

Perfects in Indo-European Languages and Beyond

EDITED BY
Robert Crellin
Thomas Jügel

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PERFECTS IN INDO-EUROPEAN LANGUAGES AND BEYOND

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Volume 352

Robert Crellin and Thomas Jügel (eds.)

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PERFECTS IN INDO-EUROPEAN LANGUAGES AND BEYOND

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Editors' foreword

The present volume is a beginning rather than an end. It is an expression of the state of the art in research into the perfect in a particular language family, that of Indo-European, in order to provide a springboard for future research. We set out to address two principal issues:

1. Regularity (and irregularity) in the functional and semantic development of perfect(s) in the individual branches of Indo-European (IE);
2. The function and semantics of the Proto-Indo-European (PIE) perfect.

To this end we asked our contributors to provide an overview of what each one understood to be the category of the perfect in their respective branches of the family. From these surveys it is possible to identify cross-linguistically common as well as less common patterns, synchronically in terms both of function and semantics, and diachronically in terms of cyclical recurrence and areal spread. We observe that common to all IE branches is the reorganisation of the verbal system with respect to the reconstructed situation in PIE. This is usually in the form of a reduction, whereby imperfect, aorist, and perfect are reduced to two or even just a single representative, followed by a reinstatement of the member(s) of the system that had been lost. Furthermore, in some language families these reinstatements follow a cyclical pattern, yielding a system similar to the point of departure, as, for example is the case in Iranian, while in others the structure of the system diverges more and more from its point of departure, as is the case in Germanic. Accordingly, we see that neither functional nor semantic change in the perfect are necessarily dependent upon genealogical relationship. Instead we observe that the semantic domain of the perfect narrows or shifts following typologically common pathways. We can see evidence of areal convergence affecting languages belong to both the same and different families. The development of the verb systems in Iranian and Aramaic can be seen as instances of the latter case.

By investigating the development pathways taken by 'perfects' attested in the later history of the Indo-European language family, the present volume sets out to facilitate future discussion of the original functions and semantics of the PIE perfect. The sporadic appearance of semantic subdomains of perfect forms, such as evidentiality, shows that deviations can always occur (as well as disappear again),

whether triggered or intensified by language contact or not. This is salient for attempts to reconstruct any original state of affairs, insofar as it demonstrates that the 'original' semantic field(s) with which one is contending may well have been broader or narrower than the reconstruction of the semantic fields in each branch may suggest. If languages such as those in the Iranian family can reduce the verbal indicative system to two forms in the course of approximately a thousand years and rebuild a system fairly similar to the original one in the next thousand years, such restructurings are likely to have happened in the unattested periods of other branches as well. Indeed, such changes can in principle occur either at relatively faster or slower rates of change, with a very fast rate of change one possibility for the development path in Anatolian (see Kümmel, this volume, § 2.1.3).

These observations, furthermore, have implications for the treatment of IE branches attested only relatively late, such as Albanian, Baltic, Germanic or Slavic: it is in principle impossible to say whether, and if so when, there may have been cycles of grammatical change, restructuring(s) of the verbal system or conservative periods during which the status quo was maintained in these languages before their attestation. One may certainly set out to identify the semantics of the forerunner for each branch, but inevitably the connection of the various branches to a common origin will always be somewhat speculative.

The volume opens with two introductory chapters. The general introduction by Bernard Comrie, Chapter 1, sets out some of the key themes he has identified in the collection along with his own observations, while Chapter 2 provides an overview of the form and function of the PIE perfect and its subsequent development in its various branches.

In the following chapters, each branch of the IE language family is represented at least once, with the ancient and modern varieties tackled separately in a number of cases. Some contributors focus on specific languages, while others give an overview of their respective branch in its entirety. An important factor is the question of language contact, which is discussed in a number of contributions. Chapter 9 on Neo-Aramaic is included as an example of a language with which one branch of IE has been in contact over a sustained period, in this case Iranian: the interaction between Aramaic and especially Kurdish serves to demonstrate how the instantiation of particular grammatical categories can be copied across language family boundaries. Chapter 17, which addresses the HAVE perfect in Europe, provides an areal-linguistic perspective, vital for understanding the instantiation and development of new constructions in individual languages. Other contributions discuss particular features of the perfect from a cross-linguistic perspective, its discourse functions, its origins and/or its typological variations.

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The editors

Abbreviations

1	first person	AVC	auxiliary verb construction
2	second person	C	common (gender)
3	third person	C.	Christian (dialect of Neo-Aramaic)
A	agent-like argument of canonical transitive verb	CAUS	causative
A.J.	<i>Antiquitates Judaicae</i> (Jewish Antiquities)	CC	Corpus Caint Chonamara (see fn. 11 in Wigger)
ABL	ablative	cCOS	causative Change-Of-State
ABS	absolutive	Chrys.	Chrysostom
ACC	accusative	CIE	Common Indo-European
ACT	active voice	CL	Classical Latin
ADJ	adjective	CLF	classifier
ADV	adverb	CLPP	clipped past participle
Aesch.	Aeschylus	CNT	continuative
AG	aorist gerund	COM	comitative
Ag.	<i>Agamemnon</i>	COMP	complementizer
AINF	aorist infinitive	COMPAR	comparative
ALL	allative	COND	conditional
Anab.	<i>Anabasis</i>	CONJ	conjunction
Andr.	<i>Andromache</i>	CONN	connective
ANT	anterior	COP	copula
Ant. Rom.	<i>Antiquitates Romanae</i> (Roman Antiquities)	Cor.	Corinthians
Antiph.	Antiphon	COS	Change-Of-State
ANT.P	participle of anteriority	CS	Common Slavic
AOR	aorist (in Schumacher: aorist indicative)	CST	construct (marking the head of a genitive construction)
AP	aorist participle	CVB	converb
APIS	Advanced Papyrological Information System	CVBP	converb-forming particle
Ar.	Aristophanes	Dan.	Daniel
Arm.	Armenian	DAT	dative
ART	article	D-domain	Dissociated domain
ASS	assertive	DEB	debitive
ATTR	attributive	DEF	definite
AUX	auxiliary (verb)	DEM	demonstrative
Av.	<i>Aves (Birds)</i>	Dem.	Demosthenes
		DEP	dependent
		DEPON	deponent
		Df	Defective

DIM	diminutive	INT	interrogative
Diod. Sic.	Diodorus Siculus	INTJ	interjection
Dion. Hal.	Dionysius of Halicarnassus	INTR	intransitive
DIR	direct suffix	IPFV	imperfective
DIST	distal	IPRF	imperfect
D-suffix	direct suffix	IRR	irrealis
DU	dual	Isoc.	Isocrates
e	event (in Khan)	IUP	inverted univerted perfect
e	eventuality variable (in Crellin, Latin)	J.	Jewish (dialect of Neo-Aramaic)
e'	a subpart of an eventuality <i>e</i> (in Crellin, Latin)	Jos.	Josephus
EL	Early Latin	Khot.	Khotanese
EMPH	emphatic	LF	<i>l</i> -form
ENHG	Early New High German	Lith.	Lithuanian
Eph.	Ephesians	LOC	locative
Eur.	Euripides	L-suffix	oblique suffix
<i>Exord.</i>	<i>Exordia</i>	Luw.	Luwian
EZ	<i>ezāfe</i> (connector)	m	male storyteller (in Levinsohn)
f	female storyteller (in Levinsohn)	M	masculine
F	feminine	Matt.	Matthew
FIN	finite	MDS	Multidimensional Scaling
FOC	focus	<i>Menex.</i>	<i>Menexenus</i>
FUT	future	MH	Middle Hittite
GDV	gerundive	MHG	Middle High German
GEN	genitive	MID	middle
Germ.	German	MIr.	(1) Middle Irish (in Wigger) (2) Middle Iranian (in Jügel)
Grk.	Greek	MIR	mirative
HAB	habitual	MLG	Middle Low German
Hdt.	Herodotus	MP	Medio-Passive
<i>Hec.</i>	<i>Hecuba</i>	MS	Middle Script (in Inglese & Luraghi)
Hipp.	Hippocrates	ms(s).	manuscript(s)
Hitt.	Hittite	MOD	modal
IAM	iamitives	Mx	Manx
IE	Indo-European	N	neuter
IIr.	Indo-Iranian	NA	non-agreeing form
<i>Il.</i>	<i>Iliad</i>	NACT	non-active voice
IMP	imperative	NEG	negation, negative
IND	indicative	NENA	North-Eastern Neo-Aramaic
INDECL	indeclinable	NEng	Modern English
INDF	indefinite	NH	New Hittite
INF	infinitive	NHG	New High German
INFP	infinitive-forming particle	NH NCOS	non-homogeneous
INS	instrumental		non-change-of-state

<i>Nic.</i>	<i>Nicias</i>	PIE	Proto-Indo-European
NIr.	New Iranian	PII	Proto-Indo-Iranian
NOM	nominative	PL	plural
NP	noun phrase	Pl.	Plato
NP1	subject phrase	Plb.	Polybius
NP2	object phrase	Plu.	Plutarch
NS	New Script (in Inglese & Luraghi)	PN	proper name
NT	New Testament	POSS	possessive
NVIR	non-virile	PPP	(1) perfect passive participle (in Horrocks), (2) past passive participle (in E. Dahl and in Drinka)
O	patient-like argument of canonical transitive verb		
OBJ	object	PPRF	pluperfect
OBL	oblique	PREF	prefix
ObjRes	object-oriented resultative	PREP	preposition
OCS	Old Church Slavonic	PREPP	prepositional phrase
<i>Od.</i>	<i>Odyssey</i>	PRET	Preterite
OE	Old English	PRET.P	preterite participle
<i>Oec.</i>	<i>Oeconomicus (Economics)</i>	PRF	perfect
OH	Old Hittite	PRF.P	perfect participle
OHG	Old High German	PROG	progressive
OIr.	(1) Old Irish (in Wigger) (2) Old Iranian (in Jügel)	PROH	prohibitive
OMD	marker for direct objects	PRON	pronoun
OMI	marker for indirect objects	PROX	proximal/proximate
OPT	optative	PRS	present
<i>Orat.</i>	<i>Orationes</i>	PST	past
OS	(1) Old Saxon (in Drinka, in Fischer and in Kotin) (2) Old Script (in Inglese & Luraghi)	PST.P	past participle
		PTCL	particle
		PTCP	participle
		PVB	preverb
P	patient-like argument of canonical transitive verb	Q	question particle
P1	<i>after-perfect</i> (Celtic)	QUOT	quotative
P2	<i>have-perfect</i> (Celtic)	r	reference time (in Khan)
PA	active participle	REDUPL	reduplication
Pal.	Palaic	REFL	reflexive
PAM	Partitioning Around Medoids	REL	relative, relativizer
PAP	past active participle	<i>Rep.</i>	<i>Republic</i>
PASS	passive	RES	Resultative
PASS.P	passive participle	RPOSS	reflexive possessive
Paus.	Pausanias	RS	state resulting from the completion of the event (in E. Dahl)
PC	person marking clitic		
P-domain	Primary domain	R-state	Result state
PERL	perlative	s	speech time (in Khan)
PFV	perfective		

s	eventuality variable denoting a state (in Crellin, Latin)	t _E	event time (in Eystein Dahl)
S	subject (in Khan: unaccusative subject)	Thes.	Theseus
S _A	unergative subject	Thess.	Thessalonians
SAE	Standard Average European	Thu.	Thucydides
SBJV	subjunctive	TPTCP	<i>t</i> -participle
SBJVPX	subjunctive prefix	TR	transitive
ScGl.	Scottish Gaelic	t _S	speech time (in Eystein Dahl)
Sem.	semantic	T-state	Target state
SG	singular	t _t	topic time (in Crellin, Latin)
Sogd.	Sogdian	t _u	utterance time (in Crellin, Latin)
STAT	stative	t _x	time marked with respect either to topic or utterance (in Crellin, Latin)
Ste	State	V	Verb
SubjRes	subject-oriented resultative	VA	Verbal Adjective
SUP	Supine	Ved.	Vedic
SUPERL	superlative	VN	Verbal noun
t'	reference time (in Eystein Dahl)	VOC	vocative
t ₀	evaluation time (in Eystein Dahl)	VP	Verb Phrase
TA	Tocharian A	WALS	World Atlas of Linguistic Structures
TAM	tense/aspect/mood	Xen.	Xenophon
TAME	tense/aspect/mood/evidentiality		
TB	Tocharian B		

CHAPTER 1

Introduction

Bernard Comrie

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This Introduction highlights some of the recurrent themes of the volume, in particular two diachronic paths: (i) resultative > perfect > perfective past; (ii) relaxation of an initial constraint restricting the perfect to results attributed to the patient. The latter leads to a discussion of BE and HAVE perfects, including English and Dutch data that point to important methodological caveats.

Keywords: tense, aspect, diathesis, diachronic path, Indo-European

1. General remarks

This volume represents a major undertaking in presenting the perfect across all the branches of the Indo-European family with more than minimal attestation, plus for typological comparison a number of varieties of the Semitic language Neo-Aramaic, as well as the more general contributions by Ö. Dahl situating the Indo-European perfect against broader cross-linguistic variation and by Drinka examining the HAVE perfect across various branches of Indo-European. It reflects the marriage of two important linguistic traditions, on the one hand the detailed philological investigation of individual languages and groups of languages, on the other the insights of recent theoretical, especially cross-linguistic work on the perfect as a comparative concept against the background of general treatments of the tense-aspect conceptual space. For some languages, e.g. the Baltic languages, this volume presents the first detailed overview in English, while all chapters present both the empirical and the theoretical results of ongoing cutting-edge research. In this Introduction, I attempt to distill (in §2 and §3) what I see as some of the main results of the detailed investigations in the individual chapters – though my pale summary can in no way be taken as a substitute for reading the chapters themselves – as well as presenting in §4 some data from Modern English (and Dutch) that show some of the methodological problems that research of this kind, especially but not exclusively on ancient languages or language stages, encounters.

As more generally in the volume, I will assume the kind of analysis of tense-aspect embodied in such works as Comrie (1976, 1985), Dahl (1985), and Bybee et al. (1994), supplemented by Nedjalkov (1988) for the resultative. Some notes on terminology are in order to avoid confusion, especially given that while there is widespread agreement among the contributors to the volume, this agreement is far from universal. A strict distinction will be maintained between the terms 'perfect' and 'perfective'. 'Perfect' will be used to cover all uses of a form that expresses continuing relevance of an earlier situation (usually an event). No terminology is ideal, but I prefer not to use the alternative 'anterior' in this sense, as this term is also used to denote relative past time reference (or a tense that grammaticalizes this). I will maintain, or at least try to maintain, a consistent distinction between language-specific categories, written with an upper-case initial (e.g. the Ancient Greek Perfect), and comparative concepts, written with a lower-case initial (e.g. the perfect in Indo-European languages, or in the languages of the world).

In looking at the perfect in Indo-European languages, we are looking at two major chronological layers. First, there is a formation that goes back to Proto-Indo-European, characterized formally by reduplication and/or *o*-grade ablaut. One can therefore study the fate of this formation, the Indo-European Perfect, in the individual branches and languages of the family. Second, individual branches and languages have innovated new perfect formations, which thus do not go back to a single Proto-Indo-European model, but nonetheless show striking similarities, as well as important differences; the similarities reflect at least in part universal principles and in part local contact (areal diffusion). Within the Indo-European family, the usual innovation is a periphrastic form using the auxiliary BE or HAVE and a participial form of the lexical verb, although other possibilities are occasionally found, such as the preposition 'after' with a verbal noun in Celtic. The HAVE perfect seems to be by and large restricted to languages of Europe, and as noted in more detail in the relevant individual chapters it has been hypothesized to reflect a single historical origin in these languages, with later diffusion within this set of languages. However, the existence of a HAVE Perfect in Hittite and the two Middle Iranian languages Sogdian and Khwarezmian seems to argue against a strict monogenetic hypothesis, i.e. there are at least two instances of independent development of a HAVE perfect. By contrast, there are multiple attested instances of the development of the BE perfect both within and outside Indo-European.

The body of this Introduction is divided into two main parts. §2 examines the semantics of the perfect in Indo-European languages, in particular the extent to which and the manner in which particular languages extend the semantic range of their Perfect beyond resultativity, and how the Perfect in a particular language may participate in the well-known diachronic process leading to the form taking on more generally past perfective, or even simply past meaning. In §3 the

question of the diathesis of the perfect will be treated, in particular given that some Indo-European languages present interesting cases of diathesis differences between their Perfect and non-Perfect forms of what is at least arguably the same lexical verb. ‘Diathesis’ here is used as a term covering different correspondences between the semantic roles and the grammatical relations of a lexical item, and thus includes passive voice and other valence alternations.

2. Meaning

This section and §3 can be viewed as pointers to some of the issues that I found most interesting in reading through the individual chapters, albeit presented from my own perspective.

In terms of the meaning of the perfect, one approach that is particularly useful for comparative purposes is to think of the two well-established diachronic paths, which can be thought of as defining the ‘rise’ and ‘fall’ of the perfect as a distinct category in a language. The first path starts off with a rather restricted perfect, restricted in particular to resultative meaning, and often not covering even all instances of resultativity. Within Indo-European, good illustration of this comes from the historical development of the inherited Indo-European Perfect in Ancient Greek – as noted in the chapter on Indo-Iranian, even the earliest Indo-Aryan and Iranian attestations already point to a more extended meaning. Thus, in Homeric Greek the Perfect was largely limited to resultative meaning, and limited to verbs expressing a clear change of state. As noted in the chapter on Ancient Greek, it is therefore important to observe that both the original restriction as well as the path of the later expansion involves the incorporation of more semantically defined classes of verbs into the realm of the Perfect, eventually reaching a stage where pretty much any verb can form a Perfect with broader perfect meaning, even where resultative meaning is not possible. In addition, one should bear in mind that in addition to the importance of semantic classes of verbs, individual verbs can also behave idiosyncratically, the classical example being the reflexes of the Proto-Indo-European Perfect **uóid-/uid-* in the sense ‘to know’, as in Ancient Greek *oída*, where the Ancient Greek verb exists only in the Perfect system in this sense, i.e. the Perfect functions to express present time reference of the sense ‘to know’.

In coming to terms with cross-linguistic variation in the interpretation of resultative semantics, it is important to bear in mind that there can be a fair amount of variation across languages, even more so when one takes into account non-Indo-European languages. Thus, the Nivkh resultative, as noted by Nedjalkov & Otaina (1988: 145), has a narrower interpretation than in relevant Indo-European languages. In particular, the result must be perceptible. Thus, in many languages a

resultative like ‘the bread has been eaten up’ would be fully acceptable in a situation where no bread is visible, but it is known that there was previously bread there. In Nivkh, however, the resultative equivalent of (1), namely (2), is only possible if some (but not all) of the bread is still visible, since this provides perceptible evidence.

- (1) *if hə lep ní-ǵ.*
 he that bread eat_up-IND
 “He has eaten up that bread.”
- (2) *hə lep ín-yəta-ǵ.*
 that bread eat_up-RES-IND
 “This bread has been partially eaten up.”

To be more precise, an interpretation can be assigned to (2) by ‘coercing’ the semantics of the verb from ‘to eat up’ to ‘to eat up partially’. This is not automatically guaranteed by general principles, since Nivkh could have resolved the dilemma by simply treating (2) as ungrammatical. However, coercion means that (2) can be assigned an interpretation that is consistent with the narrow conception of resultativity in Nivkh.

Strictly speaking, a resultative refers to a state that is the result of a previous situation, i.e. the presumption of the previous situation, a change of state, is crucial. However, forms that are otherwise resultative, like the Ancient Greek Perfect, are often used to denote states that are not (necessarily) the result of a previous change of state, i.e. that are simply stative. Thus, use of ‘to know’, even if expressed using a form like the Ancient Greek Perfect implying resultativity, is appropriate whether or not the speaker considers the knowledge to be the result of earlier learning or not. Theological orthodoxy teaches that God knows everything, but I assume it would be heretical to maintain that He had to learn any of this, i.e. that there was an earlier time when He did not know everything. And since we can entertain the possibility of such states as knowledge, tiredness, hunger existing from time immemorial – whether or not this view is empirically correct – language clearly allows us to conceive them as stative rather than resultative. What, then, is the relation between resultative and stative interpretations? The usual assumption is that the stative interpretation is parasitic on the resultative one, often with the conclusion that the stative interpretation must be diachronically later. However, given the general historical trajectory of the rise and fall of the perfect from greater importance of the result to greater importance of the earlier situation, the stative interpretation might be viewed as the extreme early point on this path, with the earlier situation so unimportant as to be non-existent. The question strikes me as interesting, though far from easy to resolve. The fact that an earlier situation is implied in the real world is not in itself telling; after all, in English I can happily use the Present tense in *I*

know, I am tired, etc., even though my knowledge is presumably the result of earlier learning, my tiredness of earlier expenditure of energy.

Extensions from resultative meaning during the rise of the perfect include the experiential (something has occurred at least once before the reference point, typically speech time/the present moment if not otherwise expressed, e.g. 'I have never been to Antarctica'), universal or continuative (up to and including the reference point, e.g. 'I have lived here for three years'), and a cluster indicating relative recency of the preceding situation or of the speaker's realization of the preceding situation, e.g. 'I have just seen him' or 'they've closed the brewery' (said by someone returning to their home town after a 40-year absence and being surprised that the brewery is no longer there, although in fact it closed 20 years ago). The contribution by Ö. Dahl provides interesting information on these extensions, both within Indo-European and beyond. At least in Europe the universal/continuative meaning has made little headway, and is often considered characteristic of English, although the chapters on Baltic and Slavic and on Albanian note that this use is possible, though marginal, in Latvian, and found in some varieties of Albanian, in both cases in alternation with the more frequent Present. In a number of Indo-European languages, including Modern Greek, the 'relative recency' sense is not expressed by their Perfect, but rather by the appropriate general form for a (perfective) past situation.

By the 'fall' of the perfect, we mean not the loss of the relevant forms – although this can happen, as in the loss of the inherited Indo-European Perfect in the passage from Ancient to Modern Greek – but rather the greater expansion of the perfect such that its semantics no longer incorporates the crucial ingredient of continuing relevance, i.e. it simply denotes a situation in the past. This is widely attested across Indo-European languages, e.g. in Latin earlier Perfect forms merged with earlier Aorist forms to give a single new Aorist (perfective past) category; in spoken French the earlier Perfect (Compound Past) replaced the earlier Aorist (Simple Past) to form a new single periphrastic Aorist (perfective past). In Southern varieties of German this has gone a stage further, since the absence of an inherited imperfective/perfective distinction means that the earlier Perfect is now a general Past tense. In some other languages, this last merger is preempted by the development of a new imperfective/perfective distinction, as in most Slavic languages (thanks to the harnessing of verbal derivation, both prefixal and suffixal, to express the aspectual distinction) or most New Iranian languages through the development of Imperfective markers (such as Persian *mi-*). Although much of this discussion belongs more properly to the later history of individual Indo-European languages, it is worth noting that this expansion can proceed in stages, e.g. with the expanding Perfect being used for general past time reference initially with more recent situations (typically, taking place on the same day), as in some Romance languages.

Thus overall, the semantics of the perfect can be viewed as placement on a trajectory that runs from placing most emphasis on the resulting state to placing most, indeed exclusive emphasis on the earlier situation. Although this section has discussed primarily examples where the reference point is the present moment, it should not be forgotten that many languages also form other perfect tenses with different reference points, in particular the pluperfect (past relative to a past reference point) and the future perfect (past relative to a future reference point); however, these do not always develop exactly in parallel, e.g. in English the well-known constraint against the combination of a time adverbial denoting a specific anterior point of time (**I have seen him yesterday*) does not apply to the Pluperfect or the Future Perfect.

Finally in this section, we may note another well-established diachronic path whereby the perfect takes on evidential semantic values, as attested, for instance, in Indo-Iranian (especially Iranian), in Baltic, in Balkan Slavic, and outside Indo-European in Neo-Aramaic. But this is not a widespread development in either Indo-European or Europe.

3. Diathesis and alignment

The proverbial careful reader will have noted a property of the Nivkh pair (1)–(2) that was not commented on above, namely that while (1) is transitive, with subject/agent ‘he’ and object/patient ‘that bread’, (2) is intransitive, with ‘that bread’ as its single subject/patient argument. Such shifts in the linkage of semantic roles and grammatical relations are not uncommon in perfect constructions, especially at the earlier stages of the rise of a perfect as discussed in §2, although they are not of course necessary – Modern English, for instance, shows no such effects. I will use the term ‘diathesis’, unusual in English linguistic terminology but precisely for that reason less encumbered by unwanted connotations, as the general term for mismatches between non-Perfect and Perfect in the linkage of semantic roles and grammatical relations.

The Proto-Indo-European Perfect, as seen most clearly in Ancient Greek, shows a similar pattern to that found in Nivkh. The Perfect of an intransitive verb, in particular of an unaccusative verb, remains intransitive, i.e. there is no change in diathesis, e.g. Present *thnḗskō* ‘I die’, Perfect *téthnēka* ‘I have died’. Transitive verbs, however, typically shift the diathesis by dropping the agent and presenting the patient in subject position, as in Present *ēlpō* ‘I cause to hope’, Perfect *éolpa* ‘I hope’, i.e. ‘I have been caused to hope’. Only later does the language gradually extend the formation of Perfects without diathesis change to transitive verbs; none are attested in the earliest, Mycenaean stage of Greek. This alignment pattern, whereby

intransitive subject and transitive object are treated alike, differently from transitive subjects, reflects the typical semantics of the resultative, where the resulting change of state is most characteristic of the intransitive subject (more specifically, of unaccusative verbs) or the transitive object, i.e. of patients. This semantic explanation also encompasses the small number of instances where the resultative remains transitive, as with verbs of learning – resultative ‘I have learned German’ attributes a property to me rather than to the German language – in some languages also verbs of consumption – resultative ‘I have eaten the bread’ is at least as likely to be a statement about me as about the bread.

For many Indo-European languages that have innovated a new periphrastic perfect, one finds similar patterning, or more complex systems that nonetheless show clear evidence of this kind of patterning. One even finds a trace of this in the English pair (3)–(4) (on which see further §4), although Example (3) is isolated in the modern language.

(3) *The guests are gone.*

(4) *The guests are fed.*

In (3) the subject corresponds to the intransitive subject of the non-resultative *the guests went*, while in (4) it corresponds to the transitive object of *someone fed the guests*. Now not all Indo-European languages with an innovative periphrastic perfect follow this pattern. Slavic languages, for instance, consistently maintain the same diathesis as in other tense-aspects by constructing the Perfect with the auxiliary ‘to be’ and an active participle. More widespread, however, in Indo-European is the use of the inherited participle in **-to-* or **-no-*, originally with resultative semantics, though in many languages having undergone some or all of the ‘rise and fall’ of the perfect outlined in §2. Since this participle has different semantics in different attested languages, we will henceforth refer to it as the ‘*t*-participle’ (glossed TPTCP).

In some Indo-European languages with this construction, expression of the transitive agent is possible by means of an oblique case, as with the instrumental in Sanskrit Example (6) (in comparison with the intransitive construction in (5), both examples from Klaiman (1978: 205)). Comparison of (5) and (6) reveals further at least the basis for ergative case marking alignment, as in many modern Indo-Aryan languages including Hindi-Urdu. Indeed, the existence of this pairing in Sanskrit is often taken as ‘explaining’, at least diachronically, the modern Indo-Aryan (and, *mutatis mutandis*, Iranian) ergative pattern. However, one should note first of all that the ergative alignment is actually already built into the original Proto-Indo-European *t*-participle, which assigns a resulting state primarily to an intransitive subject or a transitive object. Second, detailed study of the distribution of behavioral

subject properties across the history of Indo-Aryan (e.g. Peterson 1998) suggests that even in early stages the oblique agent phrase in the structure (6) was syntactically a subject, even if ‘morphologically’ an oblique/adjunct, i.e. even in Sanskrit the construction was more akin to an ergative than to a passive; see Comrie (2016) for a parallel argument for Iranian.

- (5) *sa śayi-ta-ḥ.*
 he.NOM lie_down-TPTCP-M.SG.NOM
 “He lay down.”
- (6) *nareṇa vedāḥ paṭhitāḥ.*
 man.INS Veda(M).PL.NOM recite-TPTCP-M.PL.NOM
 “The man recited the Vedas.”

In Indo-Iranian languages that have retained reflexes of the ergative construction as the basic way of forming their Past tense, the later development of the construction shows intricate shifting of the morphological alignment: The object gains morphological object properties and the transitive subject gains morphological subject properties, as illustrated in the chapter on Iranian. A typologically similar set of extensive variations is also discussed in the chapter on Neo-Aramaic.

A frequent pattern found primarily in Western Europe (Romance and Germanic), as discussed in more detail in the chapter by Drinka, though also with extension to, for instance, some Slavic languages and Modern Greek, is a distribution of expressions of the perfect between the two auxiliaries ‘to be’ (the BE perfect) and ‘to have’ (the HAVE perfect). The BE perfect is found with unaccusative intransitive verbs, correlating at least roughly with those whose subject is low in agentivity, while the HAVE perfect is found with unergative intransitive and with transitive verbs.¹ The BE perfect is typically identical in structure to the passive of a transitive verb (with resultative interpretation). This is illustrated in Examples (7)–(10) from Italian, which shows a relatively conservative distribution of HAVE versus BE Perfects (similar in this respect to German and Dutch).²

- (7) *Siamo andat-i.*
 be.PRS.1PL go.TPTCP-M.PL
 “We have gone.”

1. For a useful overview of the distribution of the auxiliaries in the Italian Perfect, despite the dated framework, see Rosen (1984).

2. Languages that have only a HAVE perfect, such as English and Spanish, have innovated by extending the HAVE perfect to all verbs. French represents an intermediate stage, with extension of its HAVE Perfect to many verbs that take a BE Perfect in Italian while still retaining the BE Perfect for some intransitive verbs.

- (8) *Abbiamo parlat-o.*
 have.PRS.1PL speak.TPTCP-M.SG
 “We have spoken.”
- (9) *Abbiamo comprat-o i libri.*
 have.PRS.1PL buy.TPTCP-M.SG the.M.PL book(M).PL
 “We have bought the books.”
- (10) *I libri sono comprat-i.*
 the.M.PL book(M).PL be.PRS.3PL buy.TPTCP-M.PL
 “The books are bought.”

The origin of this construction is taken to be the Latin construction illustrated in (11), where the *t*-Participle functions as a kind of second predicate to the verb ‘have’, i.e. something like ‘I have the letters; the letters are written’; the construction does thus include the crucial element of resultativity.

- (11) *Habeō litter-ās scrīpt-ās.*
 have.PRS.1SG letter(F)-PL.ACC write.TPTCP-M.PL
 “I have the letters written.”

Note that in Latin the lexical *t*-Participle of ‘to write’ agrees in gender, number, and case with the object. In modern Indo-European languages that maintain reflexes of this construction (whether directly or through areal influence), to varying degrees this agreement has been lost with the HAVE Perfect, e.g. in Italian the *t*-Participles in (8) and (9) are in the default masculine singular form.

Thus, even the complex distribution of BE and HAVE perfects in modern Indo-European languages has its origins in constructions that reflect a semantically natural means of expression for resultative constructions and that differ in terms of transitivity and within intransitives between unaccusatives and unergatives.

4. Further observations

In §2 and 3 it was noted that the early attested stages of the development of the inherited Perfect in some Indo-European languages, as well as of innovative Perfect formations, often reflect lexicalization. It was also noted that problems arise in determining the range of availability of the construction because of limited attestation, sometimes spread across a long time period during which relevant changes may well have occurred. In this section, some recent and current data from English are examined. While the link may seem less than obvious at first, given the massive attestation of English, variation in and around the periphery of the standard language reinforces the impression that we need to be careful in assessing claims about

less well attested languages and language varieties, especially where the corpus is essentially closed.

As is well known, Modern Standard English uses only the auxiliary *have* to form the Perfect, although one verb, *to go*, has a reflex of the earlier BE Perfect in the construction *to be gone*, so that *they are gone* implies that they are still away, while *they have gone* is compatible with their having returned. In his detailed study of the BE Perfect over the history of English, Visser (1973: 2042–2084) documents several examples of the BE Perfect used resultatively with other unaccusative verbs well into the 20th century, indeed in some cases with examples into the 1960s, and thus contemporaneous with his own research. For the following verbs examples strike me as clear, in each case giving the page number in Visser (1973) and some indication of the number of attestations: *to be become* (2047, multiple examples); *to be grown* (2048–2049, one example, in the sense ‘become’ – I exclude examples with *to be grown up*, see below); *to be risen* (2049, one example); *to be arrived* (2055, multiple examples); *to be come* (2057, multiple examples); *to be met* (2065, one example); *to be returned* (2067, multiple examples); *to be vanished* (2083, one example). All of these I would judge to be ungrammatical in my own variety of English. They sound at best archaic – Visser (1973: 2043) speaks of a ‘poetic tinge’ – though for the most part there is no evidence that they were specifically intended as such in the citations given by Visser, although one can perhaps never be sure in literary texts by writers in whose ears the sounds of Shakespeare, perhaps also of the Authorized (‘King James’) Version of the Bible continue to ring.³ Clearly, a simple examination of examples attested in standard written English of the mid-twentieth century would give a potentially distorted view of the usual range of acceptable combinations.

To the list given in the previous paragraph one might add *to be finished* (2018, multiple examples) and *to be done* (2078–2079, multiple examples), both in the sense of ‘to be in the state of having completed the task at hand’. Both are interesting in that in the intended senses the verbs would seem to be unergative rather than unaccusative, i.e. with agentive semantics. In the case of *to be done*, Visser (1973: 2078) notes that far from being an archaism, this usage seems to be an innovation, probably arising “in the latter part of the 18th century”, and often claimed not to be acceptable in all varieties of Modern Standard English – though Visser questions the putative regional restrictions, and both combinations are fully

3. I have excluded from this count some examples where the analysis as an instance of the BE Perfect strikes me as dubious. Indeed, Visser himself notes that some examples he cites might have alternative analyses, e.g. as passives. Thus, I would exclude *to be retired* (in the sense of ‘to have given up working’) and *to be grown up* as adjectivalizations, and *to be rested* as a narrower semantic specialization (given its clear implication that the subject is now ready to continue with the task at hand). But the exclusion of particular verbs does not compromise the validity of many others.

acceptable to me.⁴ While Visser discusses the relevant sense of *to be finished* without any such historical commentary, it is noteworthy that his earliest example is only from 1678, whereas for most common verbs he gives examples going back at least to Middle English. In my variety of English, the construction does not extend to other synonyms or antonyms, i.e. I would reject all of *to be completed*, *to be stopped*, *to be started*, *to be begun* in the relevant sense, although my judgment is less secure with *to be started* (but firm on the unacceptability of *to be begun*).

Visser does not have an explicit section on the possibility of the BE Perfect with transitive verbs. He does cite examples where the verb is followed by a bare noun phrase (Visser 1973: 2043), though in most cases this is clearly adverbial rather than a direct object and thus the verb is intransitive, though one might wonder about DeFoe's *we were entred* [sic] *a vast great forest* or Shakespeare's *the enemy is pass'd the marsh*. In passing Visser (1973: 2081) also notes a comparable example from 1947 with *to be finished*: *I was finished college some years before Pearl Harbour*, commenting "With quasi-direct object extension!" For me, *to be finished* with a direct object, as in *I am finished my homework*, is fully acceptable, though I might edit it out of more careful writing; but I would not accept *to be done* or *to be started* with a direct object, although these are attested in other varieties of English and judged acceptable by speakers: Yerastov (2010) provides a recent discussion, based primarily on Canadian varieties of English but including a good survey of other treatments of the topic.⁵ In any event, at least some varieties of English have innovated resultative uses for verbs in unergative and even transitive uses, although in all cases the resulting state is attributed to the subject, whether intransitive or transitive. While only verbs of certain classes are affected, it is not the case that all verbs of that class are, and (near-)synonyms may behave differently.

Geerts et al. (1984: 519, 522f.), and more briefly Donaldson (1981: 145) note somewhat similar instances in standard Dutch of transitive verbs either obligatorily or optionally taking the auxiliary *zijn* "to be" rather than *hebben* "to have", despite the general rule that transitive verbs only allow the auxiliary *hebben* in forming the Perfect, e.g.

- (12) *Hij is een eigen zaak begonnen.*
 he.NOM be.PRS.3SG a own business begin.TPTCP
 "He has begun a business of his own."

4. My judgments here presumably reflect those in the regional variety of English I grew up with in the northeast of England.

5. However, the fact that at least one combination is found in my own variety of Northern English may call into question whether the phenomenon is properly qualified as 'Scottish' rather than perhaps as 'Northern British', also whether, as suggested in the literature, it is due historically to influence from Shetland and Orkney dialect or from Scottish Gaelic.

- (13) *Hij is de naam van die taalkundige vergeten.*
 he.NOM be.PRS.3SG the.C name of that.C linguist forget.TPTCP
 “He has forgotten the name of that linguist.”

In at least some cases there is a difference between resultative (with *zijn*) and non-resultative (with *hebben*) interpretations, e.g. *verliezen* “to lose” with *hebben* places more emphasis on the action, while with *zijn* more emphasis is placed on the resulting state:⁶

- (14) *Waar heb je je horloge verloren? In het zwembad bij het verkleiden.*
 where have.PRS.2SG you your watch lose.TPTCP in the.N swimming_pool at the.N changing
 “Where did you lose your watch? At the swimming pool while changing.”
- (15) *Ik kan je niet zeggen hoe laat het is, want ik ben mijn horloge verloren.*
 I.NOM can.PRS.SG you not say.INF how late it be.PRS.3SG because
 I.NOM be.PRS.1SG my watch lose.TPTCP
 “I can’t tell you what time it is because I’ve lost my watch.”

With this excursus I hope to have shown that even in a well-studied language like English, with broad historical attestation as well as massive current use and the availability of native speakers, there can be complications involving particular lexical items, or sometimes semantically definable classes of lexical items, making it difficult to reach clear-cut judgments on what is and what is not permissible within the language, even at a particular point in time. This relates to both survivals and innovations. It emphasizes the importance of caution in treating such phenomena where the attestation is significantly less, and where, as in the case of extinct languages or earlier stages of modern ones, it is unlikely that the corpus will expand and native-speaker judgments are not available.

6. In some cases, however, the combination of transitive verb with auxiliary *zijn* may be a historical accident. Thus, Dutch transitive *volgen* “to follow”, in the literal sense of ‘go behind’, requires the auxiliary *zijn*, as does its German cognate *folgen* “to follow”, which latter however is an intransitive verb governing a dative object; the loss of the distinction between accusative and dative case in Dutch results in the verb being transitive. Here there is no semantic component of resultativity.

5. Conclusion

These introductory remarks, especially those in §2 and §3, should be taken as guideposts pointing to some of the riches of the individual chapters that particularly appealed to me given my typological perspective, while §4 presents some further personal observations relating to some of the same general themes. But it is now time for readers to explore these riches for themselves.

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The development of the perfect within IE verbal systems

An overview

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This paper gives an overview of the development of perfect forms in the branches of Indo-European. It begins with a discussion of the perfect in Proto-Indo-European and problems with its reconstruction. Special attention is paid to the formal and functional discrepancies between the Common Indo-European perfect and related forms in the Anatolian branch. The paper then traces the continuation of the Proto-Indo-European perfect form and gives an overview of various new constructions which take the place of the original form. It concludes with a short discussion of the semantic shifts which take place in the different Indo-European branches.

Keywords: diachronic development, PIE perfect, monolectic periphrastic perfect, ergative-like, participle

Transcriptional conventions for PIE:

$*h = *h_1$; $*\chi = *h_2$; $*\mathcal{B} = *h_3$; $*j = *i$, $*w = *u$

An asterisk * before an item means that it is not attested but reconstructed; after an item it means that the particular word form is not attested but the lexeme or stem is.

1. Introduction

In this article, we first discuss the type of verbal formation known as ‘perfect’ in (Proto-)Indo-European (§2). The function (§2.1.1) and the form (§2.1.2) of this formation in the reconstructed stage(s) of IE are discussed first, followed by a short overview of explanatory approaches (§2.1.3). After that, the further development in the attested IE languages is treated (§2.2). In §3, ‘new perfects’; i.e. various new constructions with similar functions are discussed, and §4 deals with functional innovations of these.

2. The inherited IE perfect

2.1 The (Proto-)Indo-European background

Most branches of Indo-European (IE) agree in showing reflexes of a particular type of verbal formation traditionally called ‘perfect’ which therefore can be reconstructed for the protolanguage. This is especially valid for branches with earlier attestation, i.e., Indo-Iranian, Greek, Italic and Celtic, but also Tocharian and Germanic very clearly presuppose this type. The IE perfect was characterized by a particular morphology and a distinct function in the range of what we normally call ‘perfect’ (more on both below). However, in the branch with the earliest records, Anatolian, we do not find clear evidence for this type of formation with a particular function. Instead, what we find is a class of verbs with similar morphology but no distinct function, the so-called ‘*hi*-conjugation’ of Hittite, better named *ha*-conjugation at the Anatolian level. Both the perfect and the Anatolian *ha*-verbs can be led back to a common source which can be called χa -verbs after the characteristic ending of the 1st singular in the reconstructed Protolanguage of IE, Proto-Indo-European (PIE); the contrasting “normal” verb class had a 1st singular ending with $*-m-$, so these may be called *m*-verbs. Therefore, it is not clear whether the perfect as a category was really PIE or whether it may have been a common innovation of the non-Anatolian branches (henceforth Core Indo-European, CIE), and the relation between these two similar formation types must be discussed if we want to get a clear picture of the PIE situation. We start with the functional problem, and afterwards, the formal questions are discussed.

2.1.1 *The function of the perfect and related formations*

As for the function of $*\chi a$ -verbs, there is a clear difference between Anatolian and the perfect presupposed by all branches of CIE.

Anatolian *ha*-verbs had no clear function. There is no aspectual or temporal opposition to *m*-verbs, and there is no correlation with ‘middle’ or ‘stative’ semantics. Synchronically, the *hi*-conjugation in Hittite constituted merely a different type of inflection, and the formal distinction had begun to be lost, especially in the plural. There is also some diachronic variation between the two conjugations (with the *mi*-conjugation being more productive and expanding).

In contrast, the CIE perfect clearly had a special function. It was not normally derived from stative roots, and it had two main functions according to the oldest sources (Homeric Greek, Vedic Sanskrit and Avestan, cf. below 2.2):¹

1. Cf. Wackernagel (1904); Kümmel (2000: 65–78); Dahl (2010: 343–372); Kapović (2017: 97); Kulikov (2017: 242–244, 248); Sims-Williams (2017: 277–281, 283); Thompson (2017: 305,

- a. When derived from telic roots, it was normally stative-resultative in the sense that it designated a state resulting from the telic action (but without explicitly referring to that action),² viz. Vedic *jagáma*, Greek *eilélouthe* “has/is come”, Vedic *riréca*, Greek *léloipe* “is gone, has left”; but a continuative reading was also possible, cf. Vedic *jigetha* “you have won/been winning (again and again)”, Avestan *dādar³sa* “I have seen”, Greek *éorge* “has (always) done” (cf. Kümmel 2000: 72–75), and this can be seen as the expression of a non-resultative state. The existence of a more general experiential reading (including the designation of actions having occurred once in the past) is, however, doubtful for the protolanguage, so it appears that it had not yet become a real retrospective³ present. For verbs with more than one argument, the (active) perfect typically agreed with the subject argument if this can be considered to have reached a certain state by the action expressed by the verb. This is the case for experienter subjects as in cases like Vedic *śúśráva* “has heard (and knows)” or Greek *ópōpe* “beholds” (in at least some passages) and some others (viz. Ved. *dādhára* “holds”) but not for agents not affected by the action, so that prototypical transitive action verbs (where the subject was not salient for the result) did not form a perfect (e.g., there is no active perfect of the frequent verbs *dō-* “to give” or *thē-* “to put” in Homeric Greek). In the case of roots with labile argument structure, the perfect could also be intransitive, viz. Vedic *dadára* “has burst” from *dar-* “to (make) burst”; *vavárta* “turns, is turning” from *vart-* “to (make) turn”; Greek *ólōle* “is ruined” from *ol(e)-* “to ruin/become ruined”, thus appearing ‘passive’ vs. the transitive variant, often parallel to middle forms elsewhere in the paradigm (cf. below).
- b. When derived from atelic verbs, it was rather just stative (often called ‘intensive’), having no typical retrospective readings; e.g. Vedic *dīdāya* “shines”, *āha* “says”; Greek *gégōne* “shouts”, *dédēe* “burns”. Whether these verbs can be interpreted as ‘intensive’ rather than just stative, is controversial, but in many cases, there is no clear support for a more ‘intensive’ meaning.

309–310). The different function of this formation in later stages can easily be derived from this, see below.

2. So the perfect designates an attained state of the subject; this function has been called *nak-tostatisch* by Gotō (1997); Kümmel (2000), and interpreted as a derived *aktionsart*. However, the main focus clearly was on the state, and the preceding action was only implied. It can therefore be questioned if the attained character of the state was really important, see below.

3. I prefer ‘retrospective’ instead of ‘anterior’ for the ‘canonical’ aspectual function of the perfect, since ‘anterior’ should rather be reserved for strict temporal anteriority independent of other aspectual features. So, a perfective verb may have an anterior interpretation without being retrospective, i.e. without introducing a relevant (later) evaluation time.

With regard to the second group, the basic function is best taken as stative rather than resultative-stative (‘nactostatic’), for which see now Willi (2018: 232–244) against this traditional approach (as, e.g., in Kümmel 2000).

Within the tense system, the attested perfect corresponded to a present rather than a past (aorist/imperfect), and it was possible to form a past tense to it, the ‘pluperfect’, referring to a state holding in the past, e.g., Vedic *ájagan* ‘had arrived and was there’, Greek *gegónei* ‘was born, had come into being’, *dedéei* ‘burnt, was burning’.

The perfect and its participle partially competed with stative verbal adjectives, formed by the suffix **-tó-* (and others) directly from the root, but these were normally only patient-oriented with transitive telic verbs and thus tended to have a ‘passive’ meaning. Verbal adjectives were later often used in periphrastic constructions replacing the old perfect (see §3).

2.1.2 The form of the perfect

The PIE or possibly rather CIE ‘perfect’ had the following morphological (formal) characteristics:⁴ simple reduplication (with basic vowel **e*), *o*/zero-ablaut, oxytone mobile (‘hysterokinetic’) accentuation and a particular set of endings which I will call **χa*-endings in contrast to the ‘normal’ set of **m*-endings of the active. Simple reduplication means that only the initial consonant(s) is/are taken over into the reduplicating syllable, followed by one reduplication vowel, in this case **e*. What we call *ablaut* is a morphologically conditioned vowel alternation, in this case between a ‘strong’ stem used with endings that cannot be accented (in the singular) and a ‘weak’ stem used with endings that can be accented (in the dual and plural). Mobile accentuation means that the accent is not always on the same morphological element, and it is oxytone because the accent is on the last element that can bear the accent, i.e. the last syllable of the ‘strong’ stem or on the endings, where the ‘weak’ stem is used. For the endings, cf. the following table (more on these below):

Table 1. (P)IE verbal endings⁵

<i>*m</i> active			<i>*χa</i> -active		Perfect	Middle	
Present			Present			Type 1	Type 2
1SG	<i>*-m</i>	<i>*-m.i</i>	<i>*-χa</i>	<i>*-χa.j</i>	<i>*-χa(.j)</i>	<i>*-χa</i> (<i>*-χ?</i>)	<i>*-m.o?</i>
2SG	<i>*-s</i>	<i>*-s.i</i>	<i>*-tχa</i>	<i>*-tχa.j</i>	<i>*-tχa(.j)</i>	<i>*-tχa</i>	<i>*-s.o</i>
3SG	<i>*-t</i>	<i>*-t.i</i>	<i>*-s</i>	<i>*-e.j</i>	<i>*-e(.j)</i>	<i>*-o</i>	<i>*-t.o</i>
3PL	<i>*-(é)nt</i>	<i>*-(é)nt.i</i>	<i>*-ēr/-r.s</i>	?	<i>*-r/ ēr.i</i>	<i>*-r.o</i>	<i>*-nt.(r)o</i>

4. Cf. Jasanoff (2003: 30–34); Kapović (2017: 97–99); Lundqvist & Yates (2018: 2150–2153; 2167–2168).

5. Dots indicate that a morpheme can formally be further segmented although the second part only occurs in combination with the first.

The basic type of the Anatolian *ha*-conjugation was characterized by the following features: no reduplication, *o*/zero-ablaut or *o*/*e*-ablaut (cf. Kümmel 2004; Melchert 2013), mobile accentuation and **χα*-endings.⁶

Thus the two formations agree in the ablaut of their strong stem, accentuation and the basic set of endings, while there is only one fundamental difference, namely reduplication in the perfect vs. its (partial) absence in the Anatolian *ha*-conjugation, and the (possibly correlated) smaller difference that only unreduplicated Anatolian *ha*-verbs can have *e*-grade in the weak stem (depending on root structure); *ha*-verbs can also have additional stem-forming suffixes. There was, however, at least one ‘perfect’ stem without reduplication in CIE, i.e. **wojd-/wid-* ‘to know’, and on the other hand, non-basic Anatolian *ha*-verbs can be reduplicated, too. One may therefore say that the perfect(s) could be understood as forming part of a larger class of PIE **χα*-verbs.

2.1.2.1 Analysis of the endings

From the verbal endings found in the attested languages, we can reconstruct at least three different sets of endings. Two of these belong to the ‘active’ diathesis in the extant languages, where the PIE verb obviously distinguished two types of non-middle verbs with completely different sets of endings, the *m*-active and the *χα*-active (including the perfect).⁷ The third (and fourth) set of endings belongs to a functionally quite distinct category in the attested languages, the ‘middle’ diathesis. In the active, there is a very clear contrast between extended (‘primary’) endings used in present function (and partly in the subjunctive), and non-extended (‘secondary’) endings used elsewhere (i.e. in non-present and optative, partly also subjunctive); the extended endings were mostly marked by **-i* (after consonants) but sometimes also by **-s* (after a vowel). Likewise, the attested middle also has extended endings used in present functions; however, their reconstruction is

6. It should be noted, however, that the Anatolian set of *ha*-endings was not completely distinct from the *mi*-endings. In Hittite, the two conjugations differed only in the singular and partly the 2nd plural (some *hi*-verbs have *-steni*, *-sten* instead of *-teni*, *-ten*), and in the other Anatolian languages, only the 3rd singular has a distinct ending. On the Proto-Anatolian level, distinctive endings can be reconstructed also for the 3rd plural, since the Hittite past ending *-ēr* (generalized for all verbs) apparently comes from the *ha*-conjugation while Palaic *-anta*, Luwian *-a(u)nta*, Lycian *-nte* must have belonged to the *mi*-conjugation. In the 3rd plural present, all languages continue the old *mi*-ending (Hitt. *-anzi*, Pal.Luw. *-anti*, Lycian *-nti*).

7. Sometimes also a third type of active endings is reconstructed, used with ‘thematic’ stems (cf. Kortlandt 2010: 42, 95, 392 who assumes an originally ‘objective’ conjugation; Beekes 2011: 260), while most others hold that these stems had endings basically identical to the *m*-type. For our purpose it does not play an important role whether such a special status of the thematic inflection existed or not. It is also often assumed that the thematic inflection developed at least partly from old middles (cf. Watkins 1969; Jasanoff 2003: 70–71, 128–139, 224–227; Pooth 2004b).

difficult since the IE subbranches do not agree here (some use **-j* and others **-r* as the main marker).⁸ In addition, the middle has another type of variation, i.e. between more **χα*-like endings (type 1) and more **m*-like endings (type 2), at least in the 2nd singular and 3rd persons. In Indo-Iranian, the 3rd person variants seem to show a functional difference: The set PIE **-o(-)*, **-ro(-)* > PII **-a(-)*, **-ra(-)* is mainly confined to intransitive readings of the middle and the perfect, while all readings are available for PIE **-to(-)*, **-nto(-)* > PII **-ta(-)*, **-nta(-)*.⁹ A similar difference is maybe attested in Celtic, where **-o-r* only appears in passive function.¹⁰ In Anatolian, only the 3rd singular shows formal variation but no functional difference between *a*-middle and *ta*-middle,¹¹ and elsewhere, one of the variants has been generalized. There is disagreement about whether these two types of middle endings reflect an old distinction between two types of ‘middle’, one *χα*-like often called ‘stative’ and another one more similar to the active. We will come back to this question below when discussing the function.

In the perfect, Italic and Slavic use extended (‘primary’) endings (1sg **χα-j*, etc.), but most branches have the shorter forms (1sg **χα*) in the same function. Nowhere is there an opposition between these two sets of endings; where the unextended endings (**χα*, etc.) are used for the present perfect and a corresponding past exists (i.e. in Indo-Iranian and Greek), the latter takes the same or active (*m*-type) non-present endings.¹² In contrast, the Anatolian *ha*-conjugation shows the same

8. On this problem, cf. Jasanoff (2003: 46); Dunkel (2014: 669–670). The *-r* marker is often taken as an archaism since it appears to be attested at the margins of the family, while **-j* is more easily explainable as a central innovation; however, the *r*-languages do in fact not agree very much on the exact shape of these endings.

9. Cf. Kümmel (1996); Kulikov (2006, 2012: 738–745); otherwise Pooth (2000, 2014). García Castillero (2002) argues that the first set of endings was taken over from the perfect middle in Indo-Iranian, but this still requires two different sets of middle endings and does not answer the question of their ultimate origin.

10. However, García Castillero (2002) has argued for an innovation, i.e. analogical truncation of **-e-tor* → **-et-or*.

11. The middle with 3sg in Hittite *-a(-)* is sometimes called ‘stative’ (following Oettinger 1976) but there is no synchronic evidence that it had a more stative function. There is also no ground for the once usual assumption that the *a*-middle belonged to the *hi*-conjugation. While *hi*-verbs do in fact often have an *a*-middle (cf. *nē^{-a}*, *halzi^{-a}* beside *nai^{-hhi}* ‘turn’, *halzai^{-hhi}* ‘call’), this is also attested for *mi*-verbs (cf. *es^{-a}*, *ars^{-a}* beside *ēs^{-mi}* ‘sit’, *ars^{-mi}* ‘flow’), and many *hi*-verbs have a *ta*-middle (cf. *da^{-tta}*, *ari^{-tta}*, *hanna^{-tta}* beside *dā^{-hhi}* ‘take’, *arai^{-hhi}* ‘rise’, *hanna^{-hhi}* ‘judge’).

12. The apparent contrast found in Avestan between 3rd pl. perfect *-ar^š* < **-r^š* and the (longer) ‘secondary’ ending **-r^š* of *cikōit ar^š* (if correctly interpreted as ‘pluperfect’, cf. Jasanoff 1997) and some optatives is a different case: It is probably connected to the (unclear) difference between 3rd sg. perfect **-e* and *ha*-conjugation past **-s* (cf. Kümmel 2016: 87–88; 2018: 245–252).

distinction between unextended ('past') and extended ('present') endings as the *mi*-conjugation. In the 3rd singular however, there is a striking difference between past *-s* and present **-e-j* > Hitt. *-i*, the latter corresponding to the IE perfect ending **-e(-j)*, the former corresponding to that of some aorist or past forms in other branches (cf. Kümmel 2016: 83–88; 2018: 245–254) but not to the perfect ending **-e*.

2.1.2.2 Stem formation, ablaut and accent

The **χα*-type attaches the endings directly to the root or stem without an intervening 'thematic' suffix **-e/o-*. As usual with such 'athematic' stems in IE, they show an ablaut alternation between a 'strong' and a 'weak' stem, with the 'strong' stem showing a higher¹³ ablaut grade in the last element than the 'weak' stem, e.g. root = alternating stem + ending in 3sg **hés-ti* "is" vs. 3pl **hs-énti* "are", in contrast to non-alternating root + 'thematic' vocalic suffix + ending 3sg **b^hér-e-ti* "carries", 3pl **b^hér-o-nti* "carry". In the case of **χα*-verbs the strong stem always has the full vowel **o*, the so-called *o*-grade, while the weak stem normally appears in the zero grade, i.e. without that vowel. Only some root stems appear to show the full vowel **e* instead of zero (although this is controversial).¹⁴ The distinction between the two stems correlates with accentual properties: the strong stem is used with endings that are never accented (and thus underlyingly unaccented), normally the endings of the singular. The weak stem is used with endings and suffixes that can be (and thus probably are underlyingly) accented, if the stem does not have a fixed accent, normally the endings of the dual and plural¹⁵ or the suffixes of the optative and participles. The perfect as well as most Anatolian *ha*-verbs¹⁶ show mobile

13. There is a hierarchy of ablaut grades: the lowest is zero, the next is **e*, and the highest grade is either **o* or **ē*.

14. Cf. Jasanoff (1979); Melchert (2013) contra Kloekhorst (2008: 142–143; 2012, 2014). The distribution between *e*-vocalism and zero grade (mostly <a> in Hittite) is in any case complementary, the former being restricted to some lexemes with special phonotactic structures (monosyllabic stems ending in simple obstruents), and maybe also to former present stems (vs. former aorists, cf. Melchert 2015: 131 with fn. 3 on the same page).

15. However, the past plural of the Hittite *hi*-conjugation often has the strong stem and unaccented endings, in contrast to the present plural, cf. *dái-wen* "we placed" vs. *ti-wéni* "we place". This phenomenon also appears in the *mi*-conjugation, cf. *éswen* "we were" vs. *aswéni* "we are", and parallels can be found in the root aorist and 'pluperfect' of Indo-Iranian; for a discussion and possible explanations see Malzahn (2004); cf. also Hoffmann (1960: 119; 1968: 7–8); Harðarson (1993: 57–58, 89); Jasanoff (1997, 2003: 38–43; 2013: 108); Kümmel (2000: 32–34; 2018: 241–245); Melchert (2013: 142–143; 2015: 127–128).

16. Some non-reduplicated Hittite verbs show ablaut but no mobile accent, e.g., *halzái- ~ halzí-* "to cry, call", *parái- ~ parí-* "to blow". For the type showing *a ~ e* ablaut, this appears to be the rule, cf. *asás- ~ asés-* "to make sit", *nái- ~ né-* "to turn" (cf. Melchert 2013 contra Kloekhorst 2012, 2014, who only accepts these two cases as having root accent in the weak stem).

accentuation on the surface, alternating between the last syllable of the stem and the endings or suffix. Cf. the IE inflection of some root stems: the IE ‘root perfect’ **wójd-* ~ **wid-* “to know”, some of its continuants, and the Hittite *ha*-verb *pái-* “to give”¹⁷ < **(H)pój-* ~ **(H)pi-*:

Table 2. Inflection of **χα*-conjugated root stems

(P)IE		Vedic	Greek	Gothic	Hittite	
					Past	Present
1s	<i>*wójd-χα</i>	<i>véd-a</i>	<i>oĩd-a</i>	<i>wait</i>	<i>pě-hhon</i>	<i>pě-hhi</i>
2s	<i>*wójd-tχα</i>	<i>vét-tha</i>	<i>oĩs-tha</i>	<i>wais-t</i>	<i>pái-tta</i>	<i>pái-tti</i>
3s	<i>*wójd-e</i>	<i>véd-a</i>	<i>oĩd-e</i>	<i>wait</i>	<i>pái-s</i>	<i>pā-i</i>
1p	<i>*wid-mó</i>	<i>vid-má</i>	<i>íd-men</i>	<i>wit-um</i>	<i>pi-wén</i>	<i>pi-wéni</i>
2p	<i>*wid-é</i>	<i>vid-á</i>	<i>ís-te</i>	<i>wit-uþ</i>	<i>pi-stén*</i>	<i>pi-sténi</i>
3p	<i>*wid-ér/-ř</i>	<i>vid-úr</i>	<i>ís-asi</i>	<i>wit-un</i>	<i>pi(j)-ěr</i>	<i>pi(j)-ánzi</i>

In addition, the IE perfect is normally characterized by partial reduplication, i.e. anticipation of (at least) the first consonant of the root, followed by (unaccented) **e*.¹⁸ This leads to the following inflection, exemplified by **memón-* “to have in mind”, its Greek continuant¹⁹ and the Vedic perfect *cakár-* “to have done”:

17. This verb shows the weak stem also in the past plural (in contrast to many others, see fn. 15) and therefore corresponds even better to the CIE perfect than most *hi*-verbs.

18. For details about IE reduplication cf. Keydana (2006); Zukoff (2017). If reduplication would have produced problematic consonant clusters, this was prevented by simplification of the cluster and lengthening of the vowel, so that the stem then looked like the root in lengthened grade, cf. Schumacher (2005); Schumacher & Matzinger (2013: 162–172), e.g. **deḱ-* ⇒ **de-dḱ-* → **dēḱ-*. This explains (originally weak) perfect stems like Vedic *dās-*, Latin *cēp-* and forms with **ē* in the finite preterite of the fifth (and by analogy also the fourth) class of Germanic strong verbs, e.g. **gēb-um* “we gave”, etc.

19. The verbal accent of Greek is irrelevant for the reconstruction, since Greek generalized bar-ytone accentuation for finite verbs. The Vedic accentuation is confirmed by Germanic, since the Germanic past tense shows consonantal alternation according to Verner’s Law between the singular indicative and the other forms, presupposing root accent in the former and desinential accent in the latter, viz. OHG *was* “was”: *wārun* “were” < **was*: **wēzun* < **wáse*: **wēsún* < **(we) wós e*: **wēs ŋt*.

Table 3. Inflection of the perfect

	(P)IE	Vedic	Greek
1s	* <i>me-món-χα</i>	<i>ca-kár-a</i>	<i>mé-mon-a</i>
2s	* <i>me-món-tχα</i>	<i>ca-kár-tha</i>	<i>mé-mon-as*</i> (* <i>mé-mon-tha</i>)
3s	* <i>me-món-e</i>	<i>ca-kár-a</i>	<i>mé-mon-e</i>
1p	* <i>me-mṇ-mó</i>	<i>ca-kṛ-má</i>	<i>mé-ma-men</i>
2p	* <i>me-mn-é</i>	<i>ca-kr-á</i>	<i>mé-ma-te*</i>
3p	* <i>me-mn-ḡ</i>	<i>ca-kr-úr</i>	<i>me-má-asi</i>

In contrast to that, reduplicated Anatolian *ha*-verbs normally have fixed stem accent and thus do not exactly correspond to the IE perfect, cf. Hittite *wéwakk-* “to crave”, *mímm(a)-* “to reject”, *méma/i-* “to speak”, *nánna/i-* “to drive” (for the last two cf. Kümmel 2012).

2.1.2.3 Perfect and **ha*-conjugation in the context of the PIE verbal system

We have already seen that the **χα*-endings show a certain similarity to at least one apparently old set of middle endings, while they are very different from those of the other type of active endings. This raises the question of a functional connection between the middle and the active on the basis of the endings.

2.1.2.4 Examples of reconstructable perfects (all 3sg)

- (1) Greek *dé-dork-e* “looks” = Vedic *da-dárs-a* “has seen” < CIE **de-dórk-e*
- (2) Greek *lé-loip-e* “is away” ≈ Vedic *ri-réc-a* “has left” (renewed reduplication vowel) ≈ Gothic *laih* “loaned” < CIE **le-lójk^w-e*
- (3) Greek *gé-gon-e* “is born” = Vedic *ja-ján-a* “has produced” (with analogical *á*) < CIE **ǵe-ǵónh-e* (with a discrepancy in meaning)
- (4) Vedic *da-dhárṣ-a* “dares” ≈ Gothic *°dars* (lost reduplication) < CIE **d^he d^hórs-e*
- (5) Vedic *ā-námṣ-a* “reaches/has reached” = Old Irish *ánaic* “(has) reached” < **ānonke* < CIE **χα χνόκ^w-e*; cf. also Greek *-ēnoka/enēnokha*²⁰

20. In this especially the Celtic part must be inherited. The form with two nasals is surprising since the root is **χnek-* and not **χnenk-* (which would be irregular anyway); but the shape of these forms can hardly be secondary, while apparent **χα-χνόκ^w* in the Vedic by-form *ānāśa* and the Greek forms can easily represent an innovation; cf. Kümmel (2000: 287); Schumacher (2004: 200, 203).

- (6) Greek *mé-mon-e* “strives after” ≈ Latin *memini-t* “thinks of, remembers” ≈ Gothic *man* “remembers, thinks” (lost reduplication) < CIE **me-món-e* (cf. possibly also Vedic *ámaman* “had thought about”, Kümmel 2000: 364–366)
- (7) Vedic *ja-ghán-a* “has slain” = Old Irish *geguin* < CIE (?) **g^{wh}e-g^{wh}ón-e* (because of the strongly transitive meaning, PIE age is doubtful)

Exception without reduplication (lexicalized, functionally present tense):

- (8) Greek *oīde* < **woīde* = Vedic *véda* = Avestan *vaēdā* = Gothic *wait* < PIE **wójd-e* “knows”; cf. also the same stem in Armenian *gitê* “knows”, Old Prussian *wai-dimai* “we know”, OCS *vědě* “I know”.

It seems clear that the perfect was originally only ‘active’ (non-middle) and could not form a distinct middle. Often, an active perfect belonged to a verb otherwise inflecting as a middle, cf. Vedic *mriyáte* “dies”: *mamára* “has died, is dead”; *vártate* “turns”: *vavárta* “has turned, has been turning”; Greek *péithetai* “becomes persuaded”: *pépoithe* “believes”; *gígnetai* “is born, becomes”: *gégone* “is born, exists”. However, a middle perfect was quite productive in Greek (mostly ‘passive’) and Indo-Iranian, and there are possible traces in Tocharian (in the middle endings of the preterite).²¹ This is normally seen as a post-CIE innovation, i.e. a secondary introduction of the diathesis opposition into the perfect. This view is supported by the clearly independent creation of middle perfects in Celtic, marked by inserting *-r-* between stem and (active!) endings (cf. Schumacher 2004: 69).

The (active) perfect is associated with its own participle formed with a special suffix **-wós-* ~ **-us-*,²² attached to the perfect stem, e.g. **wid-wós-* “knowing”, **me-mṇ-wós-* “thinking, remembering”. In most languages, this participle was agent-oriented if formed from a transitive verb, as the finite perfect; however, in Tocharian it can be both agent- and patient-oriented (Malzahn 2010: 232), and some cases in Greek also show an intransitive meaning, as some finite perfects do (see below). In Greek and Indo-Iranian, also a middle participle with the usual suffix can be formed from perfect stems.

21. The ending variant *-dai* of the weak preterite in Runic Germanic has also been explained from a middle perfect, but it is doubtful whether such an ending really existed, and middle inflection would not be well motivated there (on the whole problem cf. Schuhmann 2016), but cf. Jasanoff (forthcoming). The formerly usual derivation of the Latin and Slavic endings (1s **-aj*, etc.) from the perfect middle has now become obsolete, since such endings are attested as active endings in Hittite.

22. Cf. Ved. *-vāms-* ~ *-uṣ-* = Av. *-uuāh-* ~ *-uṣ-*, Greek Mycenaean *-wo^h-*, Lith. *-us(ia)-*, Slav. (v)y/-(v)ṽše/a-, Tocharian **(w)u*, *-wæṣə*, *-wəsa*.

2.1.3 *Different explanations*

To explain the functional and formal discrepancies between the CIE perfect and the Anatolian *ha*-verbs, different accounts have been developed. Two main approaches can be distinguished:

1. The IE perfect was indeed PIE, and the Anatolian *ha*-conjugation can be explained from a (de-reduplicated) perfect that had developed into a past tense, to which then a new present had been built, just as old aorists had also obtained present forms in Anatolian.²³ The general development of the perfect would thus have been similar to what happened later in many branches but much earlier and thus much faster. In this approach, the original function of the **χα*-endings is stative (rather than middle), and the reduplicated perfect was originally a derived stative including a presupposed pre-stage of the situation. It is often assumed that there was an old difference between a 'stative' middle and another middle derived from a different source and connected to the active (Rix 1988; Kortlandt 2010: 384–385). PIE then originally had a fourfold distinction between an active factive²⁴ and stative and a middle factive and stative, and the perfect as well as Anatolian *ha*-verbs continue the active stative. For instance, the system might have included active factive **wejd-t* "sees, saw", active stative **wójd-e* "knows", middle factive **wid-tó* "sees/saw herself; is/was seen" and middle stative **wid-ó* "is visible, is known".
2. The **χα*-verbs reflect an original pre-PIE 'protomiddle'²⁵ which had split into a 'neo-active' (with **χα*-endings) and the middle (with modified endings) already in PIE. Anatolian preserved this state of affairs (at least formally), but in CIE, a 'neo-active' reduplicated (intensive) formation developed into the 'perfect' and became largely productive; all other **χα*-conjugated formations were either lost or transferred into the 'normal' active or middle conjugation. Most often it has been assumed that the predecessor of the perfect was a PIE 'neo-active'

23. Cf. Eichner (1975); Oettinger (1979). The idea that a new present might have been built directly to a past (the 'tēzzi-principle', Malzahn 2010: 267–268, cf. Jasanoff 2003: 3) is widely accepted for the case of presumed old IE aorists continued in Anatolian, but this depends on the PIE existence of the aspectual distinction between 'present' and 'aorist' (which is doubted by Pooth 2009). A development from an original perfect is also assumed by Kortlandt (2010: 373–382), who assumes a semantic development from (resultative) stative to processual imperfective, citing parallels from the development of stative verbs in Slavic; see also Kloekhorst (2018).

24. I propose to use this term for the *m*-type verbs in contrast to 'stative' for the *χα*-type, but 'fientive' (in the sense of the Semitist term *fientisch*) may also be used.

25. Cf. Neu (1968); Watkins (1969) and most importantly, Jasanoff (2003).

stative present.²⁶ If Pooth (2009) were right that the PIE contrast between present ('primary endings') and non-present was not a temporal contrast but was rather an aspectual one between progressive and non-progressive, the problem would look a little different (cf. also Kloekhorst 2017). For an original stative category, a distinct progressive would not be expected, and this might explain the questionable status of 'primary' endings in the perfect.

The original function of the 'protomiddle' is still somewhat unclear, but there is some evidence that it might have been connected with lability and (originally) different alignment.²⁷ It cannot have been a 'stative' in the temporal sense, since it was apparently compatible with perfective function, but a difference in semantic diathesis is possible. Typically, this approach assumes that the middle originally had χa -like ('stative') endings (3rd sg. $*-o$) and these were only secondarily transformed to more active-like endings (3rd sg. $*-to$, etc.), without an original functional difference. So an originally twofold opposition had split into a threefold one on the formal level (m -active, χa -active, middle) but functionally the old distinction of 'protomiddle' (χa -form) and active (m -form) was replaced by one of middle (χa -forms with introduction of m -forms) and active (with both a m - and a χa -form).

Both accounts agree that the classical 'perfect' of the type *léloipe* had obtained its typical shape and function by CIE, but the original main function of this formation is viewed more or less differently, and there is disagreement whether Anatolian lost the perfect as such or had never developed it.

There have also been attempts to combine the two approaches in different ways: Oettinger (2002) reconstructed a reduplicated intensive formation with χa -endings. In Kümmel (2004), a verbal type with the same stem formation as Anatolian *hi*-verbs (no reduplication and o grade, ablauting just like o -grade root nouns) and no clear 'stative' function is acknowledged, standing beside the traditional perfect, e.g., stems like $*kós-/kes-$ "to comb" and $*kónk-/kñk-$ "to hang"; the question of

26. Cf. Kümmel (2000: 65); Kümmel & Rix (2001); Jasanoff (2003: 168–169); Fortson (2010: 104–105). Jasanoff (2018) has now proposed starting from an aorist instead, though only for the typical resultative (reduplicated) perfect, assuming that the 'intensive' perfect rather continues a different subtype with present function. This would explain the preference for 'secondary' endings, but it makes it more difficult to explain the cases of 'primary' endings, and it requires the additional assumption that there had been an aspectual shift from an original perfective (past) to an imperfective present as we find it in the earliest texts, before the function shifted to past again. In Kortlandt's system, the 'active' stative = perfect is considered 'perfective' (see Kortlandt 2010: 95, 392) but this apparently does not mean the same as 'aorist'.

27. Cf. Pooth (2004a); Jasanoff (2018: 141–143). Kortlandt (1983, 2010: 373–386, 398–400) reconstructs a dative 'subject' which might be interesting in view of the 'dative-like' or possessive semantics of perfect constructions.

original χa -endings for these verbs is left open. In the Addenda to LIV² (Kümmel 2017), a χa -conjugated verbal root stem with *o/e/zero*-ablaut has been added to the list of PIE verbal formations, both in present and aorist function. A rather different model has been recently proposed by Willi (2018: 246–272), who explains the CIE perfect from a reduplicated perfective parallel to an unreduplicated imperfective χa -verb (as in CIE **wójde* “knows” or Anatolian *ha*-verbs). He assumes that the Anatolian *ha*-verbs are rather sisters of the perfect, both being derived from nominal verbs from originally agentive nominals, while the thematic inflection and (at least partly) the middle go back to non-agentive nominals.

2.2 The development of the old perfect in IE

It is only in the oldest documented stages of IE languages that we still find the perfect as a distinct category, that is, which has not functionally merged with other formations. Thus, only the evidence of the earliest stages of Indo-Iranian and Ancient Greek can directly reflect the synchronic function of the IE perfect, while its form is clearly presupposed by other branches, too.

2.2.1 *Oldest period: The perfect as a distinct category*

a. *Indo-Iranian*

In the earlier periods of Vedic and in Avestan, the perfect is still distinct and has the following usages:²⁸ lexicalized cases point to a mainly stative-resultative (subject-oriented) function, and the inherited indicative of the perfect was a present, the pluperfect being its past tense, used much like an ‘imperfect’. However, the productive function of the perfect shifted in the direction of a retrospective, viz. Ved. (*ā*) *jagāma* “(has come and) is here” > “has come”. Object-orientation with transitive verbs became possible, and other clearly retrospective readings can also be observed, including experiential and continuative ‘has (always) ...’; a perfect of recent past was excluded, however, since this became the main function of the aorist. The pluperfect and modal forms became rare and were only preserved in cases where an old perfect had become a synchronic present.²⁹ The perfect then had become a (retrospective) preterite and contrasted with two others: the old ‘aorist’, developing from perfective to proximate past, and the old ‘imperfect’, developing from imperfective to distal past – at least in Vedic, it is not clear if the Iranian

28. See Kümmel (2000); Dahl (2010, 2014) and cf. Ey. Dahl (this volume).

29. Pluperfect forms of ‘real’ perfects sometimes appear to be used as simple aorists; this usage may have evolved from cases of anterior usage (Kümmel 2000: 85–86) but this is unclear.

development was identical. In contrast to these tenses, the perfect could be used as a general past, i.e. for both proximal and distal past, and therefore was used in contrastive contexts in opposition to categories designating present and future (Kümmel 2000: 74–75).

In later Indic, first (at least from Middle Vedic on) there was an extension to factual (perfective) past and general past usage, and in Late Vedic this was extended to narrative use (taking over from the older ‘imperfect’); at the same time an evidential function appears to have arisen (cf. below). In Middle Indic, all the old finite preterites merged functionally (formally, it was most often the old ‘aorist’ that survived), and the perfect was lost except for a few relic forms.³⁰

In later Iranian, the perfect was almost completely lost, owing to a merger of all preterites (mostly in favour of the old ‘imperfect’). Already in Old Persian, we find but one formal relic of the perfect, the optative *caxriyā* “could do/could have done” (the context does make it possible to decide if it still has some ‘perfect’ function). There are also a very few lexical traces of perfect stems in later stages, cf. Khot. *byau-* “to be found” < **abi-āf-* and maybe also **dadār-* > **dār-* > Sogd. *δr-* “hold, keep”, Khot. *han-dār-* “to care for”.³¹

b. Greek

The use of the perfect in Homeric Greek was more restricted than in Indo-Iranian: its function was still that of a subject-oriented resultative or ‘intensive’ present, the pluperfect being its past, i.e. a stative imperfect, with rather few exceptions (cf. *éorge above*).³² There are, however, some cases of pluperfects used like a (perfective) past tense, viz. *beblēkei* “shot, hit” (with no present perfect attested). Other ‘perfect’ readings were normally expressed by the aorist (perfective past). Up to and including the Classical period, the perfect extended its use and developed into a rather typical retrospective, with the pluperfect used as a retrospective past (competing with the aorist which could be used to denote anteriority).³³ In the post-Classical period a slow development towards a perfective past and merger with the aorist occurred (cf. Crellin 2016 and this volume).

30. Cf. von Hinüber (1977 1983, 1986: 192–6); Kümmel (2000: 9).

31. Both verbs presuppose **dār(a)-* and not the usual present stem **dāraya-* which would have undergone umlaut (cf. Sogd. *wy-δʿyr-*, Khot. *pa-der-*). This **dār-* is most easily derived from an old perfect **dādāra*, cf. Yav. *dadāra* = Vedic *dādhāra* “holds, keeps”, under the assumption that the reduplication got lost by haplology in Sogdian; in Khotanese intervocalic **d* was regularly lost anyway. However, umlaut may not have occurred in all forms of the paradigm so that levelling could lead to two stem variants, and derivation from **dāraya-* is difficult to exclude with certainty.

32. Cf. Wackernagel (1904); Thompson (2017: 309–310).

33. Cf. Gerö & von Stechow (2003) and see Crellin (this volume).

2.2.2 *Later periods: The perfect as a past tense or lost*

Everywhere else the perfect either developed into a past tense, merging with other preterites or ousting them, or it was completely lost so that its functional development has become invisible.

a. *Italic*

In Latin and in all of Italic, the ‘perfectum’ was a perfective past with retrospective readings and had apparently merged with the aorist. This situation must be due to a rather recent merger in Common Italic: formally, the new ‘perfect’ continues older aorists and perfects, but the two branches of Italic in most cases adopt different stems for a given verb, showing that the functional merger was at the Common Italic stage rather than the Proto-Italic, since both formations still existed after the breakup of the family (cf. Meiser 2003: 72–76). There are some relics of stative meaning, cf. Latin *memini* ‘remember’, *odī* ‘hate’, but this is also found with an innovative formation in *nōui* ‘know’ (beside ‘have got to know’, cf. Meiser 2003: 81, 221, 226).

b. *Celtic*

In Celtic, the development is very similar to Italic. The perfect merged with the aorist into a new perfective past (normally called ‘preterite’ in Celtic studies), but both types were formally preserved as in Italic, sometimes leading to different stems in different Celtic languages (cf. Schumacher 2004: 59–60, for details 61–79). Retrospective readings can be marked by ‘aspect’ particles like *ro* in Old Irish, but this is certainly an innovation. There are only two clear relics of stative perfects, e.g. **wid-* → **wid-r-* ‘know’ (Schumacher 2004: 693–701) and probably **ānk-* ‘wish, want’ (Schumacher 2004: 207–210).

c. *Germanic*

In Germanic, the perfect became the only preterite and thus a general past with potential retrospective readings. There must have been a functional merger with other preterites, but these are mostly lost without clear traces.³⁴ The reduplication was lost, if it was redundant, i.e. if the stem vowel alone was distinct from that of the present. There is a whole class of potential relics of stative perfects, the so-called ‘preterito-presents’, synchronically inflected like a past but functioning as a present. At least some of these can continue old perfects, e.g., **dars-/durz-* ‘to dare’, **aih-/aig-* ‘to own’, **ōg-* ‘to fear’, and **wait-/wit-* ‘to know’. Some others, however, may continue other formations, possibly relics of non-perfect *χa*-verbs or stative

34. The most important exception is the probable continuation of an imperfect or aorist of the root **dē-* ‘to do’ in the originally periphrastic preterite of ‘weak’ verbs, cf. Lühr (1984); Ringe (2006: 157–160, with references); Kim (2010).

middles, e.g. **mag-* (with no ablaut), cf. Kümmel (1996: 79–81); LIV s.v. **mag^h-*. Cf. Tanaka (2011); Randall & Jones (2014).

d. *Tocharian*

Tocharian has a ‘preterite’ which is a perfective past, combining perfect-like endings³⁵ with a stem formation that most often continues an aorist (cf. Malzahn 2010: 38–44; 140–148, 208–214, 225–227; Peyrot 2013: 421), so it seems reasonable to assume an aorist-perfect merger in the prehistory of Tocharian, much like in Italic and Celtic.³⁶ However, the stem of the perfect is directly continued in the past participle, using the ancient perfect participle suffix, and most often reduplicated (cf. Peyrot 2013: 609–610).

e. *Albanian*

A merger with the aorist must also be assumed in Albanian, since its aorist (perfective past) sometimes formally continues an old perfect. This is the best explanation of the synchronically ablauting aorist type with *o* < **ē*, derived from weak stems of perfects where reduplication had been replaced by vowel lengthening.³⁷

f. *Armenian*

In Armenian, the old perfect is almost completely lost. There are only few lexical traces of old perfect stems, continued as presents: *gite-* ‘know’ ← **wojd-* and perhaps also *owni-* ‘have’ ← **(se)sonχ-*.³⁸ There is no evidence that the perfect had become a preterite before loss, but this is not excluded.

g. *Slavic and Baltic*

As in Armenian, the finite perfect was lost with neither evidence nor counterevidence that the perfect had become a preterite before loss. There are also some lexical traces: besides **wojd-* ‘to know’ > Proto-Balto-Slavic **waid-* (with preserved perfect

35. In principle, these could also reflect the endings of non-perfect *χa*-conjugation aorists, under the assumption that this type had been preserved in Tocharian better than anywhere else outside of Anatolian. In any case, these endings have certainly been taken over by stems that originally did not follow this inflection, the reason being that only these endings were clearly distinct markers of the preterite (Peyrot 2013: 421–422).

36. Sometimes, it has also been assumed that the ‘athematic’ subjunctive (expressing uncertainty and future, see Peyrot 2013: 389–390) of Tocharian goes back to a perfect, since it has the same ablaut and its accentuation can be taken to presuppose reduplication (initial accent due to loss of the initial syllable by regular syncope of **ə*). However, the subjunctive does not take ‘perfect’ endings, and functionally, the development would be quite unclear, cf. Peyrot (2013: 401–405).

37. Cf. Schumacher (2005: 611–620); Schumacher & Matzinger (2013: 69, 161–172).

38. See Klingenschmitt (1982: 135–136; 157).

ending in 1s OCS *vědě*), most perfect stems were dereduplicated and obtained the productive stative suffix **-ē-*, present **-ī-* (cf. Stang 1942, 1966): This is the best explanation for *o*-grade verbs, cf. **gegar-* → **gar ē-* “burn” (likewise **bajē-* “fear”, **galē-* “be able”), but maybe also some zero grade stems were treated like that, as in **mēman-/mēmin-* → **min ē-* “think, remember” (here, however, an independent creation of a stative is also possible, since new statives normally got zero grade).

The suffix of the old perfect participle **-wos-/us-* was preserved (cf. below) and used for a past participle, but it is derived from the root or verbal base, not from a continuant of the old perfect stem.

3. New perfects

After the loss of the old perfect, eventually no IE language had a distinct perfect (retrospective present). In many cases, such a category was then introduced or re-introduced by periphrases. For periphrases with verbal adjectives and participles, cf. the overview given in Kümmel (2017), especially for Indo-Iranian.

3.1 Periphrasis with copula only

The oldest type, probably going back to PIE, was an IE resultative construction produced by combining the copula (potentially zero) with the verbal adjective. In contrast to the IE perfect, this construction was patient-oriented and thus normally ‘passive’ with transitive verbs. The resultative function results here from the semantics of the adjective and is thus only indirectly connected to the verb. However, the construction would come to be interpreted as directly deverbal in many languages.

3.1.1 Type 1: PST.P only (→ ‘ergative’)

If the construction was not changed formally, but used parallel to originally verbal constructions, this led to an alignment difference between the resultative (and later perfect) construction and other verbal categories, the former behaving in an ergative-like manner.

a. Indo-Iranian

The standard type of the later IIr. past periphrasis evolved from ‘passive’ (resultative) to an ‘ergative’ construction. It was marked by the original PST.P (suffixed by **-tá-*) as predicate, combined with the copula (which could be zero in the present, however), and exhibited special marking and/or agreement with transitive verbs.

In Late Vedic / Sanskrit / Middle Indic, predicates like *gataḥ* “is gone, went”; *kṛtaḥ* “is/was done” became more frequent and started to compete with the old

finite preterites. With transitive verbs, this construction showed agreement with the patient, and the agent was normally expressed by the instrumental case. Although it started from an older resultative and perfect, the function normally developed rather quickly into a general perfective.³⁹ In Modern Indo-Aryan (cf. Masica 1991: 341–346; Deo 2006) the old construction typically has no copula, and a new perfect was created by adding the present copula, cf. Hindi *kiyā* “did” vs. *kiyā hai* “has done”.

In Old Persian and Middle Iranian, a similar construction often called ‘*manā kṛtam*’ (Skjærvø 1985; Schmitt 1989a: 79–80) arose for perfect function. As in Indo-Aryan, agreement with the patient of transitive verbs was the rule but the agent of transitive verbs was expressed by the genitive-dative, not the instrumental. This was grammaticalized to a new perfect (and later most often past), e.g. Middle Persian (etc.) *man/-m ... kird/kard* “made by/for me > I (have) made”.⁴⁰ This construction is still found in oldest Sogdian (but see below) and preserved as such in Northern Kurdish, Pashto, Wakhi, etc.

In some Indo-Iranian languages, the old synthetic past tense (marked by the ‘augment’ *a-/a-*) was preserved, and so the new construction remained a perfect rather than becoming the only past tense. In Iranian, this was the case in Khwarezmian, (older) Sogdian (Durkin-Meisterernst 2009: 353; Yoshida 2009: 296) and (Modern) Yaghnobi (see below). In Indic, Pāli and the modern ‘Dardic’ languages Khowar, Kalasha (Morgenstierne 1947: 8; Bashir 1988: 41 n. 26, 48) still have augmented finite past tense forms.

Elsewhere the old finite preterites were lost, and there was a rather fast development from perfect to perfective (past) to past, leading to a new contrast of two verb stems: old present vs. perfective/past stem in **-t-*, continuing the old PST.P. In many Iranian languages, the old PST.P. was then replaced in its original function by a renewed ‘perfect’ participle in **-ta-ka*, cf. Middle Persian *-dag*, Sogdian *-tē*.

The most archaic situation is still found in Modern Yaghnobi (Bielmeier 1989: 484f.; Novák 2010: 229–239). Here a ‘simple perfect’ (Novák: *prosté perfek-tum*) with *-t(a)* + copula and ergative alignment (object agreement on copula, agent marked by oblique case) contrasts with a prefixed simple past (Novák: *prosté préter-ium*; < old augmented imperfect) with accusative alignment (like the present).

- (9) Cf. *-š viyor-ta-m* 3SG find-PTCP-COP.1SG “he/she has found me”
-m viyor-ta-x 1SG find-PTCP-COP.3SG “I have found her/him/it”

vs.

- (10) *a-vīr* PST-find.PRS(.3SG) “he/she found”

39. Cf. Oberlies (2003: 152–154); Fahs (1985: 224–226); Deo (2006: 112–114, 125–129).

40. Cf. Haig (2008); Jügel (2015); Sims-Williams (2017: 283).

After the change of the perfect construction to a perfective/past, new perfects could be formed in different ways (cf. Jügel, this volume):

1. Different auxiliary: 'stand' in Middle Persian
2. New PST.P in **-taka-*: Later Sogdian, Modern Persian and elsewhere

b. *Armenian*

In Classical Armenian, the perfect construction uses the PST.P, formed by a suffix **-lo-* mostly from the aorist stem. Transitive verbs could have an ergative-like construction with genitive of the agent, but they could also show a 'normal' active construction also analogous to other verbal categories. It seems plausible to reckon with Middle Iranian influence here which was generally very strong in Armenian (cf. Lyonnet 1933; Meyer 2015).

c. *Tocharian*

In Tocharian (cf. Malzahn 2010: 242–246), the synchronic PST.P continues the old IE 'active' perfect participle (suffix **-wu*, OBL **-wəṣ*, F **-wəsa-*), but in contrast to most languages, this participle was indifferent to diathesis and could be both agent- and patient-oriented. Together with the copula, it was used to form a periphrastic perfect which likewise was indifferent as to orientation, without marking by different alignment structures. Cf. Seržant (this volume).

3.1.2 *Type 2: 'Active' construction vs. PST.P*

In some languages, the development of ergative-like constructions was prevented or circumvented by the development of an 'active' construction with a special active participle contrasting with the PST.P.

a. *Indo-Iranian*

Such a special development is found in Khotanese Saka, where the preterite (general past) reflects periphrastic constructions that probably continues a former perfect. Tumshuqese Saka preserved old finite past tense forms, viz. *a-cchu* 'I went' (cf. Skjærvø 1987: 80), so it is probable that the loss of these in closely related Khotanese was recent.

Table 4. Inflection of the Khotanese intransitive preterite

	M		F		N	
1SG	<i>-tə-mə</i>	<i>*-tah ahmi</i>	<i>*-ta-mə</i>	<i>*-tā ahmi</i>		
2SG	<i>-t-ī</i>	<i>*-tah ahi</i>				
3SG	<i>-tə</i>	<i>*-tah</i>	<i>-ta</i>	<i>*-tā</i>	<i>-tu</i>	<i>*-tam</i>
1PL		<i>*-tā ahmah</i>				
2PL	<i>-ta sta</i>	<i>*-tā asta</i>	<i>-te sta</i>	<i>*-tāh asta</i>		
3PL	<i>-ta</i>	<i>*-tā</i>	<i>-te</i>			

Table 5. Inflection of the Khotanese transitive preterite

	M		F	
1SG	-ta-imə	*-tā ahmi	-tā-mə	*-tātī ahmi
2SG	-tai	*-tā ahi		*-tātī ahi
3SG	-te	*-tā ahmi	-tātə	*-tātī ahmi
1PL	-tāndə-mə	*-tāntah ahmah		
2PL	-tāndə sta	*-tāntah asta		
3PL	-tāndə	*-tāntah ahmi		

While the intransitive (and passive) preterite is formed by the old PST.P in **-ta-* and the copula (= zero in third person), the preterite of transitive (and agentive intransitive = ‘unergative’) verbs combines the copula with a new ‘active’ participle, apparently an innovative formation in **-tā-(wā)h*, *tā-(wa)nt-*, fem. **-tā-(wa)tī*,⁴¹ derived by possessive **(w)ant-* from PST.P **-ta-*. This formation is similar to Sanskrit *-tā-vant-* in the sense of an active perfect participle,⁴² which was still rare in Vedic; in similarly fashion, also *-tāvin-* could be used there. Periphrasis was very rare in Vedic (see the examples), but it is found more frequently in Epic and Classical Sanskrit.

- (11)

AV 9,6,38

aśi-tā-vat-y

ātithau

eat-RES.PTCP-POSS-LOC.SG.M guest.LOC.SG

(absolute locative) “when the guest **has eaten**”
- (12)

KaṭhU 1,2,10

prāp-ta-vān

as-mi

nitya-m

reach-RES.PTCP-POSS.NOM.SG.M be.PRS-1SG eternal-ACC.SG

“**I have reached** the eternal”

Secondarily this new participle could also be formed from intransitive verbs. Such a formation was also preserved in Pāli (beside *-tāvin-*).⁴³

b. Baltic

In the Baltic languages, the perfect construction combines the copula (optionally zero in 3rd person) with one of the past participles. Since Baltic has an ‘active’ past participle, continuing the old perfect participle (suffix **-us-/-usja-*), transitive verbs can keep their argument structure in the perfect. Combination with different tenses and moods of the copula is possible.

41.

Emmerick (1989: 222, 224–225); Skjærvø (1987: 80 §3); Christol (1990: 43); Sims-Williams (1997).

42.

Whitney (1879: 310); Speijer (1886: 254–255); Debrunner (1954: 610–612).

43.

Cf. Fahs (1985: 166); von Hinüber (1986: 197); Oberlies (2001: 263).

- (13) Lith. *jìs/jì yrà dāvēs/dāvusi*
 3SG.NOM.M/F be.PRS.3SG give.PST.PTCP.NOM.SG.M/F
 “he/she has given”

The same kind of construction with an ‘active’ past participle is also found in the Uralic neighbour languages, in Balto-Finnic and Saamic, cf. Finnish *hän on antanut*, South Saami (without copula) *satne vadteme* 3SG.NOM (be.3SG) give-PRE.PTCP.NOM.SG “he/she has given”. In a similar fashion, the stative-resultative *va* (suffix *-ta-*) can be used for a ‘passive’ perfect construction in Baltic (again with a parallel in Balto-Finnic).

c. *Slavic*

Slavic possesses the same past participles as Baltic, but in contrast to Baltic, these are not used in a perfect construction. Instead, Slavic languages show a periphrasis with an *l*-formation (suffix *-lo-*, cf. Armenian) and the copula. In the oldest stages (OCS), and in part until today (e.g., in Bulgarian), the construction with the present of the copula⁴⁴ designates a retrospective present, while with the imperfect it functions as a retrospective past (pluperfect). The original function of this adjective is often assumed to have been resultative. However, it is used in two other constructions where such a function is not necessarily implied:

1. With the future copula (= “become”) **bǫdǫ*, the *l*-participle designates the future perfect in Old Church Slavonic (> Balkan Slavic) but only a simple future in NW Church Slavonic, Slovene and Polish-Kashubian. The latter use does not point to an originally resultative function.
2. With the subjunctive and later the aorist of the copula, the *l*-participle is used in all Slavic languages to form a periphrastic subjunctive/conditional. Here an original resultative or retrospective function of the participle is less clear, although not excluded.

d. *Italic (Pre-Latin)*

According to a disputed hypothesis by Rix (1992; cf. Meiser 1998: 204–205), a periphrasis with the old perfect participle is the origin of both the Latin perfect suffix *-v-* (typically attached to ‘weak’ verbs) and the desinence “enlargement” *-is/er-*.

- (14) E.g. **pŕtāwoses stes* carry.PRE.PTCP.NOM.PL be.PRS.2PL
 → **portāwoses istes*
 → **portāwistes > portāuistis* carry.PRE.IND.2PL “you have carried”?

44. The present copula is normally overt in South Slavic, but it is zero for 3rd persons in West Slavic, and generally zero in Russian.

Details are difficult, however, and it remains unclear whether this is the right explanation for these phenomena. On the secondary perfect formations of Italic cf. also Willi (2016).

3.2 Periphrasis with ‘be’ + ‘have’

Another solution to preserve the usual argument structure in new resultatives and perfect constructions is to use a ‘transitive copula’, i.e. a possessive verb meaning ‘have’ as auxiliary for those verbs where the normal copula + PST.P would result in irregular alignment. This solution was often preferred when an active participle was not at disposal. Most usually, the PST.P was used with auxiliary selection according to verb class: the copula ‘be’ was used with fientive intransitives (‘unaccusatives’), telic motion verbs and passives, while ‘have’ was used with others, i.e., transitives and agentive intransitives (‘unergatives’), and atelic motion verbs. In some European languages, the generalization of ‘have’ (in perfect function) is found, i.e. Ibero-Romance, Romanian; English, and North Germanic except Danish. However, see Drinka (this volume) for an alternative explanation, and Drinka (2017) for a detailed discussion of the Western European periphrastic perfect.

A special variant appears to have evolved only in Modern Greek: it combines only ‘have’ with an original (aorist) infinitive (a construction that elsewhere often means OBLIGATION > FUTURE), see below and cf. Horrocks (this volume).

a. *Anatolian*

The earliest case is documented in Hittite, where we can find a ‘perfect’ construction with the PST.P in *-ant-* (the only participle):⁴⁵ besides *es-/as-* “be” + PST.P (with subject agreement) there is also *har(k)-* “hold, keep” + PST.P in neuter singular (with no agreement!).

b. *Indo-Iranian*

In Northern Iranian, similar constructions are also found.

1. Sogdian-Khwarezmian

In Sogdian, the older ‘ergative’ construction was lost with transitive verbs and replaced by an ‘active’ retrospective (> preterite) periphrasis made with *ḍār-* “to hold, keep”, cf.

45. Cf. Hoffner & Melchert (2008: 310); for a detailed description and discussion see Luraghi & Inglese (this volume).

- (15) *kt-u* *ḍār-t* Buddhist Sogdian ʿkrtw ḍʾrt
 do.PTCP.RES-N.ACC.SG have.PRS-3SG
 “holds/has done” > “has done”
 > *kt-ḍār-t* > *k-θār-t* Christian Sogdian ʿqθʾrt
 do-RET.TR-3SG
 “has done” > “did”

Later this construction was also extended to intransitive (only ‘unergative’) verbs.⁴⁶ A similar development is found in Khwarezmian.⁴⁷

2. Alanic (Pre-Ossetic)

In Alanic, something similar appears to have happened, as presupposed by the system of Modern Ossetic. Ossetic distinguishes between intransitive and transitive past. The intransitive is formed from the past stem (= old PST.P) with the copula. The transitive past is formed from the PST.P with a suffix **-dā-*, probably from an auxiliary **dā-* “to put, to do” in the old past tense (aorist) inflection and therefore with endings mostly identical to those of the subjunctive rather than the present.⁴⁸

c. Greek

Already in Ancient Greek, periphrastic constructions with ‘have’ and ‘be’ were possible (cf. Bentein 2016) and could be used for perfect-like semantics, though normally with more strictly resultative function. Only with the loss of the old perfect (or rather its merger with the aorist) such constructions became more frequent and were used to replace the perfect (Gerö & von Stechow 2003: 283–285). The Modern Greek perfect construction is attested since the end of the Byzantine era, combining *écho* “to have” with a form looking like the 3rd sg. aorist ‘subjunctive’ (stem + *-i*), but in fact continuing an original aorist infinitive. For instance, *échei grápsei* /*éç-i* *yráp-si*/ have.PRS-3SG write.SUP “has written”, with an older aorist infinitive *grápsei(n)*, modified from ancient *grápsai*. For the use of the perfect in Modern Greek, cf. Leluda-Voß 1997.

46. Cf. Sims-Williams (1989: 189); Yoshida (2009: 301); Wendtland (2011); Korn (2013: 50).

47. See Durkin-Meisterernst (2009: 354); Korn (2013: 51).

48. The desinences of aorist 2sg **-dāh*, 3sg **-dāt* coincided with the subjunctive desinences in **-āh*, **-āt*, and other forms may have analogically introduced a subjunctive desinence (cf. Christol 1990: 44; Lubotsky apud Cheung 2002: 140; Korn 2013: 51). Alternatively, one might assume the same construction as in Sogdian, i.e. an auxiliary **dār-*, but with irregular loss of **r*. However, this is formally less attractive.

d. *Italic*

Already in Latin (and probably in other Old Italic languages), a construction of the copula *esse* “to be” + PST.P was grammaticalized as passive ‘perfect’ (= perfective past) of transitives and sometimes also of intransitive ‘deponent’ verbs (with passive form in the present system but not passive meaning). A construction of *habēre* “to hold, keep” + PST.P (first with object agreement) could be used as possessive or HAVE-construction but not yet as a perfect. In (most of) Romance, it was grammaticalized to a new resultative/perfect, and the older copula construction became restricted to resultative/perfect and passive function, losing its function as a perfective past. Later developments include lexical replacement, i.e. *tener/têr* for *haber/haver* in Spanish/Portuguese, and functional restrictions: e.g., the perfect only has a continuative reading in (Modern) Portuguese.

e. *Celtic*

It is only in Middle and Modern Breton that we find a perfect construction consisting of a HAVE-construction (i.e. ‘be’ with a prepositional ‘subject’) + participle. Influence of French is very likely. For further details on formations in Celtic, see Wigger (this volume).

f. *Germanic*

In West and North Germanic, the development was very much like in Romance, but later. The new perfect construction with ‘have’ (**habai-* or **aih-*) is not yet attested in Gothic, and it is nearly absent from the oldest strata of Norse poetry.

g. *Baltic*

In Lithuanian but apparently not in Latvian, the rather rare construction *turėti* “have” + PST.P can only be used for a resultative perfect (see Arkadiev & Wiemer, this volume).

h. *Slavic*

Only in two regions, a rather late development can be found (elsewhere HAVE-constructions remained strictly resultative), cf. Arkadiev & Wiemer (this volume):

Macedonian (vs. old Slavic construction as inferential)

- (16) *ima pisano* have.3SG write.PASS.PTCP.ACC.SG.N “has written”

Kashubian (> past tense like old Slavic construction):

- (17) *(je) pësał* be.3SG write.PRF.PTCP.NOM.SG.M
or *mò pësano* have.3SG write.PASS.PTCP.ACC.SG.N,
both “he wrote”

i. *Albanian*

In Albanian, two types of ‘have’-constructions can be distinguished: 1. A probably older construction developed into the ‘admirative’ (evidential) mood. It has generalized ‘have’ in univertation with the shortened PST.P, i.e. synchronically a suffix *-ka-*. 2. A younger construction resembles the Romance perfect: it shows no univertation, but combination of an auxiliary (active *ka* “have” vs. non-active *është* “be”) with the invariable PST.P. Cf. Schumacher (this volume).

3.3 Other developments

Besides the two main developments described in 3.1 and 3.2, some other constructions could also develop to perfects, both found in Celtic.

Insular Celtic

1. In Old Irish, the ‘perfective’ (completive) simple past (with ‘augment’ *ro-*, etc.) is used with similar readings as a perfect.
2. In Modern Gaelic and Welsh there is a special construction of ‘be after’ with the verbal noun. Cf. Irish *tá ... tar éis VN* / Welsh *mae wedi VN* “is after V ...” = “has V-ed”. In Irish (but not in Welsh), this construction is claimed to have the feature [+recent], but cf. Wigger (this volume).

4. New functions of the (old or new) perfect

Perfect constructions often acquire additional readings and new functions. There are two main paths attested in IE: perfect > perfective > past and perfect > inferential > evidential.

4.1 Perfective and/or past

An extension into the domain of real preterites can be considered the ‘default’ development of the perfect (if it is not preserved as such). It happened to the old perfect in most branches of IE (see above). For new perfects, such a development is attested in most of Indo-Iranian, in Sardinian (late), and in a large (central) European area comprising North-Western Romance (French-North Italian), Romanian, Central and Southern German, and nearly all of Slavic except (Standard Upper) Sorbian and Eastern South Slavic.

4.2 Inferential (evidential)

Less frequently, the perfect acquired modal nuances via an inferential reading: By conclusion from results, a retrospective category can be interpreted as inferential past: ‘it is wet from rain > has rained > rained in the past (but I did not see it)’.

a. *Sanskrit*

The Sanskrit perfect was a non-witnessed past (Pāṇini: *paro’kṣe* “out of sight”) according to grammarians. This was not yet the case in earlier Vedic (Job 1994) nor in Middle Vedic (1sg *uvasa* “I have stayed”, etc.) though it possibly developed in later Vedic (Ey. Dahl 2012, 2014 and this volume).

b. *Iranian*

In Modern Persian and elsewhere, the perfect can be used as a perfective evidential past, similar to the functional range of the perfect in many Turkic languages. From this starting point, also other evidential categories could develop, e.g., the *mī*-derived imperfective inferential past in Persian. On evidentials, especially in Iranian and Turkic, cf. Johanson & Utas (2000).

c. *Baltic*

In East Baltic, the participle (without copula) as a predicate is used as a reportive mood (‘modus relativus’/ ‘renarrative’); the functional spectrum also includes assumptions (Schmalstieg 1987: 114–116). The past reportive is identical to the perfect without copula (3rd person potentially homonymous), and it seems possible that the perfect played a crucial role in this innovation. A similar development is found in neighbouring southern Balto-Finnic languages (Estonian and Livonian).

d. *Bulgarian-Macedonian (Balkan Slavic)*

In southern Balkan Slavic, the old Slavic perfect was preserved as such, but the same construction developed to a past perfective (aorist) evidential, distinguished from the perfect by zero copula in the 3rd singular. To form a past imperfective evidential (imperfect), a new ‘present’ *l*-participle was coined, e.g. Bulgarian *písel* IMPF “wrote, was writing (evidently)” ⇐ PRS 3SG *píše* vs. old *písal* AOR “wrote/has written (evidently)” vs. *e písal* PRF “has written”. Cf. Arkadiev & Wiemer (this volume).

e. *Albanian*

As already mentioned, a perfect-like construction with suffixed *ka* “to have”, was strongly grammaticalized (univerbation) as the ‘admirative’ mood in Albanian, cf. present *bë-ka* “does (surprisingly/reportedly)”, past (imperfect) *bë-kej* “did (surprisingly/reportedly)”. In contrast to that, the perfect function was taken over by a renewed periphrastic construction (without univerbation and with auxiliary selection), cf. *ka bërë* “has done”, *është bërë* “has been done”.

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Abbreviations

- LIV Rix (1998)
 LIV² Kümmel & Rix (2001)

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CHAPTER 3

Celtic past tenses past and present

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Past tense marked for perfective aspect, resultative, or other typical features of grammatical perfect forms is clearly in evidence in all of the modern Celtic languages, although not normally listed in the standard paradigms. An overview of usages in the modern languages will be given here, the major structures being of fairly recent origin. The formal structure is periphrastic throughout, divided between an older type employing the preposition ‘after’, and a newer one which shows some resemblance to the HAVE-perfects in many other European languages. In agreement with previous authors, these major formal types will be referred to as P1 and P2 respectively. As the question of active vs. passive is crucial here, this side of the matter will be discussed to some extent, as will be the issue of syntactically reduced structures containing traces of a perfect tense. Questions of contact-induced change will not be addressed in this descriptive overview, except on some minor points. Given the grammatical and semantic complexity of this matter, with different developments over six literary languages and a multitude of dialectal varieties, the early (pre)history will not be discussed in much detail here.

Keywords: analytic [vs. synthetic], HAVE-perfect, simple past, recent past, passive

1. Preliminaries

1.1 Overview

The term ‘Celtic languages’ here refers to a group of European languages representing a distinct branch of Indo-European. For lack of sufficient relevant evidence, the earliest stages of Celtic (‘Continental Celtic’) are not considered here. Only the later, historical and contemporary members of the group (= Insular Celtic) are dealt with, viz. q-Celtic or Goidelic/Gaelic (Irish,¹ Scottish and Manx) as well as the p-Celtic

1. The reduction of ‘Irish Gaelic’ to ‘Irish’, although historically justifiable, has an ideological touch, making a de facto minority language appear as the prime language of the nation (similarly *Gaeilge* [na hÉireann] vs. *Gaeilge na hAlban* for Irish vs. Scottish Gaelic).

or Brittonic/Brythonic group: Welsh, Breton, including Cornish, marginally. Most of these supply rich evidence from the Middle Ages to the present that enables us to judge the status of grammatical categories such as the perfect. Notable changes in the literary sources can be stated and, to a lesser extent, in areal patterns, while colloquial usage prior to ca. 1900 remains largely undocumented.

Describing temporal grammar for a group of languages with a long recorded history can be done in a summarizing and concise manner or in a selectively detailed way based on the exposition of examples. I have attempted to do both: some aspects are only touched upon; others are discussed in some detail. Historical and areal features are considered, but not covered in great detail. I draw heavily on previous research, although the widely differing theoretical premises do not merge into a unified picture of this part of grammar. The sources of the examples are indicated throughout, except when based on the author's own competence.

An overview of these languages in terms of typologically salient features will be given at the outset, particularly those which are manifest in verbs. More detailed information can of course be found in some of the publications listed in the bibliography. The main part of the article deals with the two different periphrastic perfects (§§2–3), followed by a discussion of diathesis as far as relevant here (§4), and finally the question of further derived tenses is summarized (§5) and a brief look at non-finite perfect-like structures is taken (§§6–7).

The evaluation of earlier contributions to this topic is somewhat impeded by the general lack of contextual and situational information about instances given as evidence for some category of verbal usage. Another problem are the considerable discrepancies in theoretical approaches, terminology, and interpretation of the linguistic facts by previous scholars.² Given this situation I have refrained from adopting and explicating any particular theoretical framework to capture and sort out the relevant data. The result is a systematic overview of facts and topics as well as a guide to published research and further sources. At some points I have looked more closely at some issues of tense and aspect in Modern Irish.

The term 'perfect' as used here is only defined formally, referring to two periphrastic constructions occurring in these languages, clearly distinct from the preterite throughout. (A different situation in the earliest stages of Irish in particular is mentioned, but not discussed in detail.) However, attaching time-semantic features such as 'resultative', 'completive' or 'recent/distant', etc. to these formal types is somewhat futile as often there are no reliable correspondences between form and

2. For example, Fife (1990) and Heinecke (1999) in their extensive discussions of Welsh verbs are hard to compare, as Fife operates within the framework of cognitive linguistics as developed by Langacker, whereas Heinecke, after lengthy discussion of prominent positions in this field (Comrie, Klein, etc.), opts for Heger's view on time in language.

function. Many instances are too vague or context-free in the secondary literature to support a detailed temporal/aspectual interpretation. Wherever possible, I have proposed more specific features of form types which occur in the area studied.

1.2 Typological features of Celtic verbs

Leaving aside some other peculiarities of this non-‘Standard Average European’ (SAE) group of languages, the verb figures prominently in the grammar of the Celtic languages, when compared to SAE, in a number of ways:

- The order of constituents is VSO, unless S or O are shifted to the left for the purpose of clefting; only in Breton has this focusing effect been bleached to the extent that SVO may be seen as the unmarked order.
- The anaphoric representation of a clause is the bare verb, finite but completely reduced syntactically. This also shows in the (traditional) lack of a particle like ‘yes, no, perhaps’, etc. whereas the preceding verb or auxiliary is repeated in a final form, sometimes taken from an older morphological set. This is most evident in Irish, where the term ‘echo-forms’ has been established.³
- The differentiation of finite form series formed by suffixation (often with fusion of tense and person) is high, reaching eight in Modern Irish, between what are usually termed tenses and moods. Breton and formal Welsh are similarly elaborated, although the functional load is less than in Gaelic. The amount of suppletion in verb paradigms is high, especially in Gaelic, which shows root alternation for verbs also in some types of negative, interrogative or subordinate clauses. This also affects auxiliaries in perfect forms. Periphrastic verb forms / locutions are highly developed, some of which will be the central issue here.
- Personal subject suffixes are obligatory in parts of the paradigm, but can or must be replaced by subsequent personal pronouns in many other configurations; a combination of both by way of concord occurs in Welsh, but not in Gaelic. The impersonal subject forms, going back as they do to older passives, cannot be represented by a pronoun, and thus have distinct suffixes throughout. In parts of the Irish paradigm special personal suffixes are available for verbs in some relative constructions.
- Celtic morphophonology works from both ends: apart from suffixation and some overt prefixation we see initial mutations (‘cryptoprefixation’) whereby initial segments are shifted phonologically from plosive to spirant, voiceless to voiced, etc. For verbs this can be particularly relevant in the way the past tenses

3. See Wigger (2002).

are marked, usually as a trace of preverbal particles, historical or otherwise: Irish *cas* “turn!” viz. *chas* “turned (PST)”.

- In addition to the inflectional devices a variety of analytical and periphrastic formations have evolved over the centuries, with differing degrees of specificity and grammaticalization. Among these are the two competing perfect periphrases which are discussed in detail here, conventionally labelled P1 and P2. Some verbs have largely aspectual functions *sensu lato* (e.g., ‘start’, ‘continue’, ‘stop’, ‘come’), while others occur in auxiliary function (‘do’, ‘get’ ...), but are hardly as grammaticalized as in English. The default auxiliary is ‘be’, mostly used to denote what is usually termed progressive aspect, but is also used for passives and for perfects. Given the finite nature of the auxiliary, all basic (synthetic) tenses and moods can be superimposed on the periphrastic form types, resulting ultimately in a large number of TAM categories (see §5 below).
- There are many lexical gaps in the verb inventory of most Celtic languages for the translation of rather ordinary concepts like ‘love’, ‘borrow’, ‘sing’, etc.: often apparently awkward circumlocutions are used, unless one ‘borrows’ the appropriate English verb, in Irish marked with a specific class marker *-áil*, to facilitate inflection.⁴ These limitations of the verb lexicon include the large-scale lack of modal verbs as well as the non-existence of ‘have’, which is of great importance in the discussion of the perfect.
- Derivation of verbs from nominal or adjectival bases is fairly well developed, more so than in English, although not to a very large extent, owing to the early disuse of prefixation. Old Irish shows a rich development of preverbs similar to most IE languages, from MIr. on unproductive, phonologically reshaped and mostly obscured or discarded in the later stages of the language. The old verbal system showed some similarity with Slavic and Germanic verb prefixation as known today, including some of its aspectual functions. In fact, a non-lexical prefix *ro-* (< **pro*) is usually regarded as an OIr. perfect marker, with parallels in early forms of Welsh and Cornish. In modern Celtic languages free adverbial elements have largely covered this grammatical and lexical field, which is somewhat similar to English in this respect (see §7 below).
- Although codified standards exist throughout, with a varying degree of adherence, variation along parameters such as style, class, age and area are highly relevant to much of verb grammar. This is most obvious in Welsh where the distinction between formal and informal renders a unified description futile.⁵

4. See Wigger (2000: 181f.).

5. This is sometimes seen as a case of diglossia, which has not successfully been bridged by the creation of an intermediary *Cymraeg Byw*. The two most extensive studies on this topic, Fife (1990) and Jones (2010), explicitly deal with informal Welsh.

In the early stages of Welsh grammatology, well into the 20th cent., the focus was on the literary norm, in many ways close to medieval Welsh, from which the spoken varieties had drifted away considerably in important structural areas whereby periphrastic verbal structures became dominant in contemporary spoken Welsh, including the expression of temporal and aspectual relations and perspectives.

2. 'After'-perfect (P1)

2.1 General structure

A common line of development towards a perfect tense in Celtic is constituted by the nominal representation of the verbal concept⁶ in combination with a temporal preposition denoting anteriority, of which a number of different formal representations can be found. In Wagner's (1959) terms this is P[erfect]1, and I will occasionally revert to this labelling by using P1 or P2 for convenience, as the two types are always neatly distinct, if only in form.

This structure occurs in most of the area covered here, although with varying functions and degrees of relevance. It could be labelled an eastern feature, being less prominent in Ireland, compared with Scotland, Man and Wales. Greene (1979) ranks it equal with the competing type P2, although calling both "free syntactical constructions", as far as Irish is concerned. Apart from the question of grammatical status, the enduring bilingual situation in Ireland has produced some remarkable effects concerning this particular type of perfect, even if it has ceased to be a significantly specialized category in its own right (see 2.4).

The general structure is, in Irish, 'be' & NP1 & PREP & (NP2 & PTCL) & VN. A simple example would be:

- (1) *Tá Sinéad tar éis amhrán a chasadh.*
 is S after song (to) sing.VN
 "Janet has sung a song."

The prepositions most used in Irish here are *tar éis* and *i ndiaidh*, rarely *a haithle*, all meaning "after"; it should be noted that these are 'secondary' or compounded prepositions consisting of a simple preposition (*tar* respectively *i*) and a nominal element (*éis* or *diaidh*) which has hardly any other occurrence in the modern

6. Calling this 'verbal noun' (VN), as usual, or 'infinitive', certainly makes some difference, depending on the criteria; this is no major issue here. Similarly, the 'verbal adjective' (VA), essential in the formation of P2 perfects, is often referred to as past participle; I mostly use the established label VA.

language. The nominal status is corroborated by the fact that the nominal element in this PREPP is attributive, thus taking the genitive, or when pronominal, the appropriate possessive pronoun: *tar éis an lae* “after the day”, *tar m'éis* “after me”⁷ respectively *i ndiaidh an lae/i mo dhiaidh* “after the day”/“after me”. The choice between *tar éis* and *i ndiaidh* is largely an areal feature, the latter being prevalent in the North, e.g. Donegal, often spelt *i ndéidh* there.

2.2 Earlier stages

In earlier stages of Irish, and today still in eastern Gaelic (see 2.7), the OIr. preposition *iar*, reduced to *ar* already in Middle Irish, is used in a similar function, not to be mistaken for the local preposition *ar* “on”, which goes back to older *for*, although there is some overlap.⁸ The first records for this form type, including the use of the auxiliary *bí*, date from the MIr. period as well, whereas OIr. examples of *iar* + verbal noun are non-finite. The full structure is mentioned in an Irish grammar from the early 17th century (Bonaventúra Ó hEodhasa; see Mac Aogáin 1968), which would point to a relatively common usage in Classical Irish, although rather in non-literary usage (Ó Sé 2004: 190).

The areal distribution in Ireland roughly shows a north-south cline with decreasing incidence in the southerly varieties, where p2 is clearly the dominant perfect type. But even in Donegal p1 is less frequent, in spite of the closeness to Scotland, to go by a statistical analysis done by Ó Sé (2004: 229).

2.3 Function

Given the uneven coexistence of p2 and p1 in Irish, the question as to which specific function p1 may have is clearly justified. This type has often been seen as a mode of signalling a ‘recent past’ (e.g. Greene 1979: 126), and translated with added ‘just’ or similar indications of a short time span in relation to the moment of utterance. If this is correct, it can only be valid in a relative sense, depending on the type of event referred to.⁹ Apparently good tokens are often presented, but on close scrutiny of actual use there is little evidence for a semantic feature [± short interval], even in areas where p1 is much less in use than p2. Ó Sé remains rather vague on this issue,

7. The pronominal use here seems rather restricted. This is in line with the high degree of amalgamation in most spoken varieties, e.g. *tréis*, *thréis*, *théis*, *léis*.

8. Notably in locutions which can hardly be interpreted in a local or temporal sense, such as *ar meisce* “drunk”, *ar eolas* “known”.

9. Greene (1979: 128) rightly notes, commenting on a sampled sentence with *tar éis*, that having put a new roof on a house a year ago justifies a translation with added ‘just’ (or ‘only’).

although this is the main topic of his study: “... that the ‘after’ perfect in this dialect has specifically the force of a ‘recent perfect’. This seems generally plausible, and I have accordingly added ‘just’ to the translations below” (2004: 230).

As this is not a minor issue, both theoretically and in academic discourse, it should be pursued. To add fresh evidence to this debate, I summarize here the results of two recent corpus analyses. The first covers a mid-western dialect area of Irish, representing 90 speakers who were growing up around 1900, having produced over 100 hours of spontaneous conversation.¹⁰ This large dataset yields only 37 instances of P1. Apart from the very low frequency, the functional side remains somewhat dubious: 28 of the examples could perhaps be interpreted as recent past, though not necessarily so:

- (2) *Dúirt sé go raibh an mhaighdean mhara thar éis a bhean a*
 said he that was ART virgin sea.GEN after his wife (to)
sciobadh uaidh.
 snatch.VN from.3SG.M
 “He said that the mermaid had snatched his wife from him.” (CC:RM4-02-32)
- (3) *Bhí mé thar éis Gaillimh a fheiceáil an bhliain roimhe sin*
 was I after Galway (to) see.VN ART year before.3SG.M DEM
ag gnóthachtáil Craobh na hÉireann.
 PROG win.VN branch ART.GEN.F Ireland.GEN.SG
 “I had seen Galway (just?) the year before winning the championship of Ireland.”
 (CC:RM5-05-03)

In both these cases the preterite would be possible as well as P2; the choice of P1 here may be rather an indicator of increased subjective relevance (e.g. anxiety) than of temporal proximity. Some instances contain an explicit time adverb(ial) which conveys proximity thus making the use of *tar éis* as an indicator for this redundant, unless the speaker would try to emphasize the ‘novelty’ by using this complex construction:¹¹

- (4a) *Deir siad liom gur séipéal álainn é, agus tá sé thar éis a*
 say they to.1SG that.COP chapel beautiful it and is it after (to)
bheith déanta anois le fíorghairid.
 be.VN make.VA now since very_short
 “They tell me that it is a beautiful chapel, and it has been built very recently.”
 (CC:FO2-06-05)

10. Initiated by Hans Hartmann (Hamburg) in cooperation with Tomás de Bhaldraithe (Dublin). The recordings were made in 1964, transcriptions completed in 2000. Available as *Caint Chonamara* at www.sksk.de/materialien.php.

11. This is in fact a combination of P1 & P2; see 3.8 below.

This may well be reduced to:

- (4b) *agus tá sé déanta anois le fíorghairid.*
and is it make.VA now since very_short

Rarely there seems to be no option, as in:

- (5a) *Bhí sí tar éis a bheith i mBearna ag déanamh na Nine Fridays.*
was she after (to) be.VN in Bearna PROG make.VN ART N.F.
“She had been in Bearna doing the Nine Fridays.” (CC: FO6-10-01)

As *bí* has no past participle (=VA) P2 cannot be formed, and the preterite alone, although grammatically correct, would result in a rather flat narrative profile, still perfectly natural, given the ‘sluggishness’ about finer temporal distinctions in speakers of Irish, which narrows the chances for an explicit pluperfect:

- (5b) *Bhí sí i mBearna ag déanamh ...*
was she in Bearna PROG do.VN
“She was in Bearna doing ...”

Eleven instances from *Caint Chonamara* are clearly discourse-specific, referring to previous utterances in a conversation. This particular environment represents the most frequent use of *tar éis* in the corpus:

- (6) *Nach bhfeiceann tú féin go bhfuil mé thar éis a inseacht dhuit.*
INT.NEG see.PRS you self that is.DEP I after (to) tell.VN to.2SG
“Don’t you see that I have just told you.” (CC: RM3-09-05)
- (7) *Tá tusa thar éis a rá nach seasann sé ach mí.*
is you after (to) say.VN that.NEG stand-PRS it but month
“You just said that it lasts only a month.” (CC: TM12-14-05)

There is no doubt that referring back to a previous utterance in dialogue implies a short time span. But it is not reasonable to assume that the speaker uses this formal structure just to indicate the ‘recentness’ of the speech act: in terms of conversational analysis this is rather a marker of relevance: insisting on a point made previously, or taking up a point raised by a partner.

2.4 Current usage

More recent corpora are a richer source for this type, mostly with *tar éis*, not so much *i ndiaidh*. A large number of occurrences of the *tar éis* construction can be found which show no trace of immediately past events. Here are just two examples from contemporary prose found at www.gaois.ie (last accessed October 12, 2017):

- (8) *Bhí an t-aturnae tar éis rudaí a shocrú dúinn.*
 was ART attorney after thing.PL (to) settle.VN for.1PL
 “The attorney had settled things for us.” (Eilís Ní Dhuibhne)
- (9) *Tá mé tar éis na mílte siopaí bláthanna a fháil.*
 is I after ART thousand.PL shop.PL flower.PL (to) get.VN
 “I have found thousands of flower shops.” (Siobhán Parkinson)

It would seem that authors such as these, who probably learnt (and use) Irish as a second language, would see P1 as a typically ‘Gaelic’ construction, and overuse it in a way similar to the analogous ‘after’-periphrasis in Hiberno-English (see 2.6). Avoiding the sometimes troublesome search for ‘correct’ finite past tense forms may also be a reason for choosing this mode. More in line with native Irish usage would be P2-versions like these:

- (8a) *Bhí rudaí socraithe ag an aturnae dúinn.*
 was thing.PL settle.VA by ART attorney for.1PL
- (9a) *Tá na mílte siopaí bláthanna faite agam.*
 is ART thousand.PL shop.PL flower.PL get.VA by.1SG

Or indeed in the preterite, not necessarily narrative:

- (8b) *Shocraigh an t-aturnae rudaí dúinn.*
 settle.PST ART attorney thing.PL for.1PL
- (9b) *Fuair mé (amach) na mílte siopaí bláthanna.*
 get.PST I (out) ART thousand.PL shop.PL flower.PL

2.5 Incompatibility

Restrictions rooted in verb semantics, or in terms of syntactic idiosyncrasies have not been researched to any serious extent, although there are many. Thus purely relational verbs are barred here, even if they may take the past tense (such as *bain le* “have to do with”), as are all verbs with absent or purely formal subjects like *teip* “fail”, *teastaigh* “miss”, etc.

Sentential negation blocks the formation of P1 in Irish, unlike that of P2. This seems to apply even to cases where the discontinuous equivalent for ‘only’ *ní ... ach*, lit. “not ... except” is present, which could function as an equivalent to ‘semi-native’ *díreach* “just” (temporal). But neither of these is typically found in this context, while occurring freely and frequently in P2. Similarly, interrogatives with sentence scope are out of place, unless perhaps in an quotative mode:

- (10) A: *Tá Máire tar éis Nóra a mharú.*
 is Máire after Nóra (to) kill.vN
 B: *An bhfuil sí, i ndáiríribh, tar éis N. a mharú?*
 INT is she seriously after N. (to) kill.vN
 A: “M. has killed N.” B: “Has she really killed M.?”

Summing up, I propose that in native Irish the formal distinction between p1 and p2 should not be seen as encoding ‘short time’ and ‘long(er) time’, implying that this contrast does not have enough cognitive relevance to speakers to be grammaticalized to any degree. Apart from other possible motives for preferring p2 mentioned above, the decisive criteria are of syntactical and textual nature. I return to this in §6.

2.6 Hiberno-English

Whatever its precise role in Irish itself is, in time and space p1 is a prominent feature of ‘uneducated’ English in Ireland, where it acquired a fairly stable position as a past tense. The account given by Henry (1957) claims ‘recent past’, but the general usage has gone beyond that, as Filppula’s (1999) later research shows, although the latter too seems to favour the ‘recent past’ hypothesis. As p2 would be a more cumbersome challenge in trying to project Irish structures onto English utterances, p1 offered a better template for such a transfer. Perhaps avoidance of the ablaut rules in a Germanic language, necessary for past verb forms in many common English verbs, a grammatical feature which has no parallel in Celtic, contributed to this option. But the salience of p1 in Hiberno-English culminated as a grammatical shibboleth of what emerged as Stage Irish-English in the 19th century, which certainly did not mirror the real spoken language in the fully or partly anglicized parts of the country. But the structure was clearly present, and it seems to have reverberated in the later usage of Irish.

This structure is similarly characteristic of Hebridean English and other contact varieties in Scotland, at least among bilingual speakers:

- (11) “... but of course I am after forgetting all that lot now.” (Sabban 1982: 155)

Clearly there is no implication of ‘recent past’ here, which is no surprise as p1 is close to being the unmarked past tense in ScGl., as will be shown in the following section.

2.7 Scottish Gaelic

To the east of Ireland p1 increases much in usage, with some p2 options in the southwest of Scotland,¹² and more still in Man, while decreasing in aspectual potential: In ScGl. and Mx configurations of *ar* + vN figure largely as periphrastic past tenses, shifting the simple past further into the background as a stylistically marked category mostly for narrative settings, and in auxiliaries. In what sense these structures can be judged as ‘perfect’, in particular semantically, is not clear from tokens like:

- (12) *Tha iad air a’ chlach a thogail.*
 is they after ART stone (to) lift.vN
 “They have lifted the rock.” (Lamb 2003: 59)
- (13) *Bha mi air tighinn.*
 was I after come.vN
 “I had arrived.” (Gillies 1993: 203)

Instead of *air*, speakers in parts of Scotland use *an dèidh* / *an deaghaidh* ‘after’, which neatly corresponds to Northern Irish *i ndéidh*:

- (14) *Bha sinn an dèidh pàirc a ghlanadh.*
 was we after field (to) clean.vN
 “We had cleared a field.” (South Uist; after Ó Sé 2004: 217)

To express a recent past, (*i*)*ar* > *air* “after” can be expanded to *air ùr* in ScGl., with *ùr* meaning “new” also as a common adjective. (Cf. Welsh *newydd* in 2.9.)

2.8 Manx

The common perfect-like structure in Manx resembles the Scottish one, using *er* “after”, differing however in mutations on the following vN:

- (15) *Ta yn scaddan er naase ghoan.*
 is ART herring after grow.vN scarce
 “The herring has become scarce.” (NB 130; after Ó Sé 2004: 223)

Ó Sé (2004: 225) points out that this perfect occurs also in an experiential sense, unlike Irish, but similar to English:

12. E.g. in Islay (Grant 1987: 194); see also 3.9.

- (16) *Ta mee er vakin fastyryn stermagh.*
 is I after see.VN evening.PL stormy
 “I have seen stormy evenings.” (NB 134; after Ó Sé 2004: 225)

Apparently the use of p2 is more significant in Manx than in ScGl., but quantitative and functional differences are not clear; see also 3.9. For passive structures in ScGl./Mx see 4.3.2.

2.9 Welsh

Welsh has no past participle which would lead to the formation of forms analogous to Gaelic p2. Relevant for the present study are past tense periphrases formed with *bod* “be” + *wedi* “after”, formally equivalent to *air/er* in eastern Gaelic, as well as Irish *tar éis*, etc., such as:

- (17a) *Mae ’r dillad wedi sychu ar y lein.*
 is ART clothes after dry.VN on ART line
 “The clothes have dried on the line.”

This contrasts with the present imperfective / progressive, marked with the particle *yn*:

- (17b) *Mae ’r dillad yn sychu ar y lein.*
 is ART clothes PROG dry.VN on ART line
 “The clothes are drying on the line.”

The synthetic forms of lexical verbs are largely relegated to a high register, although a preterite must be taken into account as contrasting with the *wedi*-periphrasis:

- (17c) *Sychodd y dillad ar y lein.*
 dry.PST ART clothes on ART line
 “The clothes dried on the line.”

Jones (2010: 148) labels this simple past ‘perfective’ on account of its function of representing situations as bounded, thus contrasting with the ‘imperfective’ periphrasis formed with *yn* + VN. The *wedi*-periphrasis is ‘perfect aspect’ in his terms, and is treated similarly in some other descriptions. Heinecke (1999: 214) defines the simple past, using his particular terms, as perfective and simultaneous, and the *wedi*-type as perfective and anterior. As for the actual distribution of the two types it is to be noted that the use of the preterite is not as extensive as in Irish, being perhaps more specifically a narrative tense, apart from certain subordinate structures.¹³

13. Watkins (1993: 176) “in colloquial Welsh [...] the synthetic preterite still thrives”. But an indication of its functional domain is not given. Unfortunately, the category ‘narrative’ (which

A variant can be formed by using the (original) adjective *newydd* ‘new’ in a special function to form a recent perfect, considering that older distinctions had not supplied this particular feature. Unlike the Scottish Gaelic parallel *air ùr* this element is not added to the past particle (*air* respectively *wedi*) but replaces it, in a paradigmatic relation.

- (18a) *Yr wyf newydd ymolchi.*
 PTCL am new wash.VN
 ‘I have just washed myself.’

but

- (18b) *Yr wyf wedi ymolchi.*
 PTCL am after wash.VN
 ‘I have washed myself.’ (after Thomas 1996: 92)

This supports the conclusion that the *wedi*-type in itself has no such marked function. As this is clearly not resultative in many instances, it may be fairly far advanced along the path of becoming the unmarked past tense.

In negated sentences *wedi* is commonly replaced with *heb* ‘without’:

- (19a) *Mae’r plant heb ddod.*
 is ART children without come.VN
 ‘The children haven’t come.’

A more ‘normal’ version using the negative copula and the negative exponent *ddim* (cf. French *pas*) would be:

- (19b) *Dydy’r plant ddim wedi dod.*
 is.not ART children NEG after come.VN

The difference is not obvious unless scope is involved, a matter not pursued here. But it should be noted that the non-occurrence of an event could be taken as an indication that an event is expected in the future, whereby (19b) would read ‘the children haven’t come yet’ (but will/should/must come).

A similar use of ‘without’ in conjunction with the verbal noun occurs also in Irish to express non-achievement, definite or temporary, as in

might help here) is hardly ever mentioned in the literature. In a more general vein, one doesn’t have to be a follower of Weinrich’s radical views on tense functions, but some more attention to text linguistics in a wide sense would help to get a better grip of this ‘perfect’-topic. As for Celtic, more from this kind of angle can be found in the elaborate studies of Shisha-Halevy (1998) on Welsh, and Eshel (2015) on Irish, both understandable only within a rather different paradigm which cannot easily be integrated here.

- (20) *Tá an obair gan déanamh (fós).*
 is ART work without do.VN (yet)
 “The work hasn’t been done (yet).”

This is typically a passive structure. A direct match with the active Welsh (19a) is hard to find:

- (21a) ??*Tá na páistí gan tíocht.*
 is ART.PL child.PL without come.VN
 “The children haven’t come.”

The negated after-construction is dubious too:

- (21b) ??*Nil na páistí tar éis tíocht.*
 is.not ART.PL child.PL after come.VN
 “The children haven’t come.”

unless as a contradiction to a preceding opposing statement. Here P2, which Welsh lacks, is a fair option:

- (21c) *Nil na páistí teagtha (fós).*
 is.NEG ART.PL child.PL come.VA (yet)
 “The children haven’t come (yet).”

Yet the preterite would be the straightforward choice, in native Modern Irish:

- (21d) *Níor tháinig na páistí (fós).*
 NEG.PST come.PST ART.PL child.PL (yet)
 “The children didn’t come (yet).”

3. P2: HAVE-perfect

3.1 General structure

In this section I discuss form types made up of a VA plus auxiliary ‘be’ as well as a prepositional phrase formed with *ag*, denoting (a) proximity: ‘at’, (b) possession, (c) agent: ‘by’. This has grown into a common Irish structure, although less developed in the northern varieties, and largely absent from Scottish Gaelic, although present in Manx. Its origin is still debated, and in the absence of records of early spoken language this question remains open. This type is clearly a later development than P1, with early records occurring only after 1600. Nevertheless, it represents what should be seen as the dominant grammatical means of expressing a resultative perfect in contemporary Irish, cf. (22).

- (22a) *Tá an t-alt críochnaithe agam (anois / ar deireadh).*
 s ART ART-article finish.VA by.1SG now at last
 “I have finished the article (now/at last).”

As (22a) shows, the completion of an activity is focused on, thus describing a situation in the present environment. Previous engagement in the activity is necessarily implied, but the variant (22b), which is similarly a statement about the present world, since the auxiliary is in the present tense, shows more affinity with a completed activity in the past, albeit with a result reaching into the present time.

- (22b) *Tá an t-alt críochnaithe agam le seachtain.*
 is ART ART-article finish.VA by.1SG with week
 “I have had the article finished for a week.”

The dual nature of such constructions, establishing a link between past and present, or more precisely, between the anterior event and the topic time, is of course the essential quality of any perfect tense. But to render an achieved state of affairs in the preterite would also be quite in order, although the temporal adjuncts would have to be adapted:¹⁴

- (22c) *Chríochnaigh mé an t-alt (seachtain ó shin).*
 finish.PST I ART ART-article (week since)
 “I finished the article (a week ago).”

In spite of some constraints on its use there are no good reasons for excluding this type of perfect from the full verb paradigm, unless one would allow only synthetic forms, as is the case with most didactical grammars and manuals of Irish.¹⁵ Yet many authors acknowledge its existence as a grammatical form type in its own right, beginning with Zimmer (1901)¹⁶ and later Dillon (1941), in a short article

14. Testing the compatibility of a variety of temporal adjuncts with verb tenses would help to understand time-semantic properties of the inflectional categories better. The literature shows very little of this.

15. The highly detailed account on the history of Irish, *Stair na Gaeilge*, (McCone et al. 1994) finds no room for this theme in its 905 pages, except for brief remarks in the sections of Scottish Gaelic and Manx. More dramatically still, the massive monograph (Ó Curnáin 2007), comprising over 2500 pages on a small western Irish dialect, ignores this matter, perhaps in continuation of the trend in more modest dialect manuals published by DIAS.

16. He is somewhat annoyed by Irish grammarians who ignore this type:

Die neuirischen Grammatiker schweigen sich über diese wichtige Neubildung des neuirischen Verbes vollständig aus, soweit ich sehe, obwohl man kaum eine Seite genuinen Neuirisch [sic] lesen kann, ohne einem Beleg für die eine oder andere Form zu begegnen. [p. 65] ... Es ist daher

proposing an early origin. Lewy (1942) evidently saw the type as an integral part of the Irish verb system, yet his comment on it is very brief.

It figures as P2 in Wagner (1959), reverting the numerical order Henry (1957) had chosen for analogous types in Hiberno-English. It was labelled ‘perfective aspect’ in Wigger (1972), where the role of P1 was described as rather marginal for Irish.¹⁷ Ó Sé (1992, 2004), the most detailed account to-date, deals with it under the plain label ‘perfect’. Mac Eoin in a summary description of Irish states: “The [past] participle is much used with the substantive verb to form periphrastic tenses with perfect meaning” (1993: 135), and even in the revised standard grammar of Irish both P1 and P2 are mentioned:

- (23a) *Tá Pól tar éis an doras a dhúnadh*
 is Pól after ART door (to) close.VN

vs.

- (23b) *Tá an doras dúnta ag Pól.*
 is ART door close.VA by Pól
 “Paul has closed the door.”

The comment runs: “Perfect tenses: The sense of the two above sentences is not the same: in the first reference is made to the action Pól did to the door; in the second one refers to the state of the door on account of Pól’s activity” (Ó hAnluain 1999: 139; my translation). Other authors see it as a “free syntactic variant [...] not integral part of the verbal system” (Greene 1979: 125). Ó Corráin (1997: 169) emphasizes the localistic basis of this ‘construct’, while subsuming it under the heading “grammaticalized or systemic aspectual distinctions”.

Some properties of this Modern Irish perfect will be considered in greater detail in the following sections.

Zeit, dass neurische Grammatiken, die die gesprochene Sprache lehren wollen, davon gebührende
 Notiz nehmen. [p. 98]

To make his point he then supplies rich evidence from Munster texts. In his analysis he equates the type with European HAVE-perfects, which has mostly been taken for granted since.

17. This analysis, largely conforming to that of Murphy (1970), though then unread, was later adopted in Ó Siadhail (1989) and again in Russell (1995).

3.2 Possessive character

The configuration *tá X ag Y* ‘X is at Y’ tends to express possession (‘Y has X’) rather than location particularly when Y denotes an animate being, thus functioning as an equivalent of ‘have’, ‘avoir’, ‘haben’, etc.¹⁸ The common auxiliary function of this Irish periphrasis may thus be seen here to form a perfect tense analogous to what is common in many European languages. But a salient difference lies in the syntactic position and informational role of the ‘possessor’, being the subject in ‘have’-languages, but part of a prepositional phrase here.

A reasonable evaluation of this Irish perfect shows it to be a passive construction with an agentive phrase, which is optional. Thus (22a) can be reduced to (22d):

- (22d) *Tá an t-alt críochnaithe.*
 is ART ART-article finish.VA
 “The article is finished.”

To all intents and purposes this is a simple sentence in the present tense describing a state. The participle does, however, retain a trace of past activity, which would be clearer if *críochnaithe* “finished” were to be replaced with *scríofa* “written”, *léite* “read” or *dóite* “burnt”, all describing specific activities.

If the full p2, including the agent phrase, were to be rendered as ‘X is/has been done by Y’, as a passive structure, it would be a close match with the Irish version. The crucial issue of active vs. passive in Irish, and the respective interpretation of p2 has a long history of debate and will be taken up in §6.

3.3 Related structures

A simple adjective can take the place of the VA:

- (24a) *Tá mé bodhar agat.*
 is I deaf by.2SG
 “You have deafened me.”

18. It should be noted however that (a) other prepositional locutions than the *ag*-phrases relevant here represent ‘have’ in Irish, such as the ‘bad-state’ types (hunger, fever, shame, etc. being on, not at me), (b) other ‘possessive’ relations are expressed with *le* ‘with’ in conjunction with the operator called copula in Irish grammar, as distinct from the auxiliary *bí* which is required for the constructions discussed here. *Le* also functions in Irish verb grammar as a marker for prospective aspect, or else for deontic modality.

Alternatively, the VA of a cognate verb takes this place, if available:

- (24b) *Tá mé bodhraithe agat.*
 is I deafen.VA by.2SG
 “You have deafened me.”

Adverbs also occur in this environment:

- (25a) *Nuair a bhí an claíomh ionann’s abhus aige ...*
 when REL was ART sword nearly on.his.side by.3SG.M
 “When he had almost caught hold of the sword ...” (CC: Carna3–187)

Here a purely localistic interpretation is equally valid, with the sword being physically close to the agent, although that would still be understood as the result of an action. The most likely verb to describe the activity (‘pull’) could in fact be spelt out inside this construction, unlike in the original version:

- (25b) *Nuair a bhí an claíomh tarraingte ionann’s abhus aige ...*
 when REL was ART sword pull.VA nearly on.his_side by.3SG.M
 “When he had almost pulled the sword ...”

This would most likely pass for a normal P2, actually functioning as a pluperfect (see 5). But the localistic reading is not completely ruled out. In this instance, involving movement, it should be noted that the merger of *chuig* ‘towards’ and *ag* ‘at’ in this dialect adds to the ambiguity.

It has been assumed that the use of simple adjectives in such environments started the development of the Irish HAVE-perfect, but clear historical evidence is missing, nor have contemporary structures in this grey zone been sampled and analysed thoroughly. It is not obvious how to classify completive utterances like *Tá mé réidh leat* ‘I am finished with you’ which, unlike its English counterpart, has no verbal equivalent such as **Tá mé réitithe leat* although a verb *réitigh*, derived from *réidh* ‘ready’ clearly exists, meaning ‘make ready, prepare’. The verb *críochnaigh* ‘finish’ does not seem to occur in this locution.

3.4 Definiteness, relevance and proximity

If the object noun *alt* in (22a) were indefinite (‘I have written an article’), the probability of the perfect being used would be lower and the preference for the preterite in Irish for talking about ‘anything past’ would work here. But the individuality of the result of some activity, hence definiteness, turns the focus onto the existing achievement, which would make the utterance resultative, supporting a P2 expression.

This has no bearing on the time span into the past: description of events yesterday or only seconds ago does not in itself justify the use of the perfect, unless the results are relevant for the moment of utterance – provided the speaker wants to show this. But explicit indication of some past time precludes the use of the perfect, unless two-level anteriority/posteriority is intended to be expressed (see 5. below). A sentence such as (26a) has no perfect alternative such as (26b):

(26a) *Scríobh mé alt am éigin / inné / ar maidin.*
 write.PST I article time some / yesterday / on morning
 “I wrote an article some time/yesterday/this morning.”

(26b) **Tá alt scríofa agam am éigin / inné / ar maidin.*
 is article write.VA by.1SG time some / yesterday / on morning
 “?I have written an article some time/yesterday/this morning.”

However, if the auxiliary is preterite (or future in case of ‘some time’), or the adverbials are adapted to centre around the deictic origo of the utterance (‘now, today, this year’ ...), P2 as in (26b) is possible.

3.5 Options and constraints

In line with the passive character of Irish P2, assumed by many scholars (see §4), it mainly occurs with what are usually called transitive verbs, although some subgroups are excluded for semantic and/or syntactic reasons. Conversely P2 occurs with some verbs which take no direct object.¹⁹ Thus *codail* “sleep” occurs with ‘internal’ objects such as *néal* “cloud, wink”, or with nouns which formally are direct objects but semantically just specifications of time-spans in non-adverbial shape or position ((27)). A few verbs take no subject, such as *teip* “fail”, the experiencer being stated in an obligatory PREPP ((28)). Both these examples are excluded from P2 (not P1) as well as passivization; even the VAs are not in use, but can be construed here:

(27a) **Tá uair a’ chlog codailte agat.*
 is hour on clock sleep.VA by.2SG
 “You have slept for an hour.”

19. This matter is clearly underresearched. As in German grammar it is more to the point to talk about ‘passivizeable’ verbs, although the term is self-referential. *Hier wird nicht geraucht!* “One doesn’t smoke here” has no structural parallel in English, nor in Irish: **Níl (tobac) caite anseo.* unless the impersonal ‘rogative’ *Ná caitear (tobac) anseo* would fill the gap.

- (27b) **Níl néal codailte agam.*
 is.NEG wink sleep.VA by.1SG
 “I haven’t slept a wink.”

- (28) **Tá teipthe orainn.*
 is fail.VA on.1PL
 “We have failed.”

Some semantic verb classes can be excluded categorically, such as purely relational types, which are mostly ‘timeless’ anyway: *baineann A le B* “A has to do with B”, cannot be changed into any sort of perfect, nor into a passive. Cognitive and performative verbs are also largely excluded, except for some configurations without agentive phrase (mostly), but impersonal/collective, as in:

- (29) *Tá sé ceaptha / ráite go ...*
 is it think.VA / say.VA that
 “It is thought/said that ...”

These are habitual rather than perfective, in spite of their appearance, thus roughly equivalent to the impersonal counterparts *ceaptar/deirtear go*

p2 with verbs of perception is possible, but limited in ways not studied so far.

(30a) is acceptable, yet less likely than (30b), with unmarked preterite:

- (30a) *Tá scéal aisteach cloiste agam aréir.*
 is story strange hear.VA by.1SG last.night
 “I have heard a strange story last night.”
- (30b) *Chuala mé scéal aisteach aréir.*
 hear.PST I story strange last.night
 “I heard a strange story last night.”

Similar sets could be formed with *feic* “see”. The intentional counterparts to these verbs, namely *éist* “listen” and *breathnaigh* “look” do not occur in p2 structure, if only for their complements being prepositional.

Verbs of motion are marginal here, although there is a fair amount of evidence from the southern end of the Irish perfect cline: speakers of Munster variants find no fault with sentences such as (31a), while (31b) would be more acceptable in Connacht, in a resultative sense.

- (31a) *Tá imithe aige.*
 is go.VA by.3SG
 “He has gone.”

- (31b) *Tá sé imithe.*
 is he go.VA
 “He has/is gone.”²⁰

This regional difference is corroborated by examples without (optional) object, which are not rare in Munster:

- (32a) *Tá ite aige.*
 is eat.VA by.3sg
 “He has eaten.”

This extended usage has however not reached structures where the object is obligatory, i.e. strictly bivalent verbs:

- (32b) **Tá déanta aige.*
 is do.VA by-3sg
 * “He has done.”

In the rest of the country the simple past would be the default choice, unless normal P1 or P2 were chosen:

- (32c) *D’ith sé (béilí).*
 eat.PST he meal
 “He ate (a meal). / He has eaten (a meal).”

Similarly, a version such as (33a), mentioned by O’Rahilly (1932) and cited in Greene (1979: 140) is clearly a southern feature:

- (33a) *Tá sé fachta bás.*
 is he get.VA death
 “He has died.”

Further north this would mostly be said as a preterite:

- (33b) *Fuair sé bás.*
 get.PST he death
 “He (has) died.”

Even if the death had occurred very recently, this choice of tense would be quite normal:

20. The obvious difference in English here is neutralized in Irish.

- (33c) *Fuair sé bás cúpla nóiméad ó shin.*
 get.PST he death couple minute since that
 “He (has) died a few minutes ago.”

The P2-structure is out of place here:

- (33d) *ʔTá bás fáite aige cúpla nóiméad ó shin.*
 is death get.VA by.3SG couple minute since that

The P1-equivalent is more likely to occur, in particular with the specification of the time span:

- (33e) *(?)Tá sé tar éis bás a fháil cúpla nóiméad ó shin.*
 is he after death (to) get.VN couple minute since that

Telic agentive verbs with animate agents are very much in the foreground of discussion on the perfect, but a better understanding of these languages would arise if various other types of states and processes were researched in reasonable theoretical terms and on the basis of rich material. Three Irish examples may illustrate this point:

- i. The verb *ith* “eat” usually denotes consumption of food (see (32) above). But when coastal erosion is at issue, we find statements like:

- (34a) *Tá an dumhach ite ag na taoillí arda.*
 is ART dune eat.VA by ART.PL tide.PL high.PL
 “The dunes have been eaten by the high tides.”

This is clearly resultative, including an agentive phrase, although the evidence remains in the background as the former existence of dunes is presupposed; also this could be meant as a partial process, with ‘unfinished’ visible remnants. When talking about this as an ongoing process (currently visible, at high tide, or extending over long periods) we get

- (34b) *Tá an dumhach dhá ithe ag na taoillí arda.*
 is ART dune at.POSS.3SG.M eat.VN by ART tide.PL high.PL
 “The dunes are being eaten by the high tides.”

Both versions are periphrastic passives, and the former would clearly qualify for a perfect. But contrary to the default rule, whereby the simple past is always an option, (34c) sounds odd, the imperfective (34d) being more adequate.

- (34c) *ʔD’ith na taoillí arda an dumhach.*
 eat.PST ART.PL tide.PL high.PL ART dunes
 “The high tides ate the dunes.”

- (34d) *Bhí na taoillí arda ag ithe na duimhche.*
 is.PST ART.PL tide.PL high.PL PROG eat.VN ART.PL dunes.GEN
 “The high tides were eating the dunes.”

- ii. A process taking place with no agent or cause other than e.g. gravity, in conjunction with other relevant circumstances, can be seen in various aspectual modes:

An imperfective description such as (35a) is uttered in situations where the process can be observed in real time; in this case most likely a warning:

- (35a) *Tá an dréimire ag titim.*
 is ART ladder PROG fall.VN
 “The ladder is falling.”

P1 and P2 can be used equally here: the definiteness of *dréimire* points at a situationally given context.

- (35b) *Tá an dréimire tar éis titim.*
 is ART ladder after fall.VN
 “The ladder has (just?) fallen.”

- (35c) *Tá an dréimire tite.*
 is ART ladder fall.VA
 “The ladder has fallen.”

The perfective (35d) would be uttered as a response to ‘what (had) happened?’ even in dialogue just after the event. But it would equally well be part of some narrative, recalling events either witnessed or fictitious.

- (35d) *Thit an dréimire.*
 fall.PST ART ladder
 “The ladder fell.”

The verb *tit* ‘fall’ does not allow for an agentive complement. Thus the model represented by (35c) above cannot be expanded further to include complements, apart from local and other adjuncts; in any case it represents a perfect in opposition to (35d).

- iii. *caith*

Apart from the senses ‘throw, shoot’, ‘consume’ or ‘wear’, this item of the Irish verb lexicon also has a bleached function in temporal settings where the content of a defined period of time is made explicit:

- (36a) *Chaith sí bliain in Albain.*
 spend.PST she year in Scotland.DAT
 “She spent a year in Scotland.” = “She was in Scotland for a year.”

- (36b) *Nuair a bhí an téarma caite aici, d'fhill sí ar an mbaile.*
 when REL was ART term spend.VA by.3SG.F return.PST she on
 ART home
 “When she had spent the term she returned home.”

- (36c) *Nuair a bhí an téarma caite, d'fhill sí ar an mbaile.*
 when REL was ART term spend.VA return.PST she on ART home
 “When the term was over she returned home.”

These variations show that spending time can happen in a seemingly active way, or else by the mere passing of time. The person involved in this example is an experiencer rather than an agent, which does not preclude the use of the full p2 in (36b). Among other possible interpretations, the stative (36c) can be seen as mere reduction of (36b) with omission of the (pseudo-)agentive phrase. To this extent both can be regarded as perfects.

3.6 Paradigmatic environment

The perfect tense is a relevant category in Irish grammar, but the simple past is clearly still the dominant category, even affecting the use of English in popular speech in Ireland. Although past events can also be referred to in the present, to dramatize narration, the simple past is the prime form of narrative expression.²¹ In all texts which recall past events this is the default tense, unless a resultative presentation is a good option, or much more rarely, the only possible choice.

The ‘enduring state’ perfect of English has no counterpart in Irish as the present is regularly used for this particular perspective:

- (37) *Tá sé tinn le seachtain.*
 is he ill with week
 “He has been ill for a week.”

The experiential/quantifying perfect however is expressed by the simple past:

- (38) *Bhí mé in Albain faoi dhó.*
 is.PST I in Scotland.DAT by²² two
 “I’ve been to Scotland twice.”

p1 would be highly unidiomatic here, and p2 grammatically impossible as *bí*, here in non-auxiliary use, has no VA. But other verbs show the same result:

21. Cf. footnote 14 above.

22. Lit. “under”.

(39a) *Níor ith sí oisrí ariamh.*
 NEG.PST eat.PST she oyster.PL ever
 “She has never eaten oysters.”

(39b) **Níl oisrí ite aici ariamh.*
 is.NEG oyster.PL eat.VA by.3SG.F ever
 “She has never eaten oysters.”

This incompatibility of *ariamh* “ever” would equally apply to a variant in P1-style.

By shifting the auxiliary *bí* into the past, seen in some of the previous examples already, the reference time is moved back and vaguely or explicitly related to some other past state/event. This is of course the situation where a pluperfect could evolve to express anteriority. I will look at this from a wider perspective in §5 below.

3.7 Evolution/Contacts

Early examples of the Irish P2 do not go back much further than the 17th cent., although a caveat is to be made here concerning the marked differences between written and spoken language, the latter being almost completely unrecorded before the 20th cent., especially as far as spontaneous speech is concerned, which would have been a rich source for occurrences of perfects in earlier times. It seems safe to assume however that the relatively new type P2 spread from the south-western part of the country, where it is strongest today, structurally and statistically.

Irish P2 has often been thought of as being modelled on the English HAVE-perfect, mostly on account of the near-equivalence of ‘have’ and *bí + ag*. But strong evidence for this view has never been presented, which is not surprising given the lack of early records. The emergence of P2, as far as it can be ascertained, falls within a period of incipient large-scale bilingualism in Ireland; yet the two structures, Irish P2 and English HAVE-perfect, are formally quite divergent, and functionally only just overlapping. Looking at the evolution of HAVE-perfect in Germanic and Romance, which began very much earlier, there is no plausible reason for contact-induced change here, the more so since no auxiliary ‘have’ has ever evolved, although native lexical resources could easily have supplied a suitable verb denoting ‘possession’ to be bleached right down to auxiliary functions in the verbal system.²³

23. By way of comparison, Latin *tenere* “hold” became the ubiquitous ‘have’ verb in Portuguese, including in the formation of perfects, not to mention the semantic and grammatical functions of *habere* elsewhere. Perhaps Irish *sealbhaigh* “own” or even *greamaigh* “hold, stick” were too specific, too ‘clumsy’ morphologically, or too late on the scene to get the chance. Or the Irish speaker did not need such a verbal lexicalisation of this highly abstract notion, having sufficient means carried on from the older language, right into the 21st cent.

The English glosses for P2 in some studies (such as Greene 1979) differentiate between ‘I have done my homework’ and ‘I have my homework done’, implying that the latter is closer to the Irish version of such a sentence. A look at descriptions of old-fashioned rural Anglo-Irish (Henry 1957) seems to corroborate this; but what exactly the difference is between the two English versions of the HAVE-perfect (if both are such) remains unclear, seeing that they occur well outside this particular area of close language contact; the more so as the difference is only one of syntactic alignment, and prosody. If the former is valued as a present-tense construction, although containing a PREPP, with the latter being part of the extended tense system, then this is a matter for English grammar, including distinctions in Hiberno-English. No such choice is available in Irish.²⁴

3.8 Combination of P1 & P2

A passage in Wigger (1972) was commented on by Greene (1979: 127), soon corroborated by de Bhaldraithe (unpubl.), who supplied more examples of P1 and P2 being closely connected in the same clause, in Conamara Irish. The original sentence reads:

- (40a) *Tá iasc tar éis a bheith díolta agam.*
 is fish after (to) be.VN sell.VA by.1SG
 ‘I have (just) sold fish.’

If the two competing Irish perfects can occur in one phrase, they should not be seen as paradigmatically mutually exclusive. While one part of this compound structure would seem to indicate recent past (P1: *tar éis*), the other is resultative (P2: *bheith díolta*). Ó Sé (2004: 239) also deals with this configuration, presenting some instances from Munster. His analysis remains somewhat inconclusive, acknowledging, along with Greene, “an element of completion or accomplishment” and adding that “there is also a difference of focus”, without further discussion. This latter point is crucial, however, as will be shown in §4.

Alternatively, (40a) would be fine without the agentive phrase *agam*, although Ó Sé labels it as obligatory. Another alternative would be the inverted placement of the nominals, especially in the progressive aspect:

- (40b) *Tá mé tar éis a bheith ag díol éisc.*
 is I after (to) be.VN PROG sell.VN fish.GEN
 ‘I have (just) been selling fish.’

24. For the historical background of the two types in Latin and Romance see Wehr (2012).

To this Ó Sé (2004: 240) adds another variant, with double agent-encoding, which he rightly considers restricted to (parts of) Munster. The ‘added value’ of such hypocoristic developments as (40c) remains unclear.

- (40c) *Táim tar éis iasc a bheith díolta agam.*
 be.1SG.PRS after fish (to) be.VN sell.VA by.1SG
 “I have (just) sold fish.”

Throughout the speaker could also have used active preterite, perfective or imperfective:

- (40d) *Dhíol mé iasc. - Bhí mé ag díol éisc.*
 sell.PST I fish is.PST I PROG sell.VN fish.GEN
 “I sold fish.” – “I was selling fish.”

as an answer to questions like *Céard a rinne tú ? / Céard a bhí tú a dhéanamh?* “What did you do? / What were you doing?” whenever a low aspectual profile is informationally sufficient.

Since in Manx (see §3.9 below) both p1 and p2 occur, the existence of this combined structure there is not surprising:

- (41a) *V'eagh eh er ve tilgit.*
 be.COND it after be.VN throw.VA
 “It would have been thrown.” (Broderick 1993: 271)²⁵

This would correspond to an Irish double perfect:

- (41b) *Bheadh sé tar éis a bheith caite.*
 be.COND it after (to) be.VN throw.VA
 “It would have been thrown.”

In both the original and the translated versions it would appear that the use of *Mx er* and Irish *tar éis* would indicate a recent past, seeing that the situation described could in both languages be represented by the respective p1/p2 structures alone, without loss of relevant information.

3.9 HAVE-perfect in Eastern Gaelic

While p2 is a particularly strong development in the southwest of Ireland, it loses functional scope towards the north, losing much ground in ScGl. except for the south-western area. Thus we find (42) on record for Islay (Grant 1987: 194).

25. This Manx model sentence is context-free and cannot be interpreted properly.

- (42) *Tha e leughte agam.*
 is it read.VA by.1SG
 “I have read it.”

Its role in Manx is stronger, according to Broderick (1984: 80–81).

- (43) *Ta 'n chooid smoo jeh jarroodyt aym.*
 is ART part COP.big.COMPAR of.3SG forget.VA by.1SG
 “I have forgotten most of it.”

This would be one of the areal features linking Manx to Irish, contrasting with ScGt., its otherwise close linguistic neighbour, as well as with Welsh. But given the wide distance to the assumed area of origin of Irish p2 (Munster) it would appear to be an independent development in Manx rather than a remnant of some historical linguistic bridge across (half) the Irish Sea. On the whole however, the (*i*) *ar*-type (p1) is close to being the default past tense in both ScGt. and Manx with the preterite being much more reduced in function and frequency than in Irish. While Broderick (1984: 80f.) notes that both p1 and p2, “expressing a completed action in the past” are “very often used in Spoken Manx”, Ó Sé (2004: 224) assesses that in one corpus (Fargher) the ratio p1: p2 is 127: 6. This might be comparable to some south-western areas of Scotland where p2 is on record along with the dominant p1. As for Manx, the access to large-scale evidence is much limited by the fact that pre-revival Manx represents only a small body of texts, while current usage may not be a reliable source for more detailed research.

The stronger position of p2 in Manx, as compared to ScGt., is seen as a heavier influence from English there. Whatever the historical, social and structural criteria applied here, it can only be an overall judgment. The experiential use of the perfect not much known from Celtic usage otherwise, may be a point in case (see 2.8). This would however require a close match between English ‘have seen’ and Manx ‘be after seeing’ (p1), not to mention the precise variety of English which may have been influential here.

3.10 HAVE-perfect in Breton

In contrast to Welsh, and typologically somewhat closer to Irish, there is a structure in Breton verb grammar which has qualities of a perfect, composed of the verbal noun/infinitive and a locution usually translated as ‘have’, which somewhat resembles Latin *mihi est* “I have”. It is composed of a case-free proclitic pronoun and any of six TAM-forms of *bout* “be”, with some modifications of the basic paradigm in the ‘have’ reading. Thus it is formally distinct from Gaelic p2 *tá X ag Y* both in agentive interpretation or when seen as a passive. The shared feature however is

the use of a past participle the regularly available formation of which constitutes a major difference from Welsh, though not from Cornish.

A sentence of this type may look like:

- (44) *Dec'h en deus Yann gwelet Mona.*
 yesterday has Y. see.VA M.
 "Yesterday Yann saw Mona."

This Breton HAVE-perfect is however restricted to transitive verbs. Otherwise 'be' functions as auxiliary:

- (45) *degouezet eo an eur*
 arrive.VA is ART time
 "The time has come."

Whether the transitive/intransitive distinction given in the literature is appropriate here, and how close this is to the situation in French, is not clear. Similar questions arise in regard to passive structures, including an agent phrase:

- (46) *Lennet e oa al levr gant Lenaig.*
 read.VA is ART book by L.
 "The book was read by Lenaig." (Stephens 1993: 379)

This periphrastic tense contrasts with the synthetic past form series: apart from a 'situational' type limited to a north-western dialect (Leoneg), there is an imperfect, usually habitual, and a perfective preterite. The preterite is stylistically highly marked, as is the French *passé simple*, see Favereau (1997: 240), who in fact declares Breton and French to be equal in this regard.

The 'have/is' structure can have a resultative sense, but to what extent is not evident from the descriptive studies. The same holds for other possible time-semantic criteria such as distance, continuity or experientiality. On the whole the Breton verbal system is more differentiated, but less systematic than its Welsh counterpart.²⁶

4. Voice

In previous sections the relevance of the active ~ passive opposition has been mentioned at various points, especially concerning p2. In fact, the issue has been a major battlefield in most contributions to the perfect from Zimmer (1901) onwards, remaining rather inconclusive even in fairly recent publications such as Ó Sé (2004),

26. This is, in broad sum, what emerges from Heinicke's (1999) comparative analysis.

as far as Irish is concerned. The full scale of the debate cannot be unfolded here; it may suffice to look at (1) the ‘depassivization’ of old passives (4.1) and their evaluation in later stages, (2) the diathetic evaluation of p2 (4.2), (3) the passive versions of p1 (4.3).

4.1 From ‘passive’ to ‘autonomous’

In the older stages of Insular Celtic form series occur systematically in the synthetic verb paradigms which are cognate with IE passive forms such as in Latin,²⁷ yet do not show full passive potential as they are used impersonally: an agent phrase is found occasionally in early records, but vanishing steadily in later development. Hence they cease to be passives, turning into indefinite-subject actives, termed ‘autonomous forms’ viz. *briathar saor* (“free verb”) in Irish grammar.²⁸ These forms are morphologically highly differentiated across the TAM paradigms, but share the function of representing an unspecified agent or cause for various kinds of events. The closest equivalents would be German *man*, French *on* or English *one*, which are only available as free-standing quasi-pronouns and refer only to human agents. The Celtic impersonal forms may often be translated as an agentless passive in those languages.

Although this category has little bearing on temporal semantics, in order to show how it functions, I give a set of examples from Modern Irish:

- (47a) *Ní caitear tobac anseo.*
 NEG consume.INDF tobacco here
 “One doesn’t smoke here.”
- (47b) *Ná caitear tobac anseo.*
 PROH consume.INDF tobacco here
 “One shouldn’t smoke here.”
- (47c) *Ní caithfear tobac anseo.*
 NEG consume.FUT.INDF tobacco here
 “One won’t smoke here.”
- (47d) *Caití tobac go leor.*
 consume.PST.HAB.INDF tobacco much
 “One/they/people used to smoke a lot.”

27. Deponents with the same morphological characteristics as (ex-)passives were well developed in Old Irish (with traces in Brittonic), but were soon remodelled to become normal active verbs. The wider historical and comparative context of this is discussed in Katz (1988).

28. See Müller (1999: 16–20) for an overview of this topic especially in Medieval Welsh and Irish, as well as more detailed analyses in other parts of the book.

- (47e) *Caitheadh tobac anseo.*
 consume.PST.INDF tobacco here
 “?Someone/people smoked here.”

(47e) is natural enough, although noticing traces of previous events is a classic precondition for using a perfect. Thus the (agent-free) p2 seems more suitable unless focus on the unknown/unspecified actors was wanted:

- (47f) *Tá tobac caite anseo.*
 is tobacco consume.VA here
 “Someone/people have smoked here.” (Cf. German: *Hier ist geraucht worden.*)

The imperfective progressive would be a further option, with the auxiliary *bí* in ‘autonomous’ form:

- (47g) *Bhíothadh ag caitheamh tobac anseo.*
 is.PST.INDF PROG consume.VN tobacco here
 “(Some)one was smoking here.”

Since p1 is an active construction, it seems freely to allow for an indefinite subject in the auxiliary. However, the passive-like p2 may also have the auxiliary in impersonal form, given a non-human agent:

- (48a) *Bhíothadh ciaptha ag na sciortáin.*
 is.PST.INDF plague.VA by ART.PL tick.PL
 “One was plagued by the ticks.”

A personal version, at least formally, would however be preferable:

- (48b) *Bhí siad / tú ciaptha ag na sciortáin.*
 is.PST they / you plague.VA by ART.PL tick.PL
 “They/you were plagued by the ticks.”

4.2 p2 as passive

4.2.1 Previous views

Zimmer’s appeal to accept p2 as a legitimate part of the Irish verbal paradigm, quoted above, ends with the remark that this structure is formally passive, but “gefühl’t” active (1901: 90). If feelings can be regarded as a reasonable guide here at all, the author can only be taken to reflect his own feelings, not those of Irish speakers. But the formal aspect is clear: p2 is passive in his straightforward analysis, although this is not shown in great detail – although Zimmer surely knew that this category was encoded otherwise in the early language, and that the term had been

used for these earlier forms (see §4.1). Some later authors²⁹ intuitively or naively mark P2 as a passive, without further discussion, while a few others take a contrary view, most prominently perhaps Greene (1979); the majority do not deal with this issue (see §4.2.5).

To clarify this apparent crux a brief look from three different angles may be useful:

4.2.2 Agentive clause

The use of the preposition *ag* in P2 is, on the level of sentence semantics, functional for specifying an entity actively (though not necessarily intentionally) involved in the event referred to, in a non-trivial causal sense. That *ag* has other meanings in other contexts is not relevant: local (proximity or aim),³⁰ temporal (*ag meán oíche* “at midnight”), quantitative/partitive as in *an triúir againn* “the three of us”. There are no good reasons for rejecting the separate function of agentivity which we are looking at here, even in the light of very old occurrences. Other prepositions have, over the centuries, shown similar disparities in meaning and usage.

The optional nature of the agentive phrase is fully in line with passives elsewhere. This is a matter for co- and contextual analysis. In fact, agent-free instances of formal passives are widespread, forming the majority of cases in German, for instance, although here a distinction between the auxiliaries *werden* and *sein* is relevant. In Irish, where *bí* is the only auxiliary available, the omission of the agentive phrase regularly leads to stative expressions which can be read as actual presents with a trace of past events embodied in the VA, or as agentless perfects.³¹

The agentive use of *ag* is also manifest in imperfective / progressive structures, which should be seen as systematic counterpart to P2, with the VN carrying the verbal notion instead of the VA.

- (49) *Tá alt dhá scríobh aici.*
 is article PROG.POSS.3SG.M write.VN by.3SG.F
 “An article is being written by her.”

29. Also a slightly earlier one: Finck (1899: 135): “Abgesehen von den erwähnten modus- und tempusformen können noch periphrastische bildungen angewandt werden, die durch zusammensetzung des verb. subst. mit dem part. perf. pass. sowie der verbindung einer präposition mit einem verbalsubstantivum zustande kommen.”

30. For older *chuig* “towards”. Even recent or incipient mergers must be considered carefully in dealing with prepositions and their assumed semantic unity.

31. See Fife (1990: 498ff.) for a detailed discussion of the relation between perfect and passive.

Here the agent phrase is again optional, depending on contextual criteria.³² It should be noted that, given the chance for realistic interpretations, such structures are systematically ambiguous, depending on the referential identities of the nominals:

- (50a) *Níl sí dhá, cháineadh.*
 is.NEG she PROG.POSS.3SG.M blame.VN
 “She does not blame him.”
- (50b) *Níl sé dhá, cháineadh (aici).*
 is.NEG he PROG.POSS.3SG.M blame.VN (by.3SG.F)
 “He isn’t (being) blamed (by her).”

4.2.3 ‘Have’ again

That many ‘possessive’ relations, which are of very different natures, can be expressed by way of Irish *tá X ag Y* “there is X at Y” and elsewhere in Gaelic, does not fully justify seeing this collocation as an equivalent of SAE ‘have’, as it can or must be translated in a number of other ways as well; conversely ‘have’ must be translated differently into Irish in many cases. Thus p2 can only loosely, and misleadingly, be called a HAVE-perfect, for the simple reason that there is no such verb in Irish and all of its relatives, whether close or distant. Even Breton structures are not aligned with the concept of ‘having’, in spite of some systematic affinity with French in the formation and use of past tenses.

The ‘felt’ active sense noted by Zimmer stemmed from this attractive translation equivalent, and from mental structures in his own first language, but not from the intrinsic evaluation of the facts, formal or otherwise. As the localistic interpretation is dangerously ‘down to earth’, assuming a basic meaning of *ag*, and the concept of ‘having’ being lexically alien to these languages, seeing them as passives is the best choice, if only for the formally marginal and even optional status of the most ‘energetic’ entity in the event described, i.e. agent or cause.

4.2.4 Textual features

Speakers and writers are prompted to use passives in line with the textual structure of what they are saying or writing. This is clearly an issue of text linguistics, i.e. beyond the scope of the formal sentence. In our particular context the focus on the agent is one important perspective, the focus on some other relevant entity in the given context another. Hence a sentence starting with a nominal expressing the affected (or effected) object will lead to a different structure compared to an

32. In fact, the blunt statement of ‘an article being written’ doesn’t make much sense. This would be different if the ‘product’ were definite. But a local or temporal complement would also improve the chances for this construct being useable.

equivalent sentence with the agent in subject position. Since p2 is by definition a structure of that type, it is hard to deny its passive nature, no matter how ‘active’ the ‘have’-languages may be here.

4.2.5 *Verbal noun versus verbal adjective*

The two non-finite forms of Irish verbs, VA and VN, differ in terms of diathesis / voice. Whereas the VA (or PPP) is clearly passive in transitive verbs, the VN is neutral, the interpretation in terms of voice being left to the type of construction as well as to the common-sense readings of the semantic relations prevailing in a given sentence.

On the whole, the protean / ambivalent nature of p2 should not give any headaches: it is a category which simultaneously expresses temporal features along with sentence-semantic/logical ones. It must be evaluated from a language-internal point of view, rather than from SAE-inspired ways of trying to understand and describe this form of expressing events and states.

The metalinguistic side of this would be a worthwhile area of further research: why did some authors see p2 as passive, without further discussion (e.g. linguists as distinct from each other as Lewy and McCloskey),³³ while others deny this (e.g. Greene 1979), and yet others are not sure (Ó Sé 2004; Mac Cana & Ó Baoill 1997: 274). The apparent urge to establish or apply clear-cut categories seems to be at work here, rooted in binary thinking.

4.3 Passive in p1

4.3.1 *Irish*

Irish p1 may also exhibit a passive structure, in early as well as modern usage. The surface subject then represents the patient/experiencer, etc., while the agent or cause is stated in an optional prepositional phrase, where in early types *ó* ‘from’ or *le* ‘with’ are found, later *ag*, as in p2. A fairly early example for this is:

- (51a) *an saol a tá ar n-a dhéanamh ó Dhia*
 ART world REL is after POSS.3SG.M make.VN from God
 ‘the world which has been made by God’³⁴

Later types of p1 would appear to be mostly active, the combination of p1&p2 largely taking on this function (see 3.8). An illustrative travesty of (51a) would then

33. Ernst Lewy in his equally skilful and tentative sketch of Irish (1942: 46) being one. McCloskey explicitly refers to p2 as “perfective passive” (1996: 255).

34. From *Desiderius*, translated from Spanish and published in 1616; quoted after Ó Sé (2004: 196).

look like (51b), with the added effect of clearly precluding a recent-past interpretation in this instance.

- (51b) *???an saol atá tar éis a bheith déanta ag Dia*
 ART world REL.is after (to) be.VN make.VA by God
 “the world which has (*just) been made by God”

But this is not to be taken as evidence for any time-semantically specific function of P1 here or elsewhere, rather as a token carrying too much redundant syntactic material. Contemporary Irish would have either the common perfect P1 as in (51c) (resultative) or the plain preterite (51d) (holistic):

- (51c) *an saol (> domhan) atá déanta ag Dia*
 ART world REL.is made by God
 “the world which is made by God” > “the world which God has made”
- (51d) *an saol (> domhan) a rinne Dia*
 ART world REL make.PST God
 “the world which God made”

4.3.2 Scottish Gaelic

Given the minor role of P1 in Irish, ScGl. gives rich evidence for passives in this structural environment. An illustrative example, including an explicitly agentive phrase, is

- (52) *Bha an damh ann a’sin marbh, air a marbhadh aig Colla.*
 was ART stag there then dead after POSS.3SG.M kill.VA by C.
 “The stag was there dead, killed by Colla.”³⁵ (Mac Gill-Fhinnein 1966: 71)

Similarly in Manx:

- (53) *v’eagh eh er ve tilgit*
 is.COND it after be.VN throw.VA
 “it would have been thrown” (Broderick 1993: 271)

4.3.4 Welsh

Since the historical synthetic passive had taken on a merely impersonal function, as in Gaelic, the passive periphrasis in Welsh, which has no past participle, is generally expressed with the auxiliary *cael* “get”, with the preterite or with the *after*-perfect:

35. This is clearly a recent-past token, not overtly marked as such, but inferred from the preceding main clause.

(54) *Cafodd yr ffermwr ei laddu.*
 get.PST ART farmer POSS.3SG.M kill.VN
 “The farmer was killed.”

(55a) *Mae'r gwaith wedi cael ei orffen.*
 is ART work after get.VN POSS.3SG.M finish.VN
 “The work has been finished.”

(55b) *Mae'r gwaith wedi ei orffen e.*
 is ART work after POSS.3SG.M finish-VN
 “The work is finished.” (After Watkins 1993: 178)

The following example includes an agentive phrase:

(56) *Cafodd yr ymwelwyr eu croesawu gan y plant.*
 get.PST ART visitor.PL POSS.3PL welcome.VN by ART children
 “The visitors were welcomed by the children.”

4.3.5 Breton

Apart from the synthetic impersonal forms, passive-like periphrasis arises from replacing the ‘have’-structure with ‘be’-structures in transitive verbs, not much different from French. But in both languages the difference between process and result is blurred, leaving room for interpretation in individual utterances. Rarely an agentive phrase is added using the prepositions *da* or *gant*:

(57) *An argant zou bet fondet dehoñ/getoñ.*
 ART money is be.VN spend.VA by.3SG.M
 “L'argent a été dissipé par lui.” (Favereau 1997: 428)

The impersonal form may also be accompanied by a *gant*-phrase, even when an event with zero-agent is described:

(58) *Dour 'vo ganti.*
 float.INDF be.FUT by.3SG.M
 “Il va flotter (pleuvoir).” (Favereau 1997: 436)

As an alternative to the impersonal verb a passive structure with suppressed collective agent can be found:

(59) *Amañ 'vez debret mad.*
 here is.HAB eat.VN good
 “Ici, on mange bien.” (Favereau 1997: 232)

Other auxiliaries supplying passive-like structures such as Welsh *cael* ‘get’ or French *voir* ‘see’ may occur in Breton but are not in evidence in the sources used here.

5. Derived tenses: Anteriority and Posteriority

Shifting the reference time to some point in the past or in the future gives rise to further temporal categories, which may be integrated into the systematic verbal paradigm, such as the Latin *plusquamperfectum* viz. *futurum exactum*. In the Celtic languages these extensions can only be found in the periphrastic parts of the verbal system, which are evidently of later date. The fact that in both p1 and p2 the verb ‘be’ functions as an auxiliary implies that the entire verbal phrase governed by it can be transferred into any temporal or modal category available for verbs and auxiliaries in the respective language. The rest of the phrase will retain its temporal and aspectual qualities.

For both types of perfect there are variants available which move the achieved state into some other temporal sphere. Thus an analytic pluperfect is common in Irish sentences with a temporal complement, or in clauses introduced with *nuair* “when” or *sula* “before”; and a secondary future when the auxiliary is in the future tense, referring to the expected conclusion of some ongoing or expected process after the time of utterance.

(60a) *Bhí an t-alt scríofa agam lá roimh an spriocdháta.*
is.PST ART ART-article write.VA by.1SG day before ART deadline
“I had the article written a day before the deadline.”

(60b) *Beidh an t-alt scríofa agam lá roimh an spriocdháta.*
be.FUT ART ART-article write.VA by.1SG day before ART deadline
“I will have the article written a day before the deadline.”

Less felicitous, with p1, is the following:

(60c) *Bhí mé tar éis an t-alt a scríobh díreach in am.*
is.PST I after ART ART-article (to) write.VN just in time
“I had finished writing the article just in time.”

(60d) *Beidh mé tar éis an t-alt a scríobh díreach in am.*
is.FUT I after ART ART-article (to) write.VN just in time
“I will have finished writing the article just in time.”

The next examples are more complex, involving temporal clauses:

(60e) *Ní raibh an t-alt scríofa agam nuair a bhí an*
NEG is.PST.DEP ART ART-article write.VA by.1SG when REL is.PST ART
spriocdháta thart.
deadline over
“I hadn’t written the article when the deadline was past.”

- (60f) *Bhí an t-alt scríofa agam sula raibh an
is.PST ART ART-article write.VA by.1SG before is.PST.DEP ART
spriocdháta thart.*

deadline over

“I had written the article before the deadline was past.”

- (60g) *Beidh an t-alt scríofa agam sula mbeidh an
is.FUT ART ART-article write.VA by.1SG before is.FUT ART
spriocdháta thart.*

deadline over

“I will have written the article before the deadline is past.”

Further configurations arise from replacing the simple past with the habitual past, or the future with the conditional; optative modal versions are also possible. In all these types the feature [resultative] is clearly inherent, as the use of the VA shows.

Such extensions of the verbal paradigm, achieved by shifting the auxiliary from the default present tense to any other temporal or modal category, are well recorded from all modern Celtic languages, resulting in multidimensional networks of complex grammatical forms. In addition to the perfect-types discussed here there are also ‘imperfective’ or progressive series, a central aspectual type in all these languages plus English, and in yet another dimension active/passive contrasts. The agentive phrase in these P1-type derived tenses can regularly be omitted, resulting in a stative version.

As the Welsh auxiliary *bod* can take any tense form available from the synthetic paradigm, a set of compound tenses based on the *wedi*-periphrasis (P1) arises, such as the anterior:

- (61) *Yr oedd wedi prynu llestri newydd.*

ASS was after buy.VN dish.PL new

“He had bought new dishes.”

or posterior:

- (62) *Byddaf wedi symud y cyfan erbyn i chi ddod.*

is.FUT.1SG after move.VN ART whole by to you.PL come-VN

“I will have moved the lot by the time you come.” (After Heinecke 1999: 181)

There is a restriction here concerning the choice between the alternative pasts *oedd* (imperfective) and *bu* (perfective) of *bod* in that only the former is compatible with *wedi*:

- (63a) *Mi oedd John wedi gweithio.*

ASS was John after work.VN

“John had worked.”

- (63b) **Mi fu John wedi gweithio.* (Fife 1990: 134)
 ASS has_{_}been John after work.VN

Analogously the Breton ‘have’-equivalent may be expressed in past and future forms in addition to the present shown above:

- (64) *Me'm òe prinet un hanter l'e.*
 I had buy.VA a half calf
 “J’avais acheté un demi-veau.”
- (65) *Benn désadorn 'nivo (= en devo) dreset an doenn.*
 until Saturday he_{_}will_{_}have repair.VA ART roof
 “Pour samedi, il aura réparé le toit.” (Favereau 1997: 255)

The verbs which take a BE-perfect behave similarly, as does the passive:

- (66) *Pa ve' bet grilhet ar c'herc'h ...*
 when was be.VA grill.VA ART oat
 “Quand l’avoine a été grillée ...” (Favereau 1997: 256)

Heinecke (1999: 244–245) gives examples of double compound tenses (such as “it was been done”) with perfective meaning, but does not comment on their status.³⁶

6. Non-finite perfect equivalents

Establishing verbal tenses when there is no finite verb which could carry any tense/mood marker does not seem to make much sense. Yet non-finite verbal forms which are part of perfect formations are common in many less explicit environments such as small clauses, where they largely retain their aspectual features. Thus they should be mentioned here, especially those which would normally rather be finite outside the Celtic languages.

6.1 *do/i* ‘to’ as agent marker

Temporal clauses in Irish can be formed by using a suitable subordinator (default: *nuair a* “when”), with a dependent sentence following in the usual shape and order, or by moving the agent into a peripheral PREPP expressed with *do* “to”, and with the remaining VP expressed as a non-finite form, i.e. a VN-based periphrasis either in the continuous present or in a reduced perfect of the p2 type:

36. I suspect a kind of hypercorrection here such as occurs in colloquial German, even in older stages: “Ich hatte das nicht gemacht gehabt.” See Fischer (this volume).

(67a) *Ag teacht abhaile di chonaic sí ...*
 PROG come.VN home to.3SG.F see.PST she
 “When she came home she saw ...”

(67b) *Ar theacht abhaile di ...*
 after come.VN home to.3SG.F
 “When she had come home ...”

Instead of *ar*, which marks anteriority only faintly, *tar éis* can be used:

(68a) *Tar éis do lucht na sochraide scaipeadh*
 after to people ART.GEN.SG.F funeral.GEN scatter.VN
 “After the mourners had scattered” (Ó Cadhlaigh 1940: 130)

In the contemporary language this is more likely to be said less obliquely in p2 structure:

(68b) *Nuair a bhí lucht na sochraide scaipthe ...*
 when REL is.PST people ART.GEN.F funeral.GEN scatter.VA
 “When the mourners had scattered ...”

The relative scarcity of examples makes it difficult to judge whether there is any difference in temporal reference between these structures with *do* marking the agent and the more common ones. As for the Irish examples given here, these have stylistic properties which have not been studied in detail. In addition, the semantic verb classes occurring here need to be examined.

The type is attested for Old Irish, e.g.:

(69) *iar riachtain dóib in tslébe*
 after reach.VN to.3PL ART.GEN mountain.GEN
 “after they had reached the mountain” (*Lebor na hUidre* 5102)³⁷

This points at a tendency to conceive certain types of events as non-agentive, counter to SAE intuitions: the process has no explicitly stated origin, and the person affected by it is encoded as the goal of some movement, or as an experiencer, hence *do* “to”, with the verb in its diathetically neutral form VN.

A somewhat similar structure exists in Welsh, involving the preposition *i* usually glossed as ‘to’:

(70) *Wedi i’r gêm orffen, aeth pawb i chwilio am beint.*
 after to.ART game finish.VN go.PST everybody to look.VN for pint
 “After the game had finished everybody went to look for a pint.”

37. After <https://celt.ucc.ie/published/G301900/index.html> (last accessed October 21, 2018).

- (71) *Ar ôl iddi odro 'r afr, gwywodd yn ei chadair.*
 after to.3SG.F milk.VN ART goat faint.PST in POSS.3SG.F chair
 “After she had milked the goat she fainted in her chair.”

(After Heinecke 1999: 187)

In her discussion of this construction, Müller (1999: 190–195) attributes “low energy” to the agentive nominal introduced by *do/i*, taking up a similar assumption by Baudiš (1913: 403). Hartmann (1954) also deals with this use of *do* from that point of view. But convincing evidence is missing, the more so as non-agentive settings as in (70) may take this form.

6.2 Small clauses with *agus*

Another non-finite type of sentential complementation common in Irish is based on the use of *agus* “and” as an introductory element which makes the use of finite verbs, including the auxiliary *bí*, superfluous. The remainder of the VP can be a progressive or perfective phrase, among other possible complements. Thus a complex sentence like (72a) can be reshaped as in (72b), which would correspond to p2, or as in (72c), in p1 form:

- (72a) *Nuair a tháinig sí abhaile chonaic sí go raibh an fhuinneog briste.*
 when REL come.PST she home see.PST she that was ART
 window break.VA
 “When she came home she saw that the window was broken.”
- (72b) *Chonaic sí go raibh an fhuinneog briste agus í teagtha abhaile.*
 see-PST she that is.PST.DEP ART window break.VA and she
 come.VA home
- (72c) *Chonaic sí go raibh an fhuinneog briste agus í tar éis a theacht abhaile.*
 see.PST she that is.PST.DEP ART window break.VA and she after (to)
 come.VN home

The order of events is reversed here compared with the linear version with *nuair* and a finite temporal clause. Strictly speaking, the *agus*-clause here contains a pluperfect, although this is not necessarily so in this type of construction. Various other time relations can also be construed naturally, e.g.:

- (72d) *Feicfidh sí go bhfuil an fhuinneog briste agus í teagtha abhaile.*
 see.FUT she that is.DEP ART window break.VA and she come.VA home
 “She will see that the window is broken when she has come home.”

- (72e) *Feicfidh sí go bhfuil an fhuinneog briste agus í ag teacht abhaile.*
 see.FUT she that is.DEP ART window break.VA and she PROG
 come.VN home
 “She will see that the window is broken when she comes home.”

The combination of P1 & P2 (see 3.8 above) may also occur here:

- (72f) *Feicfidh sí go bhfuil an fhuinneog briste agus í tar éis a bheith teagtha abhaile.*
 see.FUT she that is.DEP ART window break.VA and she after (to)
 is.VN come.VA home
 “She will see that the window is broken as soon as she has come home.”

6.3 Obsolete *iar* > *ar*

The trace of historical *iar* “after” in (69) above can be found in formulas like *arna chlóbhualadh ag (comhlucht) X* “printed by (company) X” in books, although this clearly resultative usage looks rather old-fashioned today. Many less semi-frozen instances can be found in pre-revival Modern Irish, typically without auxiliary, and often with the *do*-complement representing the agent/experiencer, as shown in 6.1. The example above is latently passive: *-a* in *arna* is attributive (‘possessive’) pronoun 3SG.M (hence lenition of the following VN) and represents the object of the process of printing, i.e. the book, giving the VN a passive force: ‘after its printing’ > ‘after its being printed’ > ‘having been printed’ > ‘printed’.

7. Phrasal verbs

As an addendum to the findings outlined in the main sections of this essay, a glance at different means of expressing aspectual features of verbs may be taken. From the early Middle Ages on, verb derivation by means of affixes has not developed to anything like as advanced a stage as that found in most European languages, and analytical structures have been a productive alternative. Irish verbs can, semantically and aspectually, be modified by co-occurring adverbs of the basically directional type as well as other lexically bound elements, much in the way that English has evolved a lexical subsystem of what are usually called phrasal verbs (prototype *give up*), replacing the old IE preverb system, which however lives on in largely unproductive formations like *become*, *understand*, *foresee*. The Celtic languages have conserved the older type to an even lesser degree than English, while the analytical types thrive.

This is not the place to discuss the syntactic constraints and related test procedures, nor the lexical-semantic aspects of such analytically derived verbs.³⁸ But in terms of temporal relations and aspectual perspectives, it is reasonable to assume that (73) has a completive component, encoded in the originally directional adverb *amach* “out”.

- (73) *Scriobh sé amach litir don Chomhairle Chontae.*
 write.PST he out letter to.ART council county
 “He wrote a letter to the County Council.” / “He finished his letter to the CC.”

An outward movement clearly is not expressed or implied here.³⁹ Similarly *glan suas* “clean up” does not refer to any particular mode of cleaning, nor of course an upward movement, just complete action, whether achieved or not.

This matter remains to be investigated in Irish and related languages. Further insight would be gained by examining long-term restructuring in grammatical and lexical processes across the continent. Old Irish kept the IE structure to a great extent: prefixed verbs with simultaneous semantic modification could be seen as perfectives, but mostly they were semantic derivatives of the root verb, unless functional markers like OIr. *ro* were used to encode a perfect. The same applies to Slavic verbs, as well as to Celtic ‘phrasal verbs’: in the first place they serve to create refined verbal concepts, but given the right circumstances they convey little more than ‘finished’.

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38. See Doyle (2006).

39. *Amach* is *amach*, or *out and out* in Hiberno-English, means “totally, completely”, which adds to the inherent potential of *amach* “out” as an aspect marker, distantly related to the inflectional and periphrastic array of time expressions in the language.

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CHAPTER 4

The development of the perfect in selected Middle and New Germanic languages

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This article gives an overview of the most important similarities and differences in perfect constructions in modern Germanic languages. The focus is on the German present perfect form and its developments, which will be compared with the perfect constructions of English and Dutch (West Germanic) and Swedish (North Germanic) throughout. First, I introduce and compare the perfect forms in a selection of modern Germanic languages. I then focus on the emergence and development of the German perfect, before I compare the degrees of perfect expansion in the languages under investigation. In a final step, I investigate some of the consequences of the described processes: i.e. the loss of the German preterite form (*Präteritumschwund*), the emergence of the double perfect constructions in German substandard varieties, and the re-introduction of a semantic opposition in English.

Keywords: present perfect, *Präteritumschwund*/preterite loss, double perfect construction, expansion of the perfect, grammaticalisation

1. Introduction

The perfect construction is one of the most studied verbal forms in Germanic languages. Scholars have been interested in many of its characteristics, including its emergence, its semantic extension, its relationship to other verbal forms, and the choice of the auxiliary verb. In this article I will focus on its semantic development and the subsequent developments in modern Germanic languages. Therefore, I will discuss the meanings and functions that the perfect form is able to express. The heterogeneous terminology in tense and aspect research requires some preliminary remarks. Germanic verb forms determine the *temporal localisation* and the *aspectual view* of a situation ('temporality' and 'aspectuality', cf. Lindstedt 2001; Henriksson 2006). With regard to temporal distinctions, I will work with the terms 'past', 'present' and 'future' to refer to situations that happen before, simultaneously

to, or after speech time. The most important aspectual distinctions for my purposes are ‘imperfective’, ‘perfective’ and ‘retrospective’ (viewpoint, cf. Lindstedt 2001). While the term ‘perfective’ refers to a situation’s external perspective, the term ‘imperfective’ refers to a situation’s internal perspective, which is to say that it does not define the situation’s boundaries. ‘Retrospectivity’ is a more complex category, since it comprises the composite notion of a past event whose aftermath (e.g. the resultant state) persists concurrently with the reference time. In doing so, it combines features of ‘imperfectivity’ (state) and ‘perfectivity’ (completed event) and connects present with past (or past with past-in-the-past) in its temporal localisation. Retrospective present meaning is also referred to as ‘anterior’, ‘perfect’, ‘perfective’ and others (cf. Bybee & Dahl 1989; Bybee et al. 1994; Lindstedt 2001). In order to avoid any confusion with other meanings or forms, I will use the term *retrospective* whenever the aspectual meaning as described above is referred to. Depending on the context, the *retrospective* meaning can convey certain notions, e.g. the ‘perfect of result’, the ‘experiential perfect’, the ‘perfect of persistent situation’ or the ‘perfect of recent past’ (cf. McCawley 1971; Comrie 1976). Aspectual meaning in Germanic languages is usually expressed compositionally by means of lexical aspect and additional elements such as complements and adverbials (cf. Henriksson 2006; Gvozdanović 2012). However, we also find some examples of grammaticalised aspect forms as the *ga*-prefix in Gothic or the progressive tense form in Modern English. All these terms refer to concepts, i.e. the meanings of forms. To differentiate the verbal forms from their meanings, I will explicitly refer to them as forms: e.g. ‘present perfect form’, ‘preterite form’, ‘simple past form’. Mood/modality, evidentiality, and their expressions will not be discussed in this article.

2. Perfect forms in modern Germanic languages

All modern Germanic languages have acquired perfect forms. The forms show a similar construction, being formed analytically with an auxiliary verb (AUX) and a past participle (PST.P). There are some differences in the selection of the auxiliary. For example, German, Dutch and Danish use both HAVE and BE as auxiliaries, whereas in English and Swedish the HAVE-perfect has been generalised. In languages with a HAVE/BE-perfect, auxiliary selection is language-specific. Generally speaking, important factors are telicity and transitivity; in German, the notion of movement also plays an important role (cf. Gillmann 2016: 86–137). Depending on the tense of the auxiliary, two main forms can be differentiated: the present perfect form and the past perfect form (pluperfect).¹ The second part of the composite

1. A third form, the future perfect, will not be discussed in this paper.

tense form may be either the past participle (e.g. German, English, Dutch) or the supine (e.g. Swedish). Comparing the Germanic present perfects, we can observe an important functional distinction. While English and the North Germanic languages show a functional opposition between present perfect and preterite forms, in Dutch and especially German, the distinction has been lost and the present perfect is used as a past tense form. Table 1 gives a preliminary overview of the perfect forms in a selection of modern Germanic languages.

Table 1. The perfect forms in a selection of modern Germanic languages

	Form	Functional opposition	Example
English	HAVE + verb-PAST PARTICIPLE	+	<i>I have eaten dinner.</i> <i>The letter has come with the mail.</i>
Swedish	HAVE + verb-SUPINE	+	<i>Jag har ätit middag.</i> <i>Brevet har kommit med posten.</i>
Dutch	HAVE/BE + verb-PAST PARTICIPLE	(-)	<i>Ik heb diner gegeten.</i> <i>De brief is met de post gekomen.</i>
German	HAVE/BE + verb-PAST PARTICIPLE	-	<i>Ich habe zu Abend gegessen.</i> <i>Der Brief ist mit der Post gekommen.</i>

3. The emergence and developments of the Germanic perfects

3.1 The origin in Old Germanic

The Old Germanic languages were poorly equipped with tense and aspect forms. This can be ascribed to the amalgamation of the late PIE perfective (aorist) and retrospective (perfect) aspect forms which led to a new form with past tense meaning. The newly developed past tense form was now in opposition to the old imperfective aspect with present tense meaning (cf. Hewson & Bubenik 1997: 210). In the case of the two aspectually underspecified tense forms, a new main distinction between past and non-past was established that still characterises the modern Germanic tense and aspect systems.

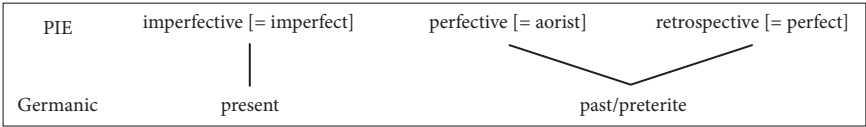


Figure 1. Development of a temporal contrast in Old Germanic (cf. Hewson & Bubenik 1997: 354, Figure 3)

The new past tense form was used as a generalised tense form to express past meaning. Aspectual differences were expressed compositionally by means of lexical aspect and either the complement or the *ga*-prefix; the latter would add a perfective notion to lexical aspect or even suggest a past-in-the-past meaning. The past tense form was used for all kinds of past notions including the present retrospective meaning, i.e. the typical ‘perfect meaning’. Table 2 introduces the form-function-relation in Gothic based on Braune & Heidermanns (2004: §167), see also Kotin (this volume):

Table 2. The Germanic two tense system²

PAST			NON-PAST			
retrospective past*	imperfective past	perfective past*	retrospective present	imperfective present	perfective present*	future
<i>preterite tense form (* = + ga-)</i>				<i>present tense form (* = + ga-)</i>		

From this starting point, the Germanic languages developed a new construction, the perfect form, that emerged from a resultative construction and specialised in retrospective meaning. While all Germanic languages shared the integration of this analytic verb form, the subsequent semantic and formal developments differ from language to language. In §3.2, I will focus on the developments in the history of German, complementing it with some details on the developments in English, Swedish, and Dutch.

3.2 The emergence of the German perfect

The emergence of the perfect construction in German has been the subject of a number of studies (e.g. Oubouzar 1974; Grønvik 1986; Arnett 1997; Kuroda 1999, and recently Gillmann 2016). These studies all examined the ‘HAVE/BE + PST.P’ construction in a selection of Old High German (OHG) and/or Old Saxon (OS) texts, and described their syntactic and semantic properties. They describe how the ‘HAVE/BE + PST.P’ construction developed from a compositional resultative construction in which HAVE and BE were used as main verbs and the participle functioned as an adjective, attributing the object or the subject of a given proposition. Through analogy and reanalysis, the meaning of the construction changed into a perfect form expressing a past event whose resultant state persists at reference time (= retrospective meaning), while the resultative construction expresses only resultant state without making any assertion concerning the preceding event (cf. Gillmann 2016: 61, 199).

In this way, the new perfect forms were integrated into the system of tense and aspect where they became specialised in expressing aspectual, i.e. retrospective

2. The semantic field of ‘past in the past’ will not be discussed here.

meaning. Depending on the tense form of the auxiliary, perfect forms were used to express retrospective present meaning or retrospective past meaning, acting as a variant of the preterite forms. Later, speakers began to avoid the preterite form in retrospective contexts all together. With this new tense morphology, the German tense and aspect systems became more elaborate, providing more grammatical forms to specify the aspectual and temporal meaning of a situation, cf. Table 3.

Table 3. The emergence of the perfect form

PAST			NON-PAST			
retrospective past*	imperfective past	perfective past*	retrospective present	imperfective present	perfective present*	future
<i>past perfect tense form</i>	<i>preterite tense form</i> (* = + ga-)		<i>present perfect tense form</i>	<i>present tense form</i> (* = + ga-)		

Bybee & Dahl (1989) identified this pattern of development as a grammaticalisation process proceeding along a universal grammaticalisation path: resultative constructions tend to become perfect tense forms (with retrospective meaning) and thence develop into past perfectives or general past tense forms. This semantic extension takes place gradually and in accordance with the category's syntactic extension. Furthermore, while a given form undergoes this semantic and syntactic extension, its original meanings persist (cf. Hopper 1991: 28f.). This leads to an ambiguity in the interpretation of the construction in its further-grammaticalised states.

Table 4 shows the findings of Gillmann (2016: 164–244), who analysed all tokens of the 'HAVE/BE + PST.P' construction. Gillmann documents the ambiguity of the construction: it was used as a resultative form, and at the same time the construction was already grammaticalised into a perfect form with retrospective meaning, even in early texts such as the OHG *Isidor* (ca. 750–800).

Table 4. Records of 'habēn/hebbian + PST.P' and 'uuesan + PST.P' in Old High German and Old Saxon texts based on Gillmann (2016: 233f.)

						
	750	800	850	900		
Old High German	<i>Isidor</i> (5,892 words)		<i>Tatian</i> (54,109 words)		<i>Otfrid</i> (79,341 words)	
	Resultative	Retrospective	Resultative	Retrospective	Resultative	Retrospective
<i>habēn</i> + PST.P	0	0	2	3	2	50
<i>uuesan</i> + PST.P	1	3	2	4	7	22
Old Saxon	<i>Heliand</i> (≈25,000 words)		<i>Genesis</i> (≈3,000 words)			
	Resultative	Retrospective	Resultative	Retrospective	Resultative	Retrospective
<i>hebbian</i> + PST.P			1	139	0	22
<i>uuesan</i> + PST.P			10	35	1	0

We can see that in the translated texts (*Isidor* and *Tatian*) the HAVE/BE + PST.P construction plays a minor role, and that the resultative HAVE-construction is overall very marginal. Nevertheless, it is clear that the construction was grammaticalised as a perfect form in both languages, and that at the same time it was still used as a resultative construction. This may be seen in the following examples from OHG *Otfrid* (cited from Gillmann 2016; translated by HF):

habēn + PST.P as resultative construction (predicative construction):

- (1) OHG *Níuuuiboran habet thiz lánt then hímilisgon héliant*
 new_bear.PST.P has this land the.ACC heavenly redeemer
 “This land has the heavenly redeemer as a new born.”

(*Otfrid* I, 12,23, Gillmann 2016: 190)

uuesan + PST.P as resultative construction:

- (2) OHG *Yrhugis thar thoh éines man ther thir si*
 remember.2SG there yet one.GEN man who you.DAT be.SBJV.3SG
 remember.2SG there yet one.GEN man who you.DAT be.SBJV.3SG

OHG *irbólgan, [...] far, bisúani thih er.*
 anger.PST.P go reconcile you before.
 “Now, however, if you remember one man who is angry with you, go
 and reconcile with him beforehand.”

(*Otfrid* II, 18, 21–23, Gillmann 2016: 200)

habēn + PST.P as perfect form (past retrospective, perfect of result):

- (3) OHG *Thaz hábeta mit then máhtin ther éuuinigo drúhtin úbaruuvntan*
 that had with those forces the eternal Lord overcome.PST.P
 “The eternal Lord had overcome that by his almightiness.”

(*Otfrid* V, 14, 13–14, Gillmann 2016: 192)

uuesan + PST.P as perfect form (present retrospective, perfect of result):

- (4) OHG *bin nú zi stáde hiar gimíerit*
 am now to shore here arrive.PST.P
 “Now, I have arrived at the shore.”

(*Otfrid* V, 25, 2, Gillmann 2016: 201)

While in the resultative constructions in these examples the participle expresses a property of the object (*níuuuiboran* “new born”) or subject (*irbólgan* “angered”), the perfects denote the typical retrospective meaning of a past event (‘overcome’, ‘arrive’) whose resultant states persist at reference time.

In Table 4 we can also see that perfect forms were much more frequent in OS than in OHG texts. Taking a closer look at the perfect senses of the OHG and OS present perfect form, we see that the OS present perfect is used with more senses than the OHG perfect forms. While the OHG perfects were limited to ‘perfect of result’ readings (with few exceptions), the OS perfect form was also used for

broadier perfect readings, such as the ‘experiential perfect’ or the ‘perfect of persistent situation’, cf. (5). Those readings show a more abstract meaning in that they entail a shift of focus from the aftermath of an event to the event itself.

hebbian + PST.P as perfect form (past retrospective, perfect of persistent situation):

- (5) OS *Thar fundun sea ênna gôdan man aldan* [...]
 then find.PST they a good man old [...]
 OS the habda at them uuîha
 who have.PST in the temple
 OS *sô filu uuintro endi sumaro gilîbd an them liohta*
 so many winter.GEN.PL and summer.GEN.PL live.PST.P in the light
 “Then, they found a good old man who had lived so many years in this
 world in the temple.” (Heliand 463–466, Gillmann 2016: 210)

The gradual extension developed along a telicity and transitivity scale according to which transitive and telic verbs were the prototypical candidates for the construction. By extending the use to less prototypical situations (e.g. with genitive complements, verbs with ambiguous lexical aspect, with specific adverbials), the OS perfect form broadened its function and developed beyond the OHG form. It was used more frequently to denote an increasing breadth and range of senses, and became less dependent on the syntactic and semantic constraints of the ‘perfect of result’ meaning. In consequence, the OS perfect form shows a higher degree of grammaticalisation than the OHG form (cf. Gillmann 2016: 237–240), as illustrated in Table 5.

Table 5. Readings of the ‘HAVE/BE + past participle’ in Old High German and Old Saxon (adapted from Gillmann 2016: 238, 238; + = documented, – = not documented)

	Resultative	Perfect notions (retrospective)					Perfective past
		Perfect of result	Summarizing perfect	Experiential perfect	Perfect of persistent situation	Perfect of recent past	
OHG	+	+	(+)	(+)	–	–	–
OS	+	+	+	+	+	–	–

The choice of auxiliaries in the modern Germanic languages is already established in the Old Germanic languages. Here we can observe two separate developments. While German, Dutch and Danish developed a two-auxiliary system (HAVE and BE), in which the selection of the auxiliary depends on the transitivity and telicity of the verb semantics, English and most of the Scandinavian languages generalised the HAVE-perfect across all verbs. Regionally, there were some further developments, as in Upper German dialects where the BE-perfect was more productive than in other

regions (‘secondary BE-tendency of Upper German’, Grønvik 1986: 70). Figure 2 illustrates the historical auxiliary selection. As Gillmann has argued, the concepts of transitivity and telicity are not binary distinctions, but rather continua influenced by a wide range of factors. These have also been discussed in terms of the ‘auxiliary selection hierarchy model’ (Sorace 2000, 2004) and the prototype model (Shannon 1990, 1995).

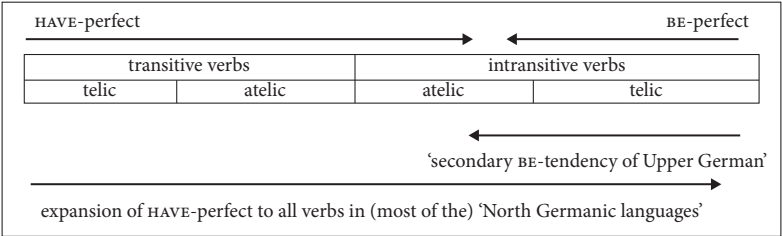


Figure 2. The development of the choice of auxiliaries in Germanic according to Grønvik (1986)

From a comparative perspective, we can observe that the perfect forms had already been grammaticalised in the earliest attested written records of OHG and OS, whereas the Gothic HAVE/BE-construction still had a compositional and resultative meaning (cf. Kotin, this volume). In a way similar to the OS forms, the Old English HAVE-perfect showed a high degree of grammaticalisation, too. It had no compositional meaning and a surprisingly high frequency. In addition, it could from an early stage be formed with intransitive verbs, even with intransitive telic verbs, which primarily belonged to the range of the BE-auxiliary (cf. van Gelderen 2004; Łęcki 2010). Accordingly, the HAVE-perfect in Old English possessed all the basic perfect readings that the Modern English present perfect shows today. On the other hand, however, the Old English BE + PST.P construction did not reach the same degree of grammaticalisation as in OHG or OS. The Old English BE + PST.P has for the most part been described as a resultative construction that failed to develop into a perfect, even though some records show more productivity than the Modern English construction (e.g. Traugott 1972). In the North Germanic languages, we can observe similar developments (with language-specific developments concerning the auxiliary selection). For an overview of auxiliary selection in Dutch, English, Danish, Swedish and further references see Drinka (2017: 247–254; this volume).

The perfect became a common feature across Germanic languages: it specialised in retrospective meaning and developed differently with regard to auxiliary selection and in the rate of its semantic and syntactic extension.

3.3 The expansion of the German perfect

Subsequent to the grammaticalisation of the perfect form, we can observe a further development regarding category frequency and the functional side of perfect forms. In the following, I will trace the functional extension of the German perfect form. The focus will lie on the High German varieties that comprise the Central and Upper German dialects.

An initial overview results from looking through grammars of the historical stages of German: Old High German (OHG), Middle High German (MHG), Early New High German (ENHG) and New High German (NHG). Interpreting the grammatical description in Braune & Heidermanns (2004: §167), Paul (2007: §§ 10), Ebert et al. (1993: §§ 159, §§ 163), and contemporary grammars such as the Duden-Grammatik (2016: 518), we can infer that the present perfect form broadened its functional range continuously, becoming a general past tense form expressing both past perfective and past imperfective meaning (cf. Fischer 2018: 218–242).

Table 6. Semantic development of the High German present perfect
(+ = documented, – = not documented, † = developing)

Temporal-aspectual meanings of the present perfect form	Gothic	OHG	MHG	ENHG	NHG
past imperfective	–	–	–	–	+
past perfective	–	–	†	+	+
present retrospective	–	+	+	+	+

Table 6 illustrates the semantic development of the German present perfect. While in OHG the present perfect is still restricted to ‘perfect of result’ notions, by the MHG period it has already broadened its functions so as to express the other perfect notions. Still, its meaning is prototypically tied to speech time, anchored in the present (cf. Zeman 2010: 253–255), as (6) illustrates.

- (6) MHG *nu liges=tu hie jæmerliche mit bluote berunnen.* *daz*
 now lie=you here woefully with blood overflow.PST.P that
 hâs=tu dran gewunnen.
 have=you therefrom win.PST.P
 “Now, you are lying here woefully, covered with blood. That’s what
 you have got from it.” (Herzog Ernst 1308–1312, Zeman 2010: 207)

While the prototypical use of the present perfect forms is tied to the present in MHG, it is precisely in the MHG period where we begin to observe a shift in the use of the present perfect forms. It is here where the use of present perfect forms that are not anchored in the present are attested for the first time (in the extant

historical record). This new use of the present perfect forms serves to bring the event into focus. For example, iterative adverbials (*dicke* “often” in Example (7)) shift the focus from the point of speech to the (indefinite) past, especially when the verb has atelic lexical aspect.³

- (7) MHG *sie hânt in dicke überladen mit strîte vil sêre*
 they have him often overload.PST.P with battles very much
 “Often, they have very much overburdened him with battles.”
 (Herzog Ernst 5372–5373, Zeman 2010: 194)

This semantic shift can first be found in MHG texts; it directly follows the grammaticalisation of the perfect form. The shift happens long before the last verbs could form perfect forms: perfect forms of *sein* (e.g. *ich bin gewesen* “I have been”) are documented from ca. 1130 on (cf. Grønvik 1986: 45), perfect forms of *haben* (e.g. *ich habe gehabt* “I have had”) from the 14th century on, while those of modal verbs are only seen from the early 16th century on (cf. Oubouzar 1974: 52, 57f.). This means that there was no (long) intermediate stage with a solely retrospective perfect in MHG, other than in Middle Low German (MLG) (on which see Table 9 below).

In ENHG, the present perfect was already used as a past perfective, for example by denoting events on a timeline in the definite past. It could stand with temporal adverbials that refer to the past. Such past uses of the perfect form occurred most often in direct speech and in commentaries (cf. Ebert et al. 1993: §§163), implying this particular use of the perfect was already established in the spoken language.

In NHG, the perfect form is used as a general past tense form, referring to situations in the definite past, as in (8). It can even be used for past imperfective contexts, e.g. background information: description of states or habitual situations in the definite past that are not part of the sequence of events.

- (8) NHG *Damals ist Anna krank gewesen.*
 at_that_time is Anna sick been
 “At that time, Anna was sick.”
 Adapted from Duden-Grammatik (2016: 518)

When one considers the various degrees of grammaticalisation in the history of the German perfect form, the question arises how the present perfect could develop into a past tense form. Why do perfects tend to become pasts? The answer lies in the “two-faced” nature of the perfect – a “*temps à deux visages*” (Waugh 1987: 3) – that brings together the past event with the subsequent moment from where it is

3. Many instances are ambiguous because their lack of further specification inhibits a clear temporal anchoring.

viewed. Depending on the verbal semantics and contextual elements the focus can shift between both poles. When the past event is put into focus, and the reference time is defocused (i.e. is not asserted), the temporal anchoring becomes vague and a past interpretation seems likely.

With Waugh (1987), Elsness (1997), and Dentler (1997, 1998) we have three approaches to characterizing the temporal-aspectual continuum between the present retrospective and the past perfective function of a perfect form. In Waugh's approach, which is based on the French *passé composé*, the concept of a semantic continuum of perfect meaning is introduced. Depending on the lexical meaning of the verbs concerned, as well as other contextual and pragmatic factors, the event's aftermath has a stronger or weaker notion: the perfect form may describe either an explicit resultant state, or merely current relevance, and may accordingly move between present retrospective and past perfective meanings (see also the discussion of the concept "current relevance" in Klein 1992: 531–532). Elsness (1997) investigates the distribution of the English present perfect and simple past forms and argues that the most important feature to differentiate is the temporal anchoring of the situation.

[T]he preterite is typically used in references to situations which are somehow attached to a past-time anchor, the present perfect in references to situations not attached to any such anchor and to situations which extend up to the deictic zero-point [i.e. speech time; HF] or at least are not clearly separate from that point, i.e. to situations located within a temporal range which extends up to zero.

(Elsness 1997: 77)

Apart from this clear differentiation, there is also a temporally underspecified "area" that results in variation:

[T]here is a considerable grey area where the time referred to is located wholly in the past but where there is no obvious anchor which forces the choice of verb form. In such cases the present perfect is more likely to be selected if the past-time reference carries clear connotation of current relevance. On the other hand, the preterite is the norm if the reference is to unique past time. (Elsness 1997: 355f.)

What we learn from the distribution of the English forms is that the obviousness of the temporal anchor can decide the selection of the tense form. If there is no obvious anchor, other features may play an important role, especially the notion of current relevance, which can be identified as part of the retrospective aspectual meaning (cf. Example (9) in §3.4).

In her diachronic corpus study on the semantic extension of German present perfect forms, Dentler (1997, 1998) brings together both concepts, that is, the shift of focus and the temporal anchoring. She identifies functional areas

(“Funktionsbereiche”) that are determined by both the definiteness of the temporal location and the particular time in focus (reference time vs. event time). In addition, she adds some other criteria, e.g. textual functions and main tenses.

Based on the concepts presented above, Fischer (2018) developed an integrative model (Table 7) that includes a transitional area (2 and 3), termed ‘past with current relevance’, which exists between the typical ‘perfect’ (1) and ‘general past’ (4 and 5). The defining properties of this transitional area are its temporal and aspectual meaning, the expression of current relevance (focused aftermath), and the temporal anchoring of the situation.

Table 7. The expansion path of the German perfect

	‘perfect use’	‘transitional use’		‘general past use’	
number	1	2	3	4	5
uses	<i>present retrospective</i>	<i>indefinite past with current relevance</i>	<i>definite past with current relevance</i>	<i>past perfective</i>	<i>past imperfective</i>
TEMPORALITY	PRESENT	PAST			
ASPECTUALITY	RETROSPECTIVE			PERFECTIVE	IMPERFECTIVE
current relevance	+	+	+	–	–
temporal anchor	present time anchor	<u>no obvious anchoring</u>	past time anchor		
perfect extension					

The model not only aims to be valid diachronically, reconstructing the semantic extension path, but it also summarises several uses of the perfect form in NHG. In the course of the semantic development, the present perfect form gradually gained more uses while at the same time the older uses persisted as well. In § 3.4, we will see that the model is also suited to cross-linguistic comparison of the modern Germanic languages, with examples. As a diachronic model it can be confirmed by the corpus studies of Dentler (1997, 1998), Sapp (2009) and Amft (2018), which show that the semantic expansion of the perfect is attended by an increase in its category frequency.

Several studies show an increase of perfect forms at the expense of the preterite forms (Lindgren 1957; Oubouzar 1974; Dentler 1997, 1998; Amft 2018). Studying the category frequencies in the *Bonner Frühneuhochdeutschkorpus*,⁴ Sapp (2009) observes that the perfect forms increase over time from 11.9% in the 14th century to 21.3% in the 15th century and to 30.2% in the 16th century.

4. The corpus is available online at <https://korpora.zim.uni-duisburg-essen.de/FnhdC/> (Accessed May 23, 2018).

Table 8. Increase of present perfect forms (adapted from Sapp 2009: 425)

Century	Preterite	Present perfect
14th	4,972 (88.1%)	672 (11.9%)
15th	5,635 (78.7%)	1,526 (21.3%)
16th	4,743 (69.8%)	2,056 (30.2%)
total	15,350 (78.3%)	4,254 (21.7%)

Lindgren's analysis of Upper German chronicles shows an even larger increase. In the 16th century, the present perfect form reaches 40%, and in the early 17th century, its rate is over 60% (cf. Fischer 2018). The increase in frequency goes hand in hand with a rise of the co-occurrence of the present perfect with the adverbials *dann* and *da/do* ("then") which are mostly used as anaphoric markers emphasizing the next instant on the timeline of narration or description, cf. Sapp (2009: 437f.). The data suggest "that the present perfect gradually takes over the semantic domain of the preterite" (Sapp 2009: 438). This observation confirms the results of Dentler's study (1997, 1998: 138), in which the semantic shift of the increasing present perfect forms is shown. The perfect form gradually expands along the grammaticalisation path and adopts past uses: in the 11th century, it is used as a preterite (uses no. 3, 4 and 5 in Table 7) in only 1.2% of cases. Starting from there, its past tense use successively increases to 20.9% in the 16th century.

The growth of the perfect form is influenced by a set of factors. First of all, present perfect forms are preferentially used in dialogic texts (and with high percentages in the 2nd person forms). These texts have a deictic temporal organisation that relates to the deictic centre of the speaker's time of utterance. Since the original meaning of the present perfect form is the expression of present retrospective (which relates to the speech time of an utterance), it is no wonder that the present perfect form primarily appears in texts with dialogic discourse modes. Those are characterised as the most important domains of the present perfect form, while the preterite form was used less in dialogues but considerably more in monological and narrative texts (cf. Fischer 2018; Amft 2018: 293; Langenberg 2008). Furthermore, we can see that the perfect form was not used with all verbs at the same time. Especially modal verbs and the verb *haben* seem to have been more resistant to the perfect form than the main verbs (cf. Sapp 2009: 427; Amft 2018: 182).

The semantic shift did not affect all German varieties in the same way. The Upper and West Central German regional languages show an early semantic expansion whereas the Low German varieties preserved a more stable perfect than their southern neighbours. This can be shown by a comparison of Middle Low German (MLG) bible printings analysed by Schöndorf (1983: 174) with MHG and ENHG reference texts. While Lindgren and Sapp show a considerable increase between

MHG and ENHG, the MLG bible texts show a similar distribution as the MHG texts, analysed in Zeman (2010). Accordingly, the MLG tense form distribution from the 15th–16th century resembles the MHG proportion from more than three centuries earlier.

Table 9. Frequencies of the perfect in areal and chronological comparison

	Zeman (2010: 308–311)	Sapp (2009: 425)	Sapp (2009: 425)	Lindgren (1957)	Schöndorf (1983: 174)	Sapp (2009: 425)
	MHG	ENHG	ENHG	ENHG (Upper German)	MLG	ENHG
Century	ca. 1200	14th	15th	1450–1549	1478–1522	16th
present perfect	5%	12%	21%	22%	7%	30%
preterite	95%	88%	79%	78%	93%	70%
total	100%	100%	100%	100%	100%	100%
	<i>n</i> = 3,097	<i>n</i> = 5,644	<i>n</i> = 7,161	<i>n</i> = 70,416	<i>n</i> = 1,572	<i>n</i> = 6,799

This development is also mirrored in the distribution depending on the discourse mode. Thus, the present perfect form in the MLG texts (15th–16th century) is almost entirely restricted to the dialogic discourse mode (94% dialogues, 6% narration), whereas the contemporary ENHG perfect form had already developed into a narrative tense form (36.4% dialogues, 63.6% narration). Again, the MLG perfect resembles the MHG perfect from 300 years earlier (98% dialogues, 2% narration, cf. Fischer 2018 for a comprehensive discussion).

In providing this comparison by period it becomes apparent that the developments of the perfect, i.e. its semantic shift and increase in frequency, occurred differently in the regional German varieties. While the southern and central regions show a viable, productive present perfect form, the perfect of the Low German varieties can be characterised as much more conservative and restricted. Beginning only in the 17th century, the Low German varieties were influenced by the preterite use of perfects in Upper and Central German dialects. Those dialects were the main basis for the development of the interregional (written) German Standard variety which emerged in the ENHG period and later on led to the *Sprachwechsel* (“language shift”) from Low to High German (at first in the written language, later on also in the spoken language).

Drinka (2017; this volume) ascribes the regional differences to an areal spread of the semantic shift of the perfect that started in the vernacular of twelfth-century Paris and influenced western German speaking territories that were in close contact with Parisian culture. The innovation eventually spread to the south-eastern German area, but not to the northern German territories which were less

influenced by the Romance culture. Those were affected later and mediated by High German influence.

The areal spread led to a characteristic areal distribution of differing degrees of perfect grammaticalisation. While the languages of the ‘core area’ (French, Upper German, North Italian) show a high degree of perfect expansion, the languages of the periphery have not or only partly undergone this shift and show lower degrees of perfect expansion.

3.4 Degrees of perfect expansion in modern Germanic languages

Comparing the English, Swedish, Dutch and German perfects, we observe differences in their uses. The English present perfect is the most restricted form in that it is only used as a retrospective present. As soon as there is a past time anchor, the preterite form becomes obligatory. Present perfect forms can only be used in situations which are not obviously anchored but which also show current relevance. Elsness (1997) calls these indefinite past contexts with current relevance the ‘grey area’. In this context, both forms are possible as in (9) (cf. Elsness 1997: 271).

- (9) *I know Mary is around somewhere – I have just talked to her.*
I know Mary is around somewhere – I just talked to her.

In Swedish, contexts with past time adverbials require the preterite form, too. But when there is an explicit current relevance notion as in (10), the perfect can be used (cf. Dammel et al. 2010: 347; Lindström & Wide 2001).

- (10) *Jag har tagit examen i 1969, så jag har examen enligt*
I have taken the_exam in 1969 so I have the_exam according to
det gamla systemet.
the old system
“I took the exam in 1969, so I have [it] according to the old system.”

In Dutch the present perfect can also be used in past perfective contexts even without current relevance. In these cases, it implies a punctual, perfective reading of an event as in (11) (cf. Dammel et al. 2010: 347). It is usually not possible to use the perfect as a narrative tense or an imperfective past.

- (11) *Vorig jaar heeft opa nog gefietst.*
last year has grandpa still cycle.PST.P
“Last year, grandpa went cycling once again.”

The German perfect expanded to all contexts of the perfect expansion path with no functional opposition to the preterite form (at least in the spoken language). It

can also be used as a narrative tense form, referring both to an event on a timeline and to a background description, cf. (12). The present perfect can also be used in imperfective contexts, with adverbials that describe the situation as habitual or progressive, cf. (13). It became a general past and pushed the preterite aside (in Upper and Central German dialects), marginalised it (in the spoken standard variety) or conserved it as a discourse mode marker (in written narration) or socio-symbolic marker (for the sake of appearing sophisticated and literate). While the present perfect expanded to more and more contexts, the preterite withdrew from all current relevance meanings (in all German dialects), cf. (14).

- (12)

Die Tür

ist aufgegangen

und sie

ist hereingekommen.

Das Zimmer

ist

the door is open.PST.P

and she is come_in.PST.P

the room is

dunkel gewesen.

dark

been

“The door opened, and she came in. The room was dark.”
- (13)

Damals

bin

ich morgens

immer zuerst

zum Fenster gelaufen.

back_then am I in_the_morning always first to_the window run.PST.P

“Back then, I used to run to the window first thing in the morning.”
- (14)

Danke, aber ich möchte nicht mitessen.

**Ich*

aß

schon.

thanks but I want not with_eat I ate already

“Thanks, but I don’t want to join you for dinner. I have already eaten.”

Table 10 compares the functions of modern Germanic perfects in an overview.

Table 10. The function of the perfect construction in selected modern Germanic languages⁵

	Present retrospective	Transitional use		Past perfective	Past imperfective
	1	2	3	4	5
English	+	+	–	–	–
Swedish	+	+	+	–	–
Dutch	+	+	+	+	–
German	+	+	+	+	+

Naturally, this overview includes some simplifications. For example, we find some cross-linguistic differences in the present perfect concerning the perfect readings

5. The numbers 1–5 refer to the functional areas in Table 7. (+ = grammatically acceptable, – = grammatically unacceptable)

(cf. Rothstein 2006). For instance, in German the present tense form is used for the expression of ongoingness, cf. (15), and the preterite can also be used in experiential contexts, (especially with *sein* ‘to be’) cf. (16).

- (15) *Wir wohnen hier seit 2001.*
 we live here since 2001
 “We have been living here since 2001.”
- (16) *Ich war schonmal in Japan.*
 I was already in Japan
 “I have already been to Japan.”

Furthermore, we can see that there is considerable variation in terms of regional differentiation. For example, in American English the use of the preterite form is preferred in transitional uses, while British English favours the present perfect form (cf. Elsness 1997: 229–236). We also find differences between perfects in the standard varieties and the dialects, as well as between spoken and written language on the one hand, and narrative and non-narrative discourse on the other. In order to fully understand the distributions of perfects and preterites in the Germanic languages, we need more multi-perspective studies that consider several dimensions of variation – standard/dialect, written/spoken, narrativity, stylistics, and language contact.

4. Consequences and current trends

4.1 *Präteritumschwund* in German dialects

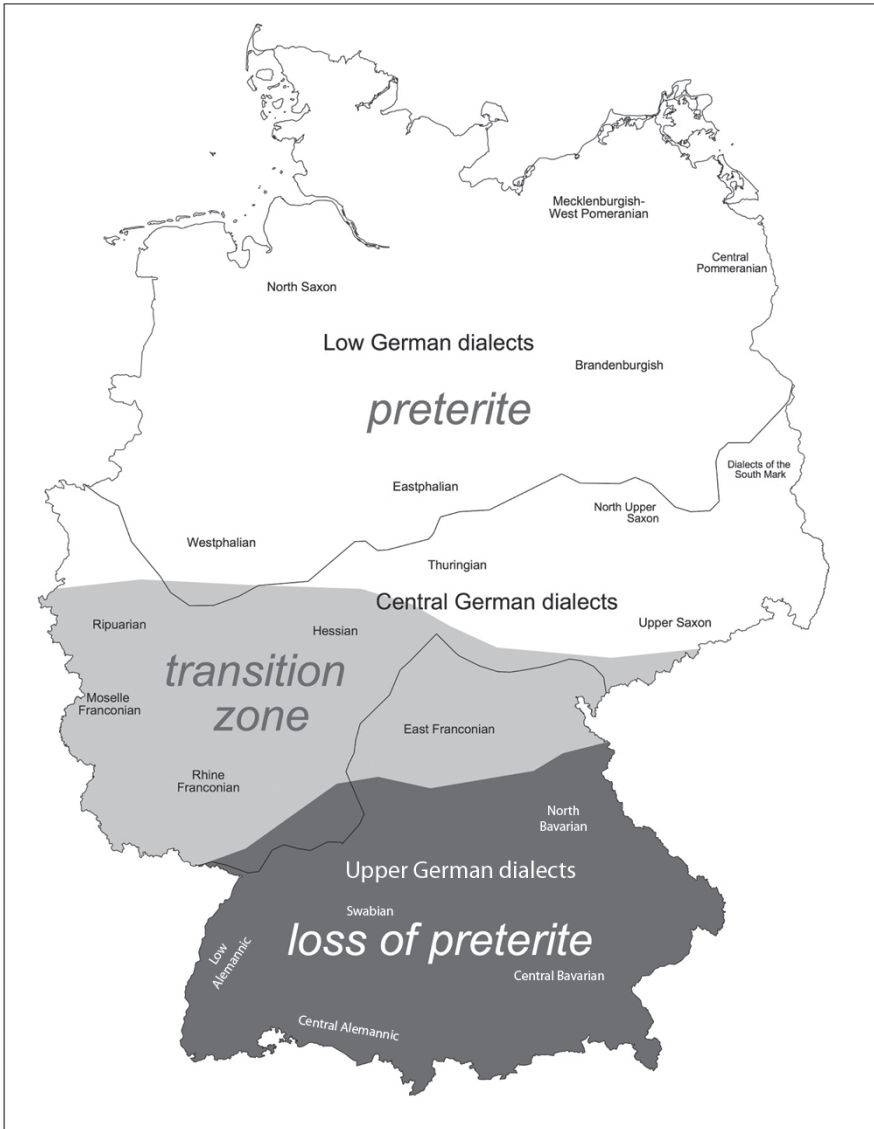
One of the most remarkable consequences of the functional expansion of the perfect is the loss of the preterite form (*Präteritumschwund*) in German dialects. Extending to progressively more semantic and functional domains, the perfect form developed into a general past and pushed the preterite forms aside.

The decay of the preterite can be traced back to the 16th century when the present perfect became the dominant past tense form in Upper German texts (Lindgren 1957). In 17th century Central Bavarian texts, Rowley (2013: 62–65) can only document indicative preterite forms for a handful of verbs. By the 19th and 20th centuries, when the discipline of dialectology emerged, and the local and regional dialects were being scientifically documented by grammatical descriptions (so-called “Ortsgrammatiken”) and dialect atlases (e.g. Georg Wenker’s *Sprachatlas des Deutschen Reichs*, 1889–1923), preterite forms had already been completely lost in the Upper German dialects. They do not even exist for auxiliaries forming the pluperfect.

In a meta-analysis, Fischer (2018) analyses the existing dialectological and historical documentation of the preterite loss. Accordingly, the German-speaking region is divided into three main areas. In the Bavarian, Alemannic and Swabian dialects, all verbs lost their preterite forms (with only some few exceptions, e.g. the punctual documentation of *war/waren* “was/were”). To the north, there is an area where the dialects preserve more and more preterite forms. This transition zone starts in Rhine Franconian, Hessian and East Franconian dialects where some verbs (mainly ‘to be’, ‘to have’, and modals) can form preterite forms, and is then continued in Moselle Franconian, Luxembourgish and Ripuarian dialects, where successively more verbs have preterite forms until there are complete preterite paradigms in Low German dialects and most parts of East Central German. Even though the preterite forms are stable in the northern German dialects (as well as in the standard variety), the dialect grammars show that the present perfect has undergone an expansion of the perfect form in semantics as well as frequency. Map 1 shows the areal distribution in an abridged presentation. This map is based on maps 10 and 11 in Fischer (2018) showing the staggered preterite/perfect-isoglosses in the *Sprachatlas des Deutschen Reichs* and the amount of documented preterite verbs in dialect grammars. Based on the study in Fischer (2018), the map is restricted to Germany, but preterite loss also affected the contiguous German-speaking areas e.g. in Austria, Switzerland, the Alsace in France, Luxemburg, and South-Tirol in Italy, as well as German speaking linguistic enclaves.

The replacement of the preterite followed a regular process and was controlled by token frequency; this led to verb-wise preterite loss. It began with infrequent verbs and subsequently encompassed the preterite forms of regular strong and weak verbs. (Strong verbs form their inflectional forms by ablaut, weak verbs by adding suffixes.) Very frequent verbs conserved their preterite forms longest because they are well entrenched in the mental lexicon, especially the verb *sein* “to be” and modal verbs, but also verbs like *gehen* “to go” and *sagen* “to say”. The preterite verbs that endure longer are mostly verbs with stative and atelic lexical aspect and irregular inflexion (cf. Bybee 1985: 117–123, 2001: 113–116, 2007: 10–11, 2010: 24–25; Schmid 2016: 11, 15–16).

Another factor which could have supported the preservation of modals (along with other multipart verbs) in the preterite tense is their similar syntactic structure with perfects, the so-called *Klammerstruktur* (‘braciation’, i.e. syntactic parenthesis structure). Perfects are formed with the auxiliary in second and the participle in final position (in V2, cf. (18)). The same pattern is found with modals that are formed with the modal auxiliary in second and a substitute infinitive in final position (in V2, cf. (19)). Examples (17) and (18) contrast the preterite and the perfect form of the verb *verkaufen* “to sell”. While the preterite *verkauften* is a synthetic tense form, the perfect *haben verkauft* is formed analytically. In German, this leads to a verbal



Map 1. Loss of preterite in the dialects of Germany (created with www.regionalsprache.de)

bracket (*Verbalklammer*) that establishes a syntactic middle field ([SUBJECT] *haben* [OBJECT; ADVERBIAL ADJUNCTS] *verkauft*). With modals, the verbal bracket already exists in the present and preterite forms ((19) and (20)) as the finite modal verb requires an infinitive form in the right bracket. By forming the perfect of a modal verb in (21), the right bracket becomes more complex (*verkaufen wollen*), but the basic sentence structure with left and right bracket remains in place, as in (19 and 20).

- (17) **Preterite form – main verb *verkaufen***
Die Bauern verkauften die Kühe.
 the farmers sold the cows
 “The farmers sold the cows.”
- (18) **Perfect form – main verb *verkaufen***
Die Bauern haben die Kühe verkauft.
 the farmers have the cows sell.PST.P
 “The farmers have sold the cows.”
- (19) **Present form – modal verb *wollen***
Die Bauern wollen die Kühe verkaufen.
 the farmers want the cows to_sell.INF
 “The farmers want to sell the cows.”
- (20) **Preterite form – modal verb *wollen***
Die Bauern wollten die Kühe verkaufen.
 the farmers wanted the cows to_sell.INF
 “The farmers wanted to sell the cows.”
- (21) **Perfect form – modal verb *wollen***
Die Bauern haben die Kühe verkaufen wollen.
 the farmers have the cows to_sell.INF.want.INF
 “The farmers have wanted to sell the cows.”

The brachiation with left and right bracket has some advantages in language processing and discourse structuring: the finite auxiliary in the left bracket allows an early identification of the subject by verbal agreement, and the middle field makes it possible, to some extent at least, to vary the order of the clausal elements and put specific elements in focus (cf. Abraham 2004: 243). Modal and copula verbs, as well as other verbs with bracketing already show a verbal bracket, along with its concomitant advantages, in the synthetic tense forms. When forming a perfect tense form, however, an unfavourable complex right verbal bracket results, with at least two elements (participle and substitute infinitive). This could be another reason why these verbs preserve the preterite forms longer than main verbs.

Two further factors can be identified. First, as discussed in §3.3, the grammaticalisation of the perfect occurred verb-wise. Specifically, the modals and *haben* “have” were the last verbs to adopt the new analytic verb form, and these thereby concluded the emergence of the perfect construction. Accordingly, the particular time at which the perfect grammaticalisation occurred seems to have played a role too. Secondly, corpus studies on the use of tense forms show that a given affinity with the preterite or perfect forms is also influenced by articulatory economy (cf. Sieberg 1984; Hennig 2000; Sapp 2009; Fischer 2018): speakers tend to replace preterite forms that are difficult to articulate because of repetitive syllables or consonant

clusters, especially in the second person singular, where the affix is {-st} (e.g. *du batst* “you asked for”, *du erkältetest dich* “you caught a cold”, *du meldetest* “you reported”).

The historical and dialectological data analysed in Fischer (2018) reveal that the loss of the preterite tense forms proceeded verb by verb in an orderly fashion. The loss is influenced by specific factors that are summarised in Table 11, illustrating the hierarchy of preterite loss.

Table 11. Hierarchy of preterite loss and its factors

Decay of preterite tense forms	Preservation of preterite tense forms
verbs/verb forms with	
low token frequency	high token frequency
morphological regularity	morphological irregularity
lack of parenthesis structure	parenthesis structure
perfective lexical aspectuality	imperfective lexical aspectuality
early grammaticalisation of the perfect form	late grammaticalisation of the perfect form
uneconomical sound structure	economical sound structure
infrequent verbs	
regular weak verbs	
regular strong verbs	
irregular verbs	
auxiliary <i>haben</i> ‘have’	
modal verbs	
	<i>sein</i> ‘to be’

In the 130 years of research on preterite loss, there has been no shortage of proposed hypotheses to explain what caused the process (cf. Reis 1894; Lindgren 1957; Dal 1960; Dentler 1997; Abraham & Conradie 2001; Sapp 2009; Drinka 2017). Fischer (2018) provides a comprehensive discussion of all hypotheses and brings together the most compelling arguments in an integrative approach where the semantic shift of the perfect is considered to be the determining factor, with other developments (e.g. sound changes) viewed as catalysts for this dynamic reorganisation of the German tense and aspect system.

4.2 Double perfect constructions in German substandard varieties

The dynamics in the German system also show an emergence of other aspectual verb forms in regional-language varieties. For example, to express aspectual meaning that is related to the imperfective viewpoint, West Central German dialects developed a new progressive form built with “be.FIN + am.LOC + V.INF” (*Er ist am kochen*. “He is cooking.”). Another striking example of the dynamicity of the temporal-aspectual system is the double perfect construction, which, however, is not a specifically German form, but can be found in several languages in Europe and the world (cf. Ammann 2007).

The German double (present or past) perfect construction is a substandard form that is not acceptable in written and spoken standard language (yet) but quite common in colloquial language. In grammars and handbooks, the doubling form is vehemently rejected and has been written off as the “Hausfrauen-Perfekt” (“housewife’s perfect”) (Sick 2004: 180). The form is composed of an auxiliary in the present or past form (e.g. *hat/hatte* “has/had”; *ist/war* “is/was”), the participle of the main verb (e.g. *gewaschen* “washed” or *gestorben* “died”) and the participle of the auxiliary (*gehabt* “had”; *gewesen* “been”) as in (22) and (23).

- (22) *Sie hat/hatte sich die Hände gewaschen gehabt.*
 she has/had herself the hands wash.PST.P have.PST.P
 “She washed her hands. /She had washed her hands.”
- (23) *Sie ist/war gestorben gewesen.*
 she is/was die.PST.P been
 “She died. /She had died.”

The construction has been attested since the 13th/14th century for *sein* “be” and since the 14th/15th century for *haben* “have” (cf. Buchwald-Wargenau 2012: 234). Until the 20th century, the form remained marginal in written texts and has become more and more frequent in the last 100 years. Still, it is a seldom-used tense form that is very difficult to pin down, as it is highly marked in written questionnaires and quite infrequent in corpus studies.

The double perfect construction is often associated with perfectivity and completedness, accentuating the aspectual meaning of the basically past tense form (Rödel 2007; Buchwald-Wargenau 2012; Brandner et al. 2016). In her corpus study, Buchwald-Wargenau (2012) finds that the double perfect can be used for different past tense meanings – with a certain tendency to express perfectivity, especially retrospectivity. It is most widely used as a past perfect tense form relating to a completed event at a certain reference time in the past. But it can also be documented with retrospective present, imperfective past or past-in-the-past meanings. Furthermore, Brandner et al. (2016) describe an exclusive meaning that seems to be a kind of niche for this peculiar verb form, the superperfect meaning, by which it is asserted that an (inferred or resultant) state that resulted from an earlier event is no longer valid. In (24), the washed hands are no longer in a clean (“result from washing”) state.

- (24) *Ich habe mir doch die Hände gewaschen gehabt.*
 I have me.DAT but the hands wash.PST.P have.PST.P
 “But, I did wash my hands.” (implying: now, they are not washed/clean anymore)

Additionally, uses have been described with the temporal marking of remoteness.

Research on double perfect forms often tried to connect double perfects to the loss of the preterite. Buchwald-Wargenau examined possible interrelations in depth and raised a number of counter-arguments, including, for example, that double perfect forms can also be found in northern German varieties (no need to substitute the past perfect) and at an early stage (no causal determination, cf. Buchwald-Wargenau 2012: 74f.).

However, both developments, the preterite loss and the emergence of double perfect construction, can be ascribed to the same process: the grammaticalisation of the perfect form. As soon as the form was grammaticalised, it further developed taking on new meanings and appearing in new configurations. While more and more analytic forms emerge, old strategies in expressing perfective aspectuality become unproductive, such as the Old Germanic heritage prefix {*ga/gi/ge-*}, cf. Table 12.

Table 12. Diachronic development of German tense and aspects forms
(+ = documented, – = not documented, ↑ = emerging, ↓ = disappearing,
↓* = disappearing in regional and spoken varieties)

FORMS	Gothic	OHG	MHG	ENHG	NHG
Present	+	+	+	+	+
Preterite	+	+	+	+	+ / ↓*
Present perfect	–	↑	↑ / +	+	+
Past perfect	–	↑	↑ / +	+	+ / ↓*
Double perfect	–	–	–	↑	+
Double past perfect	–	–	–	↑	+
<i>ga/gi/ge-</i> prefix	+	+	↓	↓	–

The regional languages that – unlike the standard variety – are not normalised or codified seem to be a “fertile soil” for a dynamic reorganisation of the already dynamic verbal categories tense and aspect.

4.3 Re-introduction of a temporal opposition in English

In the overview in Table 10, we see that the English present perfect is, functionally speaking, the most restricted perfect form. It is therefore interesting to note that the English perfect has not always been this way. Analysing a diachronic corpus of English, Elsness (1997: 288, 339–348) observes that the present perfect actually did expand into contexts referring to event time located wholly in the past. Those uses increased from Early Middle English and peaked in the 18th century. From that point on, the perfect withdrew again and specialised in typically present perfect functions (albeit with regional differences). Those findings imply that the expansion

path is not a unidirectional grammaticalisation cline, but that it is possible for tense and aspect systems to re-establish functional oppositions even when they had been previously crossed. Elsness does not provide reasons for this development.

The example of the English present perfect sets the focus on the dynamics and stability of tense and aspect systems. Why do some perfects expand, while others do not? Why did the English perfect reverse the expansion and reinforce the functional opposition? In § 3.1, we saw that the Old Saxon perfect was further grammaticalised than the equivalent Old High German form. On the other hand, however, the semantic expansion into a past tense form started in the southern variety, most likely triggered by language contact with the Romance languages. We likely have to assume that different processes changed the tense and aspect system of the Germanic languages in various ways. This should be addressed in further cross-linguistic research.

5. Conclusion

I have given an overview of some basic developments and characteristics of the perfect form in modern Germanic languages. The chapter has focused on the emergence and expansion of the German perfect form and has profited greatly from historical and dialectological studies based on text corpora and other empirical data. There are many open questions that have to be addressed by future cross-linguistic research. First, we need to broaden the picture and include other (in part quite insular) Germanic languages such as Icelandic, Faroese, and Frisian. It is important to compare the exact developments in form and function. It is therefore necessary to identify the role of language contact and work out which developments happened autochthonously, and which were triggered by contact. To successfully piece together the big picture of the perfects in the Germanic languages, we need further – empirically based and theoretically framed – historical and dialectological research on the regional varieties of each modern Germanic language.

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Perfects in Baltic and Slavic

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This survey presents a comprehensive account of perfect constructions (based on an anteriority participle and an often optional auxiliary) in Baltic and Slavic over space and time, including dialects and high-contact minority varieties. Based on a classification by participle types and their combinations with BE- and HAVE-verbs, it provides a systematic check of renowned functions of perfect grams and evaluates accepted parameters of grammaticalisation. The most consistent common denominator of perfects in Baltic and Slavic lies in the irrelevance of most such parameters but an increase in admissible lexical input and a decrease in paradigmatic variability. The two most salient differences between Slavic and Baltic are (i) the high level of stability of voice orientation of participles in Baltic vs. the diathetic lability and repeated changes in voice orientation in Slavic, and (ii) stable systems of perfects of likely great antiquity in Baltic vs. the lack of consistently employed perfect systems in most Slavic languages.

Keywords: Baltic languages, Slavic languages, grammaticalisation, BE-perfects, HAVE-perfects

1. Introduction

The chapter is structured as follows. We first survey Baltic (§2), then Slavic (§3). The internal division of these sections is not identical, owing mainly to the differences between the two groups. For each group we first survey the formal structure and types of perfects, before dealing with functional differentiation and diachronic matters. In §4 we summarize by taking up the findings of §§2–3 and point out parallels and differences in the patterns of rise and change. We also investigate the extent to which perfects in Baltic and Slavic comply with accepted parameters of grammaticalisation. We justify why morphosyntactic parameters are a bad indicator and inquire into possible reasons for the astonishing diachronic stability of resultative perfects in most varieties of both groups.

2. Perfects in Baltic

Our account of the structure and functions of the perfect in modern Lithuanian and Latvian will be mostly synchronic. The situation in the third recognized modern Baltic language, Latgalian, has not yet been sufficiently investigated, so we refrain from discussing it in any systematic fashion. The data from Old Prussian and earlier stages of Lithuanian and Latvian will be only cursorily touched upon in the section on diachrony (§2.4).

There is not much literature on the perfect constructions in Baltic, even less so in languages other than Lithuanian and Latvian, and there is a clear (and rather unfortunate) bias towards Lithuanian at the expense of Latvian. On Lithuanian perfects and resultatives see e.g. Geniušienė & Nedjalkov (1988), Sližienė (1995), Wiemer (2012), Sakurai (2016); on Latvian, among the works published in Latvian, Nau (2005) should be mentioned; on Baltic in general see Mathiassen (1996), Wiemer & Giger (2005: §4) and Arkadiev & Daugavet (2016). Regrettably, the Baltic perfects have not been included into the survey of the European perfects in Lindstedt (2000) or Dahl & Hedin (2000), and Latvian is lacking in Thieroff (2000).

2.1 Formal issues

The perfect and resultative constructions in all Baltic languages are periphrastic and consist of a past participle of the lexical verb and an auxiliary. The default auxiliary is the existential/copular verb ‘be’, Lith. *būti*, Latv. *būt*, which is often omitted in the present tense. The participle may be passive (patient-oriented, suffix *-t-*), yielding an objective resultative (in terms of Nedjalkov & Jaxontov 1988), which is systematically syncretic with the actional passive, cf. (1), or active (agent-oriented, suffix *-us-*), yielding a subjective or a possessive resultative or the perfect proper, cf. (2). The functional side of the aforementioned oppositions will be discussed in more detail in §2.2.

- (1) a. Lithuanian (Geniušienė & Nedjalkov 1988: 369)
Lang-as (yra) už.dary-t-as.
 window-NOM.SG be.PRS.3 close-PST.PASS.P-NOM.SG.M
- b. Latvian (constructed)
Log-s (ir) aiz.vēr-t-s.
 window-NOM.SG (be.PRS.3) close-PST.PASS.P-NOM.SG.M
 a=b “The window is closed.”

- (2) a. Lithuanian (LiLa)
Es-u su-kait-us-i ir
 be.PRS-1SG PVB-become.hot-PST.PA-NOM.SG.F and
iš-prakaitav-us-i ...
 PVB-perspire-PST.PA-NOM.SG.F
- b. Latvian (LiLa)
Esm-u no-kars-us-i un
 be.PRS-1SG PVB-become.hot-PST.PA-NOM.SG.F and
no-svīd-us-i
 PVB-perspire-PST.PA-NOM.SG.F
 a=b “I am hot and sweating.”

In addition, Lithuanian has a marginal possessive resultative construction with the transitive auxiliary *turėti* “have” and an active past participle, which makes this construction typologically exceptional (Wiemer 2012), cf. (3).

- (3) Lithuanian (Wiemer 2012: 71)
Kišen-ėje j-is tur-i pa-si-slėp-ęs
 pocket-LOC.SG 3-NOM.SG.M have-PRS.3 PVB-REFL-hide-PST.PA.NOM.SG.M
butel-į.
 bottle-ACC.SG
 “In his pocket he has a bottle hidden.”

Participles in periphrastic resultative and perfect constructions always agree with the subject in gender, number and case – nominative in finite clauses, see examples above, non-nominative in non-finite clauses, cf. (4) and (5), in contrast to predicative adjectives and nouns which often occur in the predicative instrumental case.

- (4) Lithuanian (LKT)
istorini-ai šaltini-ai liudij-a [pirmąkart
 historical-NOM.PL.M source-NOM.PL testify-PRS.3 first.time
Mozart-o oper-ą ‘Užburtoji fleita’ Lietuv-oje buv-us
 Mozart-GEN.SG opera-ACC.SG ‘The.magic.flute’ Lithuania-LOC.SG be-PST.PA
pa-rody-t-ą 1802–1805 met-ais].
 PVB-show-PST.PASS.P-ACC.SG 1802–1805 year-INS.PL
 “Historical sources testify Mozart’s ‘The magic flute’ being staged for the first time in Lithuania in 1802–1805.”
- (5) Latvian (example courtesy of Anna Daugavet)
ne-drīkst būs dzēr-uš-am vecāk-am
 NEG-may.PRS.3 be-INF drink-PST.PA-DAT.SG.M parent-DAT.SG
 “A parent may not be drunk.”

Due to the systematic omission of the auxiliary in the present tense of the active resultative, it systematically coincides with the past tense of the active evidential, which in Lithuanian employs active participles instead of finite forms as main predicates. Thus, the Lithuanian Example (6) without context can be interpreted either as a non-evidential present tense resultative (denoting a state) or as an evidential past tense (denoting an event).

- (6) Lithuanian (constructed)
- J-i ap-si-reng-us-i šilkini-ais*
 3-NOM.SG.F PVB-REFL-put.ON-PST.PA-NOM.SG.F of.silk-INS.PL.M
marškini-ais.
 shirt-INS.PL
 i. “She is wearing [*lit.* is dressed with] a silk blouse.”
 ii. “She (reportedly) put on a silk blouse.”

In Latvian the evidential has dedicated forms in the present and future tenses but uses active past participles in the past tense, as in Lithuanian.

Lithuanian, but not Latvian, has developed an ‘impersonal evidential’ based on the passive participle with suffix *-t-*, otherwise used in objective resultatives and in the impersonal passive, from which it often can hardly be distinguished. It is impersonal inasmuch as the *t*-participle does not show agreement with a noun phrase, since there is no agreement controller. The subject is coded with the genitive and obligatorily precedes the participial predicate, see (9). The construction is largely restricted to intransitive verbs (7), but may occur also with zero-place verbs (8) and can even be combined with the passive (9).¹

- (7) Lithuanian (LKT)
- Tai zigzag-ais šuoliuo-t-a, tai tupė-t-a ir*
 DEM zigzag-INS.PL gallop-PST.PASS.P-NA DEM roost-PST.PASS.P-NA and
dairy-t-a-si, tai pul-t-a šalin
 look.around-PST.PASS.P-NA-REFL DEM rush-PST.PASS.P-NA aside
dvimetr-ini-u šuoli-u.
 two.meter-ADJ-INS.SG.M jump-INS.SG
 “[Here are paths of hares. Look,] they (must have) galloped in zigzags, roosted and looked around. [Look,] they (must have) rushed to the side with two-meter jumps.” [*lit.* “... (it) is galloped in zigzags, roosted and looked around ...”]

1. This combinability is indicative of the different provenance of passive and impersonal evidential. Thus, in contrast to passive constructions, the impersonal evidential does not show any restrictions concerning the lexical input or numerical valency. Cf. Wiemer (2006b) and Spraunienė et al. (2015) for a systematic analysis.

- (8) Lithuanian (Geniušienė 2006: 55)
Nakt-į ly-t-a.
 night-ACC.SG rain-PST.PASS.P-NA
 “It obviously (must have) rained at night.”
- (9) Lithuanian (Spraulienė et al. 2015: 326)
J-o bū-t-a muš-t-o.
 3-GEN.SG.M be-PST.PASS.P-NA beat-PST.PASS.P-GEN.SG.M
 “He must have been beaten.”

This evidential construction is mainly restricted to inferential meanings (see the last examples), while evidentials with agreeing participles tend to be more frequent in reportive meaning (see (6)). As derived from different kinds of the perfect, both evidential constructions also show a different distribution in dialect-geographical terms: the impersonal is prominent in the south-eastern part of Lithuania, while the construction with agreeing participles is productively used in the northern part of the country closer to Latvia.

Both in Lithuanian and Latvian the perfect auxiliary can take any morphological form. The past and future perfects will be discussed in more detail below (§2.2.3, 2.2.4), so here less frequently encountered forms are shown, such as the habitual past (only Lithuanian) (10), imperative (11), and subjunctive (12) (note the ‘supercompound’ form of the subjunctive counterfactual passive in the second clause).

- (10) Lithuanian (Arkadiev 2012: 104; LKT)
Dar nedaug k-as bū-dav-o girdeį-ęs apie
 yet not.many who-NOM be-HAB-PST.3 hear-PST.PA.NOM.SG.M about
neseniai iš.leis-t-q kny-g, o Šimait-is jau
 recently publish-PST.PASS.P-ACC.SG book-ACC.SG but PN-NOM.SG already
spė-dav-o j-q per-skaity-ti ...
 manage-HAB-PST.3 3-ACC.SG.F PVB-read-INF
 “It used to be that very few people had yet heard about a recently published book, whereas Shimaitis would already manage to read it ...”
- (11) Lithuanian (Arkadiev 2012: 100; LKT)
Visada bū-k pa-si-ruoš-ęs
 always be-IMP.2SG PVB-REFL-prepare-PST.PA.NOM.SG.M
man-e pri-im-ti ...
 1SG-ACC PVB-take-INF
 “Be always prepared to receive me [, because I will come secretly.]”

- (12) Latvian (LiLa)
It kā es pat-i ne-bū-tu krit-us-i
 as if 1SG.NOM self-NOM.SG.F NEG-be-SBJV fall-PST.PA-NOM.SG.F
bedr-ē un ne-bū-tu bij-us-i
 pit-LOC.SG and NEG-be-SBJV be-PST.PA-NOM.SG.F
spies-t-a dzīvo-t cit-u dzīv-i?
 press-PST.PASS.P-NOM.SG.F live-INF other-ACC.SG life-ACC.SG
 “As if I myself had not fallen into a pit and had not been pressed to live a different life?”

The auxiliary can appear in various non-finite forms, such as the infinitive, see (5) above, or participle, either in subordinate clauses, as in (4) and (13), or in evidential constructions, as in (14).

- (13) Lithuanian (LKT)
Skambin-u, j-i vis sak-o [es-a-nt-i]
 call-PRS.1SG 3-NOM.SG.F still say-PRS.3 be-PRS-PA-NOM.SG.F
užsiēm-us-i.
 be.occupied-PST.PA-NOM.SG.F
 “I am calling her, but she keeps telling me that she is occupied.”
- (14) Lithuanian (Ambrazas ed. 2006: 263)
Sveči-as es-ąs kil-ęs iš
 guest-NOM.SG be-PRS.PA.NOM.SG.M rise-PST.PA.NOM.SG.M from
kaimieči-ų.
 peasant-GEN.PL
 “The guest is [said to be] descended from peasants.”

In Latvian the auxiliary can take a special periphrastic debitive form, which, according to Holvoet (2001: 37), can have either deontic or epistemic meaning depending on the mutual scope of the debitive and the perfect; compare (15a,b). The subject of the debitive is encoded by the dative case and triggers agreement on the predicate adjective, as well as on the participle in scope of the debitive in (15b), i.e. if the debitive has epistemic meaning:

- (15) Latvian (Holvoet 2001: 37)
- a. *Jān-im ir bij-is jā-bū-t ļoti*
 John-DAT.SG be.PRS.3 be-PST.PA.NOM.SG.M DEB-be-INF very
gudr-am.
 clever-DAT.SG.M
 “John has had to be very clever.” → deontic
- b. *Jān-im jā-bū-t bij-uš-am ļoti gudr-am.*
 John-DAT.SG DEB-be-INF be-PST.PA-DAT.SG.M very clever-DAT.SG.M
 “John must have been very clever.” → epistemic

2.2 Functions of perfect constructions

For the treatment of the resultative/perfect constructions in the Baltic languages, the following oppositions are relevant: (i) resultative vs. (actional) perfect; (ii) present perfect vs. past perfect vs. future perfect; (iii) perfect vs. simple past. The first two oppositions pertain to the structure and functions of the relevant constructions and are to a large extent independent of each other, whereas the latter opposition pertains to the partial overlap of functions and usage patterns between periphrastic perfects and simple tenses, which is common to verbal systems with perfects in general and has rather specific ramifications in each of the Baltic languages. In the following subsections, we will start with the resultative understood in the sense of Nedjalkov & Jaxontov (1988) as denoting a state causally determined by a previous event and then will discuss the various functions of the (present) perfect proper, then turning to the special functions of non-present perfects.

2.2.1 *Resultative proper*

As has already been said above, the Baltic languages formally distinguish the objective resultative formed from transitive telic verbs by means of passive participles, as in (1) above, and the subjective resultative built upon active participles derived predominantly from intransitive telic verbs, cf. (2) above. In contrast to Slavic, this distinction is strict, see Wiemer & Giger (2005: 43–45). To the latter type also belong resultatives formed from a restricted set of transitive verbs denoting a salient change of state of the subject often involving possession, cf. (16). In Lithuanian (16a), but not in Latvian (16b), this subtype often involves reflexive-benefactive marking.

- (16) a. Lithuanian (LiLa)
Buv-o šviesi-ai nu-si-daži-us-i
 be-PST.3 light.coloured-ADV PVB-REFL-dye-PST.PA-NOM.SG.F
plauk-us.
 hair-ACC.PL
- b. Latvian (LiLa)
Bij-a iz-balināj-us-i mat-us.
 be.PST-3 PVB-whiten-PST.PA-NOM.SG.F hair-ACC.PL
 a=b “She had dyed her hair in light colour.”

Lexically, resultatives are restricted to telic verbs denoting a change of state related to the participant expressed as the subject.

Both kinds of resultative denote states holding at the reference time indicated by the auxiliary (as opposed to the perfect proper referring to situations prior to the reference time, see below), as evidenced e.g. by their co-occurrence with temporal adverbials, cf. (17), or the Lithuanian continuative prefix *tebe-*, cf. (18) (on this prefix, see Arkadiev 2011).

- (17) Lithuanian (Geniušienė & Nedjalkov 1988: 371)
Radij-as buv-o vis-q laik-q įjung-t-as.
 radio-NOM.SG be-PST.3 all-ACC.SG time-ACC.SG turn.ON-PST.PASS.P-NOM.SG
 “The radio set was turned on all the time.”
- (18) *J-is tēb.ēra už.si.dar-ęs*
 3-NOM.SG.M CNT+be.PRS.3 close.REFL-PST.PA.NOM.SG.M
savo kambar-yje.
 RPOSS room-LOC.SG
 “He is still locked in his room.” [*lit.* “has still locked himself”]

In both kinds of resultative, the auxiliary can be argued to be a copula merely expressing predicative categories of tense, mood, and person, while the participles show similarities to predicative adjectives (on Lithuanian cf. Servaitė 1988: 87; Sakurai 2016: 195–196), as evidenced, e.g., by their being able to be conjoined with adjectives, cf. (19).

- (19) a. Lithuanian (LiLa)
Miest-as buv-o tušči-as ir
 town-NOM.SG be-PST.3 empty-NOM.SG.M and
ap-mir-ęs.
 PVB-die-PST.PA.NOM.SG.M
- b. Latvian (LiLa)
Pilsēt-a bij-a tuksnesīg-a, iz-mir-us-i.
 town-NOM.SG be.PST-3 empty-NOM.SG.F PVB-die-PST.PA.NOM.SG.F
 a=b “The town was empty and dead.”

In Lithuanian, the objective resultative (= stative passive) is systematically homophonous with the actional passive, cf. (20).

- (20) Lithuanian (Geniušienė & Nedjalkov 1988: 373)
Dur-ys buv-o už.rakin-t-os, bet aš
 door-NOM.PL be-PST.3 lock-PST.PASS.P-NOM.PL.F but 1SG.NOM
ne-žin-au, kada j-os buv-o už.rakin-t-os.
 NEG-know.PRS-1SG when 3-NOM.PL.F be-PST.3 lock-PST.PASS.P-NOM.PL.F
 “The door was locked (past resultative), but I don’t know when it was locked (past passive).”

In cases like (20) the two types of passive can be distinguished only by context (for more details, see Geniušienė 2016). By contrast, in Latvian, the actional passive uses a different auxiliary *tikt* “get”, cf. (21).

- (21) Latvian (constructed)
Durv-is bij-a aiz.slēg-t-as, bet es
 door-NOM.PL be.PST-3 lock-PST.PASS.P-NOM.PL.F but 1SG.NOM
ne-zin-u, kā t-as tik-a
 NEG-know.PRS-1SG when DEM-NOM.PL.F get-PST.3
aiz.slēg-t-as.
 lock-PST.PASS.P-NOM.PL.F
 “The door was locked (past resultative), but I don’t know when it was locked (past passive).”

2.2.2 The perfect proper

The perfect proper, used to refer to (both dynamic and static) situations somehow relevant at the reference time, formally differs from the resultative in that it is based mainly on active participles (for perfect uses of the passive participles in Latvian, see Nau 2019). Accordingly, it neither affects the argument structure of the verb, nor puts any restrictions on the lexical input (see below). The most prominent function of the perfect in both Lithuanian and Latvian is the experiential one, which indicates that the event denoted by the verb phrase has occurred at least once in the past and is considered as a salient property of the subject in the current discourse, cf. (22).

- (22) PQ51:² [A is visiting a town she used to live in several years ago; now she lives somewhere else.]
- a. Lithuanian
Es-u čia gyven-us-i, taigi žin-au vis-as
 be.PRS-1SG here live-PST.PA-NOM.SG.F so know.PRS-1SG all-ACC.PL.F
gatv-es.
 street-ACC.PL
- b. Latvian
Es te esm-u dzīvoj-us-i, tāpēc zin-u
 1SG.NOM here be.PRS-1SG live-PST.PA-NOM.SG.F therefore know.PRS-1SG
šeit katr-u iel-u.
 here every-ACC.SG street-ACC.SG
 a=b “I have lived here, so I know every street here.”

The ‘current relevance’ meaning is intermediate between the resultative proper and the experiential, and it is generally difficult to keep it apart from either of the latter two meanings. According to Dahl & Hedin (2000), current relevance constitutes a

2. The Perfect Questionnaire (Dahl ed. 2000: 800–809).

continuum of subtle meaning distinctions which depend both on the context and on actionality features of the verb. First of all, it is primarily a discourse-oriented notion “in that the speaker portrays the consequences of an event as somehow essential to the point of what he is saying” (Dahl & Hedin 2000: 392). In particular, relevance is important for certain illocutionary effects, e.g. to make interlocutors react somehow to the state of affairs denoted. For instance, an utterance like ‘A bank has been robbed’ is suitable not so much just to inform interlocutors about some event, but to move and do something about it. Likewise, ‘The gong has sounded’ is primarily uttered not to inform about an acoustic event, but “to mean that it is time to have dinner” (Dahl & Hedin 2000: 391). The use of the perfect in this function is much more developed in Latvian than in Lithuanian. Thus, in (23) from PQ Latvian speakers allow the perfect while Lithuanian speakers prefer the simple past (cf. similar observation in Sakurai 2016: 199):

- (23) PQ40: [The window is open but A has not noticed that. A asks B: why is it so cold in the room?]
- a. Lithuanian
Aš atidari-au lang-ą.
 1SG.NOM open.PST-1SG window-ACC.SG
- b. Latvian
Esm-u atvēr-is log-u.
 be.PRS-1SG open-PST.PA.NOM.SG.M window-ACC.SG
 a=b “I have opened the window.”

A parallel corpus study (Arkadiev & Daugavet 2016) has shown that current relevance accounts for about a half of the uses of the present perfect in Latvian as opposed to less than 20% of the uses of the present perfect in Lithuanian, cf. (24).

- (24) Lithuanian (LiLa)
Bet dar reikė-s ir Natalij-os paklausinė-ti. K-ą
 but still need-FUT.3 and Natalia-GEN.SG interrogate-INF what-ACC
j-i yra su-galvoj-us-i.
 3-NOM.SG.F be.PRS.3 PVB-think-PST.PA-NOM.SG.F
 “We will still have to ask Natalia. What did she decide?”

Similarly, in Latvian, but not in Lithuanian, the present perfect can be used to express unexpected events in the recent past (the so-called ‘hot news’ function, see e.g. Dahl & Hedin 2000), though such usage does not seem to be very frequent, cf. (25). Lithuanian employs the simple past here (cf. Sakurai 2016: 203).

- (25) PQ56: [A has just seen the king arrive. The event is totally unexpected.] A: The king ARRIVE!
- a. Latvian
Karal-is ir ie.rad-ies! /ie.rad-ā-s!
 king-NOM.SG be.PRS.3 arrive-PST.PA.NOM.SG.M.REFL / arrive-PST.3-REFL
- b. Lithuanian
Karali-us at.vyk-o! /??yra at.vyk-ęs
 king-NOM.SG arrive-PST.3 / be.PRS.3 arrive-PST.PA.NOM.SG.M
 a=b “The king has arrived!”

The so-called perfect of persistent situation (‘universal perfect’, see e.g. Iatridou et al. 2001) is absent in Lithuanian (Arkadiev 2015: 9; Sakurai 2016: 200 fn. 5) and only marginally attested in Latvian (Nau 2005: 147–148). Compare the corpus Example (26). However, for both languages the default option in such contexts is the present tense, cf. the elicited examples in (27).

- (26) Latvian (Nau 2005: 147)
viņ-š vienmēr ir iz.cēl-ies ar
 3-NOM.SG.M always be.PRS.3 stand.out-PST.PA.NOM.SG.M.REFL with
t-o, ka vienmēr meklēj-is kaut k-o
 that-ACC.SG that always search-PST.PA.NOM.SG.M something-ACC.SG
jaun-u.
 new-ACC.SG
 “... he [=Gidon Kremer] has always stood out because he has always been looking for something new.”
- (27) PQ49: [A is still living in this town.] A: I LIVE here for seven years.
- a. Lithuanian
Aš gyven-u čia septyneri-us met-us.
 1SG.NOM live-PRS.1SG here seven-ACC.PL.M year-ACC.PL
- b. Latvian
Es šeit dzīvoj-u septiņ-us gad-us.
 1SG.NOM here live-PRS.1SG seven-ACC.PL.M year-ACC.PL
 a=b “I have been living here for seven years.”

As to the opposition between the perfect and the simple past, in Lithuanian the perfect (though not the resultative) seems to be largely optional, since in most contexts discussed in this section the simple past can be used instead (see Sakurai 2016); cf. a similar situation in Koine Greek (Crellin, this volume). The situation in Latvian is different, since not only is the perfect more rigidly opposed to the simple past, but it can also be used as a rhetorical device, namely: to juxtapose events in

a report in order to contrast them with a situation obtaining during speech time (Arkadiev & Daugavet 2016); compare:

- (28) Latvian (LiLa)
- Esm-u sa-sildij-us-i kartupeļ-us [...]*
 be.PRS-1SG PVB-heat-PST.PA-NOM.SG.F potato-ACC.PL
sa-griez-u-si salāt-us, nu ie-klaus-o-s, kā
 PVB-cut-PST.PA-NOM.SG.F salad-ACC.PL now PVB-listen.PRS-1SG-REFL how
man-s vīr-s un viņ-a tēv-s atkal
 my-NOM.SG.M husband-NOM.SG and 3-GEN.SG.M father-NOM.SG again
lāpa pasaul-i.
 curse.PRS.3 world-ACC.SG
 “I heated [*lit.* have heated] the potatoes, [...], made [*lit.* have cut] the salad, and now I listen how my husband and his father are cursing the world again.”

In addition, in Latvian the perfect can be used as a device of reportive evidentiality (= reportativity), as in (29). The more common way to express reportativity in Latvian (as in Lithuanian, see e.g. Wiemer 2006a) is, however, by means of ‘bare’ past participles without any auxiliary.

- (29) Latvian (Nau 2005: 149)
- Bet cit-i sak-a, ka klas-ē tu es-i*
 but other-NOM.PL.M say.PRS-3 that class-LOC.SG 2SG.NOM be.PRS-2SG
varēj-is bū-t arī diezgan neciešam-s.
 can-PST.PA.NOM.SG.M be-INF also rather unbearable-NOM.SG.M
 “But other people say you could be pretty insufferable in class.”

2.2.3 Pluperfect

The past perfects or pluperfects in Lithuanian and Latvian are robustly represented. In fact, according to Arkadiev & Daugavet (2016) and Sakurai (2016), in Lithuanian the past perfect is used more frequently and more consistently than the present perfect. Some functions of the Baltic pluperfects can be considered to be compositionally derived from the combination of the perfect and the past tense, showing such functions as the past resultative in (30) and experiential with a reference time in the past, as in (31) from a narrative.

- (30) a. Latvian (LiLa)
- Bij-ā-m no-šķied-uš-ies un*
 be-PST-1PL PVB-sprinkle-PST.PA-NOM.PL.M.REFL and
nogur-uš-i.
 get.tired-PST.PA-NOM.PL.M

- b. Lithuanian (LiLa)
Buv-o-m nu-si-tašk-ę ir
 be-PST-1PL PVB-REFL-sprinkle-PST.PA.NOM.PL.M and
pavarg-ę.
 get.tired-PST.PA.NOM.PL.M
 a=b “We were sprinkled [with water] and tired.”
- (31) a. Latvian (LiLa)
Saimniece nedaudz uztraucās,
kaut gan sav-ā mūž-ā bij-a
 although RPOSS-LOC.SG lifetime-LOC.SG be.PST-3
pie-redzēj-us-i vēl vairāk.
 PVB-see-PST.PA-NOM.SG.F still more
 “The hostess was slightly worried, even though she had seen much in her life.”
- b. Lithuanian (LiLa)
Šeimininkė bemaž nesijaudino,
nes savo gyvenim-e buv-o mači-us-i dar ne
 because RPOSS life-LOC.SG be-PST.3 see-PST.PA-NOM.SG.F still not
toki-ų dalyk-ų.
 such-GEN.PL thing-GEN.PL
 “The hostess was almost not worried because she had seen even worse things in her life.”

However, no less prominent are non-compositional uses belonging to the domain of the so-called ‘discontinuous past’ (Plungian & van der Auwera 2006), such as annulled result (32) and the ‘stage setting’ use in the introductory sections of narratives (33). Both functions are cross-linguistically associated with pluperfects (Sičinava 2013).

- (32) PQ37: You OPEN the window (and closed it again)?
- a. Lithuanian
Ar buv-ai ati.dar-ęs lang-q?
 Q be-PST.2SG open-PST.PA.NOM.SG.M window-ACC.SG
- b. Latvian
Tu bij-i at.vēr-is log-u?
 2SG.NOM be.PST-2SG open-PST.PA.NOM.SG.M window-ACC.SG
 a=b “Did you open [*lit.* had opened] the window?”

- (33) a. Latvian (LiLa)
Bij-a at-nāk-us-i vien-a sportist-e,
 be.PST-3 PVB-come-PST.PA-NOM.SG.F one-NOM.SG.F athlete(F)-NOM.SG
atnes-a ieteikum-a vēstul-i no
 bring-PST.3 recommendation-GEN.SG letter-ACC.SG from
Olimpisk-ās komitej-as.
 Olympic-GEN.SG.DEF committee-GEN.SG
- b. Lithuanian (LiLa)
Buv-o at.ėj-us-i vien-a sportinink-ė,
 be-PST.3 come-PST.PA-NOM.SG.F one-NOM.SG.F athlete(F)-NOM.SG
atneš-ė rekomendacin-į laišk-q iš
 bring-PST.3 recommendatory-ACC.SG.M letter-ACC.SG from
Olimpini-o komitet-o.
 Olympic-GEN.SG.M committee-GEN.SG
 a=b “An athlete woman came [*lit.* had come], she brought a recommen-
 dation letter from the Olympic Committee.”

In Latvian, the pluperfect is also used to denote a sudden unexpected turn of events

(34). Lithuanian uses the simple past in such contexts, just as in the ‘hot news’ contexts discussed above.

- (34) a. Latvian (LiLa)
Eins-zwei, un viņ-a bij-a uz-zīmēj-us-i
 Eins-zwei and 3-NOM.SG.F be.PST-3 PVB-draw-PST.PA-NOM.SG.F
uz Andželo vaiga sarkan-balt-sarkanas stripas.
- b. Lithuanian (LiLa)
Eins-zwei ir j-i iš-pieš-ė
 Eins-zwei and 3-NOM.SG.F PVB-draw-PST.3
ant Andželo skruosto raudonai – baltai – raudonas juostas.
 a=b “Eins zwei, and she drew [*in Latvian lit.* had drawn] red and white
 stripes on Angelo’s cheek.”

2.2.4 Future perfect

The future perfects in Lithuanian and Latvian have compositional uses, such as future anterior (35), but are more frequently used to express inferences about present states or past events (36), which can probably be considered a separate construction using the same formal means.

- (35) a. Latvian (LiLa)
Mēs vēl redzē-si-m-ies pēc t-am, kad es
 1PL.NOM still see-FUT-1PL-REFL after that-DAT.SG.M when 1SG.NOM
bū-š-u no-mir-us-i.
 be-FUT-1SG PVB-die-PST.PA-NOM.SG.F

- b. Lithuanian (LiLa)
Mes dar maty-si-mė-s, ir tada, kai aš bū-si-u
 1PL.NOM still see-FUT-1PL-REFL and then when 1SG.NOM be-FUT-1SG
mir-us-i.
 die-PST.PA-NOM.SG.F
 a=b “We will see each other even after I am dead [*lit.* will have died].”
- (36) a. Latvian (LiLa)
Bū-s pie.vāk-us-i kād-as patron-as, ja
 be-FUT.3 pick.up-PST.PA-NOM.SG.F some-ACC.PL cartridge-ACC.PL if
som-a tik smag-a.
 bag-NOM.SG so heavy-NOM.SG.F
- b. Lithuanian (LiLa)
Bus pagvelb-us-i kok-į patron-q, jei
 be-FUT.3 pick.up-PST.PA-NOM.SG.F some-ACC.SG cartridge-ACC.SG if
rankinuk-as tok-s sunk-us.
 hadbag-NOM.SG such-NOM.SG.M heavy-NOM.SG.M
 a=b “It seems that she has picked up some cartridge(s), since the bag is so heavy.”

2.2.5 Counterfactual perfect

In Lithuanian there is a formal distinction, on the one hand, between the subjunctive of the present perfect formed by means of the subjunctive form of the auxiliary, and, on the other hand, the supercomposed form of the counterfactual of the past perfect with two auxiliaries. For the first compare (37) with the subjunctive of the experiential perfect introduced by a negated propositional attitude verb homophonous with the past subjunctive (counterfactual) (38), and for the second see (39). The latter seems to be restricted to past time reference.

- Lithuanian (Arkadiev 2016: 124; examples from LKT)
- (37) *Aš neprisimenu, kad tu bū-tum raš-ęs apie ši-uos krūm-us.*
 be-SBJV.2SG write-PST.PA.NOM.SG.M about this-ACC.PL.M bush-ACC.PL
 “I don’t remember you having written about these bushes.”
- (38) *Aš pagalvojau, kad ir tu bū-tum pri-ėm-ęs komunij-q, jeigu bū-tum laisv-as.*
 be-SBJV.2SG PVB-take-PST.PA.NOM.SG.M communion-ACC.SG if
 be-SBJV.2SG free-NOM.SG.M
 “I thought that you would also have accepted the communion if you had been free.”

- (39) *J-is nu-žvelg-ė man-e, lyg bū-čiau*
 3-NOM.SG.M PVB-glance-PST.3 1SG-ACC like be-SBJV.1SG
buv-ęs iš.vyk-ęs mažiausia šimt-q
 be-PST.PA.NOM.SG.M depart-PST.PA.NOM.SG.M at.least hundred-ACC.SG
met-ų.
 year-GEN.PL
 “He looked at me as if I had been away [*lit.* would have departed] for at least hundred years.”

2.2.6 Possessive perfects

Both Lithuanian and Latvian have developed constructions expressing the relation of possession between the result of the action denoted by the verb and its agent, i.e. the so-called “possessive perfect/resultative” (Nedjalkov & Jaxontov 1988: 9–10). These constructions are based on the structures expressing predicative possession in the respective languages; see also §3.5.3 for a discussion of similar constructions in Slavic.

As already mentioned above, Lithuanian employs for the possessive resultative the transitive verb *turėti* “have” and the active past participle.³ The lexical input of this construction is limited almost exclusively to verbs denoting acquisition or change of possession, such as *gauti* “get”, *rasti* “find”, including the productive reflexive-benefactive verbs such as *nu-si-pirkti* “buy for oneself” or *pa-si-statyti* “build for oneself”, cf. (40) and (41).

- Lithuanian (Arkadiev 2012: 105)
- (40) *Dar po savait-ės aš jau turėj-au*
 still after week-GEN.SG 1SG.NOM already have-PST.1SG
gav-ęs vis-us pinig-us už savo
 get-PST.PA.NOM.SG.M all-ACC.PL.M money-ACC.PL for RPOSS
sklyp-el-į.
 lot-DIM-ACC.SG
 “Already in a week I got [*lit.* had got] all the money for my lot.”
- (41) *ši-ose respublik-ose Maskv-os mer-as tur-i*
 this-LOC.PL.F republic-LOC.PL MOSCOW-GEN.SG mayor-NOM.SG have-PRS.3
pa-si-stat-ęs keli-as vil-as.
 PVB-REFL-build-PST.PA.NOM.SG.M several-ACC.PL villa-ACC.PL
 “In these republics the mayor of Moscow has built for himself several villas.”

3. Cf. Geniušienė & Nedjalkov (1988: 385–386), Arkadiev (2012: 105f.) and Wiemer (2012) for a fuller account.

However, one also occasionally finds in the possessive resultative verbs like *prarasti* “lose” (42), and verbs denoting mental or illocutive events (which do not change states), as in (43). These seem to have remained infrequent, though.

- Lithuanian
- (42) *Našlait-is* – *vaik-as*, *kur-is* *tur-i*
 orphan-NOM.SG child-NOM.SG which-NOM.SG.M have-PRS.3
pra.rad-ęs *vien-q* *ar ab-u* *tėv-us*.
 lose-PST.PA.NOM.SG.M one-ACC.SG or both-ACC.M father-ACC.PL
 “An orphan is a child who lost [*lit.* has lost] one or both parents.”
 (Arkadiev 2012: 105, example originally from the internet)
- (43) *Turi-u* *su-galvoj-ęs* *siužet-q*,
 have-PRS.1SG PVB-think-PST.PA.NOM.SG.M plot-ACC.SG
bet ieškau, kaip geriau jį išplėtoti.
 “I have invented the plot (for a novel), but I am considering how to develop it better.”
 (LKT)

The construction *turėti* + past active participle occurs as well in predications of inalienable possession, as in (44), for which no change of physical possession can be assumed. Such constructions can be considered the diachronic forerunners of the more grammaticalized ones shown above.

- (44) Lithuanian (LKŽe, sub *turėti*)
Ak-is *tur-i* *nuleid-ęs*.
 eye-ACC.PL have-PRS.3 lower-PST.PA.NOM.SG.M
 “He has his eyes lowered.”

Note that Lithuanian provides a counterexample to the claim that HAVE-based subjective resultatives imply a preceding stage of object orientation (see §3.5.2). The agreement pattern of the Lithuanian HAVE-resultative indicates strict subject orientation, and this is not an extension from object orientation. Note that *turėti* “have” and the participle have hardly lost any of their properties as independent verbs and do not combine into a clearly monoclausal predicative complex. That is, *turėti* shows almost no sign of auxiliation (on which see further in §3.5.2). One can still easily read the combination HAVE+PST.PASS.P+OBJECT-NP as a taxis construction with the participle as a secondary predicate: the object-NP cannot be omitted and can almost always be interpreted as an argument of HAVE, while the subject-NP can be interpreted as an argument of both HAVE and the participle. This transparent structure has a different genesis from all HAVE-based resultatives-perfects in Slavic, Germanic and Romance (Wiemer & Giger 2005: 48; Wiemer 2012: 72), and this conditions its being a counterexample to the claim referred to above.

By contrast, Latvian, lacking a transitive possessive verb, builds its possessive perfect by means of existential *būt* “be” and the agent/possessor in the dative case (e.g. Holvoet 2001: 171–175), cf. (45). This construction is restricted to transitive lexical verbs, however, it has extended its uses beyond literal possession, cf. (46).

- Latvian (Holvoet 2001: 172–173)
- (45) *Bet es jau nebiju muļķis,*
man līdzi bij-a pa-ņem-t-a nelīel-a
 1SG.DAT with be.PST-3 PVB-take-PST.PASS.P-NOM.SG.F small-NOM.SG.F
kabat-as baterij-a.
 pocket-GEN.SG battery-NOM.SG
 “But I was not a fool, I had taken a small pocket lantern with me.”
- (46) *Bet Ernestam jau neko vairs nevajadzēja,*
viņ-am jau vis-s bij-a iz-teik-t-s.
 3-DAT.SG.M already all-NOM.SG.M be.PST-3 PVB-say-PST.PASS.P-NOM.SG.M
 “But Ernest needed nothing more, he had already said everything [he wanted to say].”

2.2.7 Interim summary

The Baltic perfects, on the one hand, clearly retain their close connection to the resultative, and, on the other hand, have developed quite far beyond that. In terms of the stages of grammaticalisation of the perfect outlined in Harris (1982) and Squartini & Bertinetto (2000), the Lithuanian present perfect is at stage II (possessive resultative and experiential contexts) while the Latvian present perfect is at stage III (‘current relevance’, cf. Nau 2005). Notably, Latvian seems to employ the present perfect more consistently and systematically, while in Lithuanian the present perfect is in many contexts optional and can be substituted by other verbal forms, most commonly by the simple past. By contrast, the past perfects in both languages occupy a functional niche of their own and compete with the simple past to a lesser extent. The comparison of the functions of the perfects in Lithuanian and Latvian is schematized in Table 1 (cf. Arkadiev & Daugavet 2016). The last line refers to the extension of the future perfect into inferential functions which is encountered in many European languages with developed perfect paradigms (often called ‘epistemic extension’); see §2.2.4 above. This extension is independent of the evidential uses of participles which we discussed in §2.1 and §2.2.2.

Table 1. Functions of Lithuanian and Latvian Perfects

Tense	Function	Lithuanian	Latvian
Present Perfect	resultative	yes	yes
	experiential	yes	yes
	current relevance	marginal	yes
	universal	no	marginal
Past Perfect	resultative-in-the-past	yes	yes
	experiential-in-the-past	yes	yes
	annulled result	yes	yes
	introductory	yes	yes
Future Perfect	resultative-in-the-future	yes	yes
	inferential	yes	yes

2.3 Issues of grammaticalisation

Altogether, standard parameters of grammaticalisation (e.g. Lehmann 2015[1982]: Chapter 4) are not very suitable for describing the diachronic processes of resultative-perfects in Baltic. The most relevant parameter seems to be the expansion of the lexical input of the constructions, because it corresponds to the development of functions of erstwhile resultatives. In the following we first discuss the lexical input of the constructions and then turn to the assessment of the more traditional parameters of grammaticalisation.

2.3.1 Lexical input

As has already been noted in the preceding sections, the resultative proper is restricted to telic verbs denoting a change of state, cf. (1) and (16), including change of possession. Moreover, the choice of the active vs. passive participle is rigidly correlated with the participant conceptualized as the holder of the resultant state, cf. (16) vs. (17). By contrast, the perfect does not show lexical restrictions and is attested with all kinds of verbs, including transitive verbs that are not strictly telic (e.g., ‘hit’, ‘say’, ‘decide’) (24), intransitive (one-place) verbs like ‘live’ (22), and even meteorological (zero-place) verbs, as in (47).

(47) Lithuanian (LKT)

Anot j-ų, jau daugiau kaip trisdešimt metų
 according.to 3-GEN.PL already more as thirty year-GEN.PL
nėra taip snigę.
 NEG+be.PRS.3 SO SNOW-PST.PA.NA

‘According to them, there has not been such a snowfall for thirty years already.’

On the aspectual side, the perfect proper freely combines with atelic and stative verbs, including ‘be’, cf. (48).

- (48) Latvian (LiLa)
- Šajā pilsētā neviens nezināja,*
ka esm-u bij-us-i latvieš-u balet-a
 that be.PRS-1SG be-PST.PA-NOM.SG.F Latvian-GEN.PL ballet-GEN.SG
liel-ā cerīb-a ...
 big-NOM.SG.F.DEF hope-NOM.SG
 “In this city nobody knew that I have been the great hope of the Latvian
 ballet ...”

The rather rigid restrictions on verbs appearing in the Lithuanian and Latvian possessive perfects have already been mentioned above (§2.2.6).

2.3.2 *Morphosyntactic parameters of grammaticalisation*

According to parameters of grammaticalisation from Lehmann (2015 [1982]: Chapter 4), the Baltic perfects can be considered to be only weakly grammaticalized, at least in terms of their formal properties, with the Latvian perfect slightly more advanced than the Lithuanian perfect. However, as will be shown below, it is unclear to what extent the parameters proposed by Lehmann are at all relevant for the constructions in question.

Phonological and semantic erosion. We find none of the former and encounter analytical problems when assessing the latter. The process of semantic bleaching seems to be applicable only to auxiliaries. The Lithuanian possessive *turėti* “have” has bleached only marginally. Although it has occasionally been attested with past active participles of verbs meaning lack or deprivation, or not implying change of physical possession, see Examples (42–43), the construction still implies a certain relation between the agent of the event and its resultant state, and this relation still fits squarely within the basic domain of usage of the possessive verb in Lithuanian.

As for BE-verbs, one may wonder what the relation between copular and existential ‘be’ is, and which kind of bleaching might be involved in the step “copular ‘be’ > auxiliary ‘be’”, since the latter does not seem to be more “abstract” than the former. The only tangible difference is related to argument structure: the existential or copular verb has a subject and a predicate nominal argument, whereas the constructions with the auxiliary inherit the argument structure of the lexical verb, including the case of zero-place verbs as in (47) above.

The *morphosyntactic integrity* of the periphrastic constructions is rather low, as evidenced by the fact that although usually the auxiliary and the participle follow each other without intervening elements, this is by no means a strict grammatical requirement, see examples in (49).

- (49) a. Lithuanian (LiLa)
Psichoanaliz-ė yra gana tiksliai
 psychoanalysis-NOM.SG be.PRS.3 enough precisely
iš-aiškin-us-i,
 PVB-clarify-PST.PA-NOM.SG.F
iš ko ji sudaryta.
- b. Latvian (LiLa)
Psihoanalīz-e ir diezgan precīzi
 psychoanalysis-NOM.SG be.PRS.3 enough precisely
no.skaidroj-us-i,
 clarify-PST.PA-NOM.SG.F
no kā tā sastāv.
 a=b “Psychoanalysis has explained precisely enough what it consists of.”

The structural scope of the constructions is wide, as evidenced by the fact that the auxiliary is usually omitted in coordination, cf. examples in (50), but this can be a consequence of their low morphosyntactic integrity.

- (50) a. Lithuanian (LiLa)
suskaičiuoti visus pinigus, kuriuos dar turi,
es-i k-am nors pa-skolin-us-i ar
 be.PRS-2SG who-DAT INDF PVB-lend-PST.PA-NOM.SG.F OR
investav-us-i ...
 invest-PST.PA-NOM.SG.F
- b. Latvian (LiLa)
saskaitīt visu naudu, kura tev vēl ir,
kur-u es-i aiz.dev-us-i vai
 which-ACC.SG be.PRS-2SG lend-PST.PA-NOM.SG.F OR
investēj-us-i ...
 invest-PST.PA-NOM.SG.F
 a=b “[you should] count all the money that you still possess, have lent to somebody or invested ...”

The syntagmatic variability of the perfect constructions is high, as evidenced by the fact that the inverted order of the participle and the auxiliary is possible, see Examples (51) and (52).

- (51) Lithuanian (LKT)
Pas mus apie toki-us nè girdėj-ęs
 at 1PL.ACC about such-ACC.PL.M not hear-PST.PA.NOM.SG.M
nes-u!
 NEG+be.PRS-1SG
 “I have not even heard about such [mushrooms] at our place!”

- (52) Latvian (http://www.medniekiem.lv/discussion/2072/desc/,
accessed September 22, 2016)
Redzēj-is esm-u vairāk-us gadījum-us ...
see-PST.PA.NOM.SG.M be.PRS-1SG several-ACC.PL accident-ACC.PL
“I have seen several accidents ...”

Special consideration should be paid to the behaviour of negation, which is non-trivial in the Baltic perfect constructions. In Lithuanian, negation can appear both on the auxiliary and on the participle with a difference in scope (for more details, see Arkadiev forthcoming), cf. (53) and (54).

- (53) Lithuanian (Arkadiev forthcoming, originally from http://
www.almalittera.lt/img/uploads/pdf/Stikline-pieno.pdf)
Aš dar niekada anksčiau nes-u miegoj-us-i
1SG.NOM yet never earlier NEG+be.PRS-1SG sleep-PST.PA-NOM.SG.F
vien-a kambar-yje.
one-NOM.SG.F room-LOC.SG
“I have never slept alone in a room before.”
- (54) *Aš es-u ne-miegoj-us-i pusantr-os*
1SG.NOM be.PRS.1SG NEG-sleep-PST.PA-NOM.SG.F one.and.a.half-GEN.SG
par-os.
24.hours-GEN.SG
“I have not slept for 36 hours.”

Negation can even occur on both parts of the perfect construction, each with its own semantic contribution, cf. (55).

- (55) Lithuanian (Arkadiev forthcoming; LKT)
Niekada nes-u ne-padėj-ęs žmog-ui
never NEG+be.PRS-1SG NEG-help-PST.PA.NOM.SG.M person-DAT.SG
vien dėl to, kad jis yra vienas ar kitos partijos narys.
“It has never been the case that I didn’t help a person just because he was a member of a particular party.”

An areal parallel to these constructions is constituted by the negated pluperfect of the neighbouring Slavic dialects, see e.g. Mackevič & Grinaveckienė (1993: 107), cf. the schematic example in (56).

- (56) Lithuanian *Jis buvo tris dienas ne-valg-ęs.*
Belarusian *Jon byu try dni nā-je-ūšy.*
3SG.NOM.M be.PST.3 three days NEG-eat-PST.PA

By contrast, in Latvian, the negation almost invariably attaches to the auxiliary, cf. (57).

- Latvian (Arkadiev forthcoming; originally from
<https://spoki.tvnet.lv/literatura/Asinaina-roze-8-dala/665390>)
- (57) *Es ne-esmu ēd-us-i div-as dien-as.*
 1SG:NOM NEG-be.PRS.1SG eat-PST.PA-NOM.SG.F two-ACC day-ACC.PL
 “I have not eaten for two days.”

Attachment of the negation exclusively to the auxiliary might be considered indicative of a higher degree of grammaticalisation of the Latvian perfect with respect to the Lithuanian one, which still retains some properties of a biclausal construction.

2.4 Issues of diachrony

The diachronic development of the Baltic perfects awaits empirical investigation, which, however, is hampered by the lack of annotated diachronic corpora. This should include not only the oldest written texts from the 16th and 17th centuries,⁴ but also the pre-modern texts of the 19th century as well. The evaluation of isolated examples from old texts in the Baltic languages should also take into account philological considerations, in particular the potential influence of originals in other languages, such as German or Polish, as well as the linguistic background of the authors of original or translated Baltic texts. Here we provide only cursory remarks based on the information we could obtain from the very few works known to us that deal with the Baltic perfects from a historical perspective. The etymology of the participle suffixes will be commented on jointly with the Slavic ones in §3.2.

In general, the Baltic perfects show diachronic stability during the time span of the texts written in the Baltic languages, i.e. from mid-16th century onwards. This stability reveals itself both in the structure of the perfect constructions (e.g., no loss of agreement) and in their functions (no noticeable shifts toward general past). Thus, already in Old Lithuanian and Old Latvian texts periphrastic forms with past active participles are attested in the experiential or ‘current relevance’ meanings (Ambrazas 1990: 184), cf. (58) and (59):

- (58) Old Lithuanian
 (*Vilentas’ Catechism*, 1579, 1:14; quoted after Ford 1969a: 135)
- kok-i tulim-a warg-a es-my regey-es*
 what-ACC.SG.M great-ACC.SG misery-ACC.SG be.PRS-1SG see-PST.PA.NOM.SG.M
 “What great misery I have seen.”

4. The launching of the SLIEKKAS project (<http://titus.uni-frankfurt.de/sliekkas/>) will hopefully help resolve this. We thank the editors for bringing it to our attention.

(59) Old Latvian

(Glück's Bible, 1685–89, Jud. 15:16; quoted after Ambrazas 1990: 184)

esm-u es tuhkstosch-us Wihr-us
 be.PRS-1SG 1SG.NOM thousand-ACC.PL man-ACC.PL
kaw-is
 slaughter-PST.PA.NOM.SG.M
 “have I slain a thousand men.”

The perfect is attested with clearly atelic verbs, as in (60), depicting the words of Satan at the Last Judgment, where as a consequence the reference is to a situation no longer holding at speech time.

(60) Old Lithuanian

(Daukša's Postilla, 1599, 523: 39; example courtesy of Felix Thies)

pagal' mana, ne pagal' tawa wal-q
 according.to 1SG.POSS not according.to 2SG.POSS will-ACC.SG
giwėn-us' est'
 live-PST.PA.NOM.SG.F be.PRS.3
 “It [the soul, feminine in Lithuanian] has lived according to my, not Your will.”

Past and future perfects denoting a resultant state holding at some past or future reference time are also attested, cf. (61) and (62).

(61) Old Lithuanian

(Vilentas' Catechism, 1579, 5:13; quoted after Ford 1969a: 136, 276)

idant tatai k-q buw-a isch-mok-ię gale-tu
 so_that that what-ACC be-PST.3 PVB-learn-PST.PA.NOM.PL.M can-SBJV.3
ischmani-ti
 understand-INF
 “so that they may be able to understand that which they had learned.”

(62) Old Lithuanian (Vilentas' Catechism, 1579, 6:2; quoted after Ford 1969a: 136)

kad tu t-q maž-a Catechism-a bu-s-i
 when 2SG.NOM DEM-ACC.SG small-ACC.SG Catechism-ACC.SG be-FUT-2SG
isch-mokin-es, tada im-k didesn-i
 PVB-teach-PST.PA.NOM.SG.M then take-IMP.2SG larger-ACC.SG.M
Catechism-a.
 Catechism-ACC.SG
 “When you will have taught this small Catechism, then take the larger Catechism.”

The pluperfect also occurs in contexts where it denotes a situation no longer holding, akin to annulled result, cf. (63):

- (63) Old Latvian (*Elger's Gospel*, 1671, John 2:9; quoted after Ambrazas 1990: 185)
 wyn-u bandia katter-s bya vden-s
 wine-ACC.SG taste.PST.3 which-NOM.SG.M be.PST.3 water-NOM.SG
 byis
 be.PST.PA.NOM.SG.M
 “[the master of the banquet] tasted the wine that used to be water” (cf. the
 German original: *kostet den Wein / der Wasser gewesen war*)

The following Old Latvian example of the future perfect appears to exemplify a use apparently not attested in the modern language, i.e. a quasi-resultative reading of the perfect based on an atelic verb. It remains unclear whether the author of the text, the scholar and priest Georg Mancelius, could be influenced by the German periphrastic future (for somewhat similar uses of the corresponding form in Old Czech see §3.6.5).

- (64) Old Latvian
 (*Mancelius' Postil*, 1654, II, 182:13–14; quoted after Ambrazas 1990: 184)⁵
 Way t-am [...] k-aß buh-ß nhepareise dsiewoj-is!
 woe that-DAT.SG.M who-NOM be-FUT.3 unrighteously live-PST.PA.NOM.SG.M
 “Woe to him who will live [*lit.* will have lived] unrighteously!”

Notably, the oldest original text in Lithuanian, Martynas Mažvydas' poetic introduction to his 1547 translation of Luther's *Enhiridion* (Ford 1969b: 13–16), does not contain a single perfect form in its 114 lines, even though contexts where the perfect could be used (at least in modern Lithuanian) are found, e.g. negative experiential, twice rendered by Mažvydas by the simple past forms, cf. *nekada negirdieau* “I have never heard” and *Baßniczia nog deschimtes metu nebuwau* “I have not been to church for ten years”.

Let us also briefly discuss the situation with the perfect in Old Prussian (see Kaukienė 2004: 225–287). The syntax of its few extant texts, i.e. the three translations of Luther's Catechisms, largely follows the German original, including the use of simple vs. periphrastic tenses and even the order of the auxiliary and the participle (Kaukienė 2004: 253–258). Thus, according to Kaukienė (2004: 230, 236–237), of 45 instances of active indicative perfect in Old Prussian, only 10 do not directly correspond to the German periphrastic past tense, and out of these only three examples translate the German present or simple past. We have no data showing instances of German periphrastic tenses translated into Old Prussian by the simple

5. The example was checked against the electronic edition found at http://www.korpuss.lv/senie/static/Manc1654_LP2.html (Accessed March 12, 2017).

tenses, and the latter occur even less frequently in Old Prussian than the former (Trautmann 1910: 291).⁶ In the light of this, it is not surprising that, as Ambrazas (1990: 184) observes, in Old Prussian the perfect was often formed on the basis of atelic verbs, cf. (65).

(65) Old Prussian

(*Enchiridion*, 1561, 103₁₈; quoted after Ambrazas 1990: 184–185)

niaintont-s *ast ...* *swai-an* *subb-an* *mens-an*
 no_one-NOM.SG.M be.PRS.3 RPOSS-ACC.SG own-ACC.SG flesh-ACC.SG
dergē-uns
 hate-PST.PA.NOM.SG.M
 “No one ever hated their own body” (= Eph. 5:29, cf. German original: *niemandt*
hat ... sein eigen fleisch gehasset)

This situation is reminiscent of the role German played in the employment of the perfect (and other compound forms) in Slovincian (see §3.5.2).

3. Slavic

Slavic is traditionally divided (mainly by isoglosses on the basis of sound changes, syllable structure and some morpho(no)logical phenomena) into South, East and West Slavic; the latter two are often united under the label ‘North Slavic’.⁷ The oldest written form of Slavic is Old Church Slavonic (OCS), and Common Slavic (CS, 3rd–7th c. AD) is assumed to be a period in which the dialect area was relatively homogeneous. OCS emerged in the late 9th century on South Slavic soil, and subsequently became a kind of koine, with several recensions in different Slavic-speaking subareas (see §3.5.1). Its influence on later South and East Slavic and, in particular, on the predecessors of standard Russian has been considerable. It however must be stressed that there is no direct inheritance relation between OCS and East or West Slavic. The oldest genuinely East Slavic (Old Russian) documents date from the 11th century, while the oldest West Slavic documents reach back to the 12th (Czech) and the late 13th (Polish) centuries. Old Serbian/Slovene contacts with varieties of German are probably older than that, as is also the case at the western edge of South Slavic where there is contact with Italian.

6. “In Nachahmung des d[utschen] Perfektums hat in unsern Texten das balt[ische] periphrastische Perfektum gegenüber dem Prät[eritum] an Ausdehnung gewonnen.”

7. This basic divide proves only moderately relevant for the inner-Slavic diatopic differentiation of perfects.

Perfects in Slavic display an enormous internal differentiation, first of all as concerns variation in the means of expression and the range of admissible lexical input. A particular issue is the question of the extent to which the semantics and structure of perfects have been affected by the stem-derivational aspect (perfective vs. imperfective) opposition,⁸ which we will deal with in passing (see especially §§3.4.2–3).

We start with the basic morphosyntactic classification of perfects in Slavic (§3.1), which is followed by information on the provenance of the participles (§3.2). Then follows a survey of the functional distribution of perfects (§3.3) and of functional extensions into, and intersections with, other domains (§3.4). This brings us to diachronic issues (§3.5) and a survey of past and future perfects (§3.6). Main lines of development and areal patterns, with an account of language contact, will be summarized in §3.7.

3.1 Basic morphosyntactic classification

All Slavic perfects are based on anteriority participles, which combine with an auxiliary BE- or HAVE-verb. Altogether three basic types of perfects should be distinguished, cf. Table 2:

Table 2. Formal types of perfects in Slavic

Auxiliary			Major types	Subtypes
			Lexical part (main verb)	(Restricted)
(A)	BE	+	<i>l</i> -participle ('short forms')	
(B)	BE	+	<i>n/t</i> -participle	<i>vši</i> -participle
(C)	HAVE	+	<i>n/t</i> -participle	<i>l</i> -participle ('long forms'; see fn. 11)
(a) with inflected participle (mostly agreeing with the object NP)				
(b) without agreeing participle, or with non-inflected participle (see below).				

Type A

- (66) Bulgarian(Maslov 1981: 253)
Kableškov e doše-l
Kableškov be.PRS.3SG come[PFV]-LF(M.SG)
“Kableškov **has come**, (he arrived) late at night [, he is at my place].”

8. This opposition is based on stem derivation and has been developing since CS times (cf. Wiemer & Seržant 2017 for a recent comprehensive account). For a comprehensive account of the relation between perfect types and aspect cf. Wiemer (2017).

The *l*-participle distinguishes gender and number, but exists only in the nominative.⁹ While in Balkan Slavic (Bulgarian, Macedonian, Torlak dialects in southeast Serbia) this paradigm has persisted from CS times as a perfect, in practically all other Slavic languages this perfect has turned into a general past. This change illustrates the ‘present anterior > past’ shift known for languages in the middle of the European continent (cf. Breu 1994: 56–58; Abraham 1999; Thieroff 2000: 282–287; Abraham & Conradie 2001; Drinka 2017). In North Slavic this process was probably accomplished earlier than in the relevant Germanic and Romance languages (see §3.5.1). On the fate of the BE-auxiliary see §3.5.2.

Type B

- (67) standard Russian (own knowledge)
V sad-u nov-ye derev’j-a posaže-n-y.
 in garden-LOC.SG new-NOM.PL tree-NOM.PL plant[PFV]-PST.PASS.P-PL
 ‘In the garden, new trees **have been planted** [*lit.* are planted].’

Depending on the construction (and the Slavic variety), the participle shows gender-number agreement with the subject, or it is indeclinable. Usually the neuter form (*-n-o* / *-t-o*) is used as the default form if an agreement controller is lacking. Exceptional are some north Russian dialects, in which also the morphological status of the *no/to*-form is debatable (see §3.5.4).

Type C

Here a HAVE-verb combines with a participle with *n/t*-suffix (see §3.2). Two subtypes should be distinguished. One type, illustrated in (68), is areally highly restricted, originating in south-western Macedonian dialects, from where it spread into the colloquial standard. In turn, Example (69) from Polish represents a pattern that is widespread over the majority of Slavic languages.

- (68) Macedonian (Velkovska 1998: 52)
Zna-eš, go ima-m zasaka-no
 know[IPFV]-PRS.2SG he.ACC have-PRS.1SG start.love[PFV]-PST.PASS.P.INDECL
kako tatko.
 like father
 ‘You know, I **started loving** him like a father.’

9. For more details see §3.2. Oblique case forms exist for *l*-participles with adjectival inflection (pronominal forms; see fn. 11) in West Slavic. These forms are predominantly used as NP-internal modifiers, but their nominative forms show up in certain resultative perfects (see 70, §3.3, §3.5.3).

- (69) Polish (own knowledge)
Ma-my zup-ę ugotowa-n-ą.
 have-PRS.1PL soup[F]-ACC.SG prepare[PFV]-PST.PASS.P-ACC.SG.F
 “We have the soup prepared.”

The degree of auxiliation of the HAVE-verb varies (on criteria see §3.5.2). In most Slavic varieties the participle agrees with an object-NP in gender and number as well as for case (accusative or, under negation, the genitive); see (69). The neuter form is used if an object is lacking, in general it can be regarded as a default form whenever an agreement controller is either lacking or untypical (e.g., quantifying expressions; see §3.5.2). The Macedonian construction in (68) differs, as the participle occurs in the invariant form *-no/-to* (originally neuter singular), regardless of the form of the object (or whether there is an object at all). Further parameters of internal Slavic differentiation relevant for type B or C constructions are discussed in §§3.5.2–4.

Types A and B diachronically precede type C. As for type C, the *n/t*-participle is diachronically prior to the *l*-participle (see Figure 2), which has extended into type C only in some West Slavic varieties, e.g. in colloquial Czech, see (70) and further in §3.5.3.

- (70) Czech (colloquial)
Dveř-e má-m zacvak-l-é.
 door-ACC.PL have-PRS.1SG latch[PFV]-LF-ACC.PL
 “I have the door latched.”

In addition, there is a participle suffixed with {*vši*} (with allomorphs; here, and henceforth, curly brackets indicate morphemes):

- (71) Belarusian near the border with Lithuania (Braslav district; Erker 2015: 94)
fs'-a ulic-a by-l-a zyare-ŭšy
 all-NOM.SG.F street[F]-NOM.SG be-PST-SG.F burn.up[PFV]-PST.PA(INDECL)
 “The whole street had burned up.” [*lit.* “was burned up”]

This resultative is used primarily in the region where (East) Slavic is in contact with Baltic, but it is also well attested farther to the northeast, namely in the Pskov and parts of the Tver region, with offshoots to the east and south (Kuz'mina 1971, 1993: 142–146; Trubinskij 1984; Erker 2014; Požarickaja 2014a, 2014b); see further §3.6.4.

The subtypes exemplified in (70) and (71) never occur in the same area, and they are clearly secondary (in comparison to the major types A–C) in terms of age and areal spread (see §3.3, §3.5.3).

3.2 The provenance of the participles

The *l*-participle is an innovation which CS shared only with Armenian and Tocharian (not with Baltic). In all three languages they are considered to descend from a deverbal adjective or noun suffixed with **-l(o)*. However, the Slavic *l*-participle, which was derived from the aorist stem (now homophonous with, or replaced by, the infinitive stem), differs from its cognates. In contrast to Tocharian, where deverbal *l*-adjectives semantically resembled Latin gerundives in conveying root modality meanings (Thomas 1952; Seržant, this volume), there are, to our knowledge, no attestations of Slavic *l*-participles with modal functions. As for Classical Armenian, the difference concerns voice orientation and inflection: the CS *l*-participle was subjective (i.e., oriented towards the participant with which the finite verbal forms agreed in person and number) and was always inflected for number and gender. By contrast, its cognate in Classical Armenian did not inflect in predicative use and showed variable orientation; with intransitive verbs it targeted the nominative subject (= single argument), but with transitive verbs the more patient-like argument was the target (coded as nominative), agreement (for number) being indicated only in the auxiliary.¹⁰

The Slavic *l*-participle has generally been considered a verbal adjective, used only in the nominative as a predicative with a copula. Presumably, the initial (reconstructed) meaning of *l*-participles was restricted to states and to one-place stems (intransitive verbs), but subsequently, by the time of the appearance of OCS, started involving transitive stems and durative verbs (Trost 1968: 99–101; Večerka 1993: 88–89). Many centuries later, and independent of this expansion, *l*-participles acquired the so-called pronominal or ‘long’ forms of the adjectival declension.¹¹ These have turned into resultatives of type B or C in some West Slavic varieties (see §3.3, §3.5.3). Their development is dissociated from the general perfect > past shift attested for the original nominal (‘short’) forms of the *l*-participle (except for Balkan Slavic). The onset of this latter process can be observed already in OCS (see §3.6.1).

10. This led to an erstwhile ergative structure (the more agent-like argument of transitive verbs was marked with the genitive) and only later changed into NOM-ACC-alignment (cf. Kölligan, this volume).

11. During CS, pronouns of the Indo-European **j*-stem fused with adjective stems. The result was a new declension class by which the adjective inflection became consistently distinct from the inflection of nouns (Townsend & Janda 2003: 138–142; Wiemer 2011: 741f.). This applied to inflected participles as well. In the following, we will use the term ‘pronominal form’ (also called ‘long forms’) as a shortcut for participles whose desinences go back to this special adjectival inflection.

The participles marked with the *n/t*-suffix are ubiquitous in Slavic, with IE roots prior to CS.¹² They are generally dubbed ‘past passive participles’; however, at ancient stages they probably lacked diathetic orientation, just like the *(ea)l*-participles in Classical Armenian (see above) and cognate (and other) formations in earlier IE varieties (Arumaa 1985: 326–344), or like voice-neutral deverbal adjectives in typologically distant languages (Haspelmath 1994: 159f.). In fact, *n/t*-participles can often best be captured as predicative units that focus on the most affected participant; many manifestations are still visible in contemporary Slavic languages (Wiemer 2014: 1630f.). Regardless, *n/t*-participles have always been quite consistent markers of anteriority, and this predestined them to be nominal parts of perfect constructions. All Slavic languages have resultatives based on *n/t*-participles, and in most Slavic varieties these create a systematic ambiguity between objective resultative and (actional) passive (see §3.4.2).

Participles with the suffix {*vši*} are a typical instance of paradigmatic isolation and fossilization, and they started playing a role for Slavic perfects considerably more recently. They correspond to the nominative singular feminine form of the decayed paradigm with nominal inflection of active anteriority participles. These participles go back to the common Baltic-Slavic suffix **-ues* of deverbal adjectives; they are cognate with the Baltic past active participles treated in §2¹³ and ultimately descend from the PIE perfect participle suffix *us/uós* (Kümmel, this volume: §2.1.2.4). As such, in CS and early periods of documented Slavic they were used as predicates of dependent clauses. Thus, concomitantly with fossilization, syntactic reanalysis must have occurred due to which the isolated form gained the status of a main predicate.¹⁴ What has been left is their anteriority feature.

3.3 Functional distinctions, range of lexical input and areal spread

Perfects based on a BE- and a HAVE-verb clearly follow preferences of predicative possession. The northeast corner of Slavic, namely Russian, predominantly uses a location schema: AT (= possessor) + BE + NP_{NOM} (= possessee). HAVE-based

12. The *t*-suffix is cognate with Baltic (see §2). On the provenance and (re)distribution of the allomorphic *t*- and *n*-suffix in different parts of Slavic cf. Diels (²1963: 232–234, 241–243), Lunt (2001: 99f., 108–111) and Danylenko (2006: 225f.).

13. To be precise, the Baltic past active participles had an irregular form for the masculine singular and plural (which yields Lith. *-ęs* and *-ę*, respectively, vs. *-us*+CASE/NUMBER/GENDER in all other forms of the paradigm).

14. Cf. Wiemer & Giger (2005: 40f.). These participles have counterparts in standard languages, where they have turned into converbs (cf. Birzer 2010 on Russian and Wiemer 2014: 1634–1639 for a general Slavic survey).

perfects are correspondingly lacking in that area, while they become slightly more common in Belarusian and Ukrainian. They are fairly widespread across West Slavic, where HAVE-based predicative possession is also the predominant pattern (as in Germanic and Romance). In South Slavic an east-west cline from BE- to HAVE-based predicative possession is less obvious, as is the distribution of HAVE-based perfects (see §3.5.2).

This apparent fact requires two caveats. First, the absence (rarity) or presence (salience) of HAVE-based perfects is no reliable indicator of the voice-orientation of the whole construction. Second, the choice between BE- and HAVE-auxiliary in Slavic perfects does not match BE/HAVE-splits as we know them from Germanic and Romance languages, that is, it is not obvious that the choice between BE and HAVE is conditioned by verb classes or argument realization in a way comparable to Germanic or Romance (for exceptions in Slovencian and Kashubian see §§3.5.2–3). The relevance of both caveats will become evident below.

Another caveat concerns the data. Claims regarding type and token frequency of particular perfect constructions (vis-à-vis grams which they may replace) can more often than not only be given impressionistically. Corpus-based research in this domain is urgently needed but beyond the scope of this survey.

In this subsection we survey perfect functions encountered in Slavic, before discussing intersections with voice-related operations and evidentiality in §3.4.

The resultative proper is a salient function of B and C type constructions. See (67), (69)–(70) above, which illustrate objective resultatives. Subjective resultatives of types B and C occur in Macedonian, and they are widespread in West Slavic, see Examples (68) and (72), respectively. Compare the participles in (73a,c), which are derived from perfective verbs that do not have a direct object (see 73b,d):

- (72) Czech, Hanakian dialects (Damborský 1967: 105)

Má-m rož-l-ý

have-PRS.1SG light[PFV]-LF-N

‘I have **lit up** (a cigarette) / **switched on** (light in the room).’

- (73) Polish (own knowledge)

a. *Jestem*

wyspa-n-y / uśmiechnię-t-y / najedzo-n-y /

well.sleep- / smile- / eat.to.fill-PST.PASS.P-NOM.SG.M /

podpi-t-y / zapatrzo-n-y (w przyrodę).

drink.a.bit- / stare-PST.PASS.P-NOM.SG.M

‘I have [*lit*. am] slept enough / am with a smile / have eaten to my fill / am a little drunk / am focused and enchanted (by the environment).’

- b. *wyspać się*.REFL ‘sleep enough’ / *uśmiechnąć się*.REFL ‘(give a) smile’ /
najeść się.REFL ‘eat to one’s fill’ / *podpić* ‘drink a little bit’ /
zapatrzeć się.REFL (*w przyrodę*) ‘intensely gaze (into nature)’
- c. *Pień* *jest* *obrosnięt-y*
trunk[M]-(NOM.SG) be.PRS.3SG be.covered-PST.PASS.P-NOM.SG.M
mch-em.
moss-INS.SG
‘The trunk **has** [*lit. is*] **covered** with moss.’
- d. *obrosnąć* (*mchem*)
‘become covered (with moss)’

The type frequency of subjective resultatives of type B decreases to the east. In standard Russian they are largely possible only if the deriving stem exists in a causative-inchoative pair, e.g. *vzvolnovat’* ‘excite, make nervous’ vs. *vzvolnovat’sja* ‘get excited, become nervous’ (with the reflexive marker). Thus, although *Ona vzvolnova-n-a* ‘She is excited-PST.PASS.P-SG.F’ corresponds semantically rather to the inchoative verb *vzvolnovat’sja*, something like **naeden* (intended meaning ‘having eaten to one’s fill’) from *naest’sja* ‘eat to one’s fill’ or **ulybnut* (to mean ‘with a smile’) from *ulybnut’sja* ‘smile’ does not exist, because these verbs do not have causative counterparts.

Subjective resultatives based on *n/t*-participles are attested for South Slavic as well, but to a much lesser extent. The Macedonian type B and C perfects are a different story (see §3.5.2).

The *l*-perfect (= type A) can acquire a resultative function only with intransitive (largely one-place) verbs, and this probably corresponds to their primary resultative meaning, as is assumed for CS (see § 3.2). Thus, Example (66) from Bulgarian above can denote a resultant state because the subject-NP is the only affected participant. Ingestive verbs seem to be an exception; with them the *l*-perfect can focus on the state of the agent (not the patient). This, however, applies only to imperfective verbs, as in Russ. *Ja (uže) e-l / obeda-l* ‘I have eaten / had lunch (already)’ (i.e. ‘I’m not hungry’). Their perfective equivalents often cannot omit the object-NP (unless as zero anaphors), for which the resultant state would apply, too. Thus, in the imperfective aspect ingestive verbs are ambitransitive. This certainly explains their specific behaviour also in B-type perfects, e.g. of Macedonian (see 131), and in C-type perfects, e.g. in dialectal Czech (see 118). In the majority of Slavic languages, where the *l*-perfect long ago turned into a general past, only a few perfective intransitive verbs with narrow lexical collocations focus on resultant states (e.g., Russ. *Skaly navis-l-i* ‘The rocks are hovering (over us) [*lit. have hang over*]’; *Ščeki nabrjak-l-i* ‘The cheeks have/are swollen’).

Turning to ‘current relevance’ (§2.2.2), in Slavic, like in Lithuanian, this function is not covered by the perfect constructions, but rather by perfective verbs either in the general past (for the majority of languages in which the perfect > past shift of the *l*-participle has been completed), e.g. Russian (74), or in the aorist in the languages where it is still used, among others, as default tense in narratives and with specified temporal location, e.g. in Macedonian (75):¹⁵

- (74) Russian (own knowledge)
- a. *Ograbi-l-i* *bank*.
rob[PFV]-PST-PL bank[M](ACC.SG)
“A bank has been robbed.” [*lit.* “(They) have robbed a bank.”]
- b. *Prozvuča-l* *gong*.
sound[PFV]-PST(SG.M) gong[M](NOM.SG)
“The gong has sounded.”
- (75) Macedonian (courtesy of E. Bužarovska and L. Mitkovska)
- a. *Ja* *ograbi-j-a* *bank-a-t-a*.
3SG.ACC.F rob[PFV]-AOR.3PL bank[F]-SG-ART-SG.F
“They have robbed the bank.”
- b. *Dzvono-t-o* *za večera zadzvoni*.
bell[N]-SG-ART-SG.N for dinner ring[PFV](AOR.3SG)
“The bell has rung for dinner.”

That is, there is no specialized pattern for marking current relevance in Slavic, regardless of how complex, or simple, a particular system of past tenses is. The use of a synthetic past tense instead of the (present) perfect to express current relevance makes Balkan Slavic more similar to Lithuanian than to Latvian (see §2.2.2), even though otherwise the Baltic languages and Balkan Slavic have very different past tense systems.

Likewise, ‘hot news’ does not constitute a function that might be saliently marked with any type of perfect in Slavic, although recency effects are sometimes created, first of all, by object-oriented *n/t*-resultatives, as in (76) from Russian.

- (76) Russian (own knowledge)
- Ministr* *ubi-t*.
minister[M]-NOM.SG kill[PFV]-PST.PASS.P(NOM.SG.M)
“The minister is (i.e. has been) killed.” (e.g., as a newspaper headline)

15. This pattern is very similar to Modern Greek (Dahl & Hedin 2000: 395–398). As for standard Macedonian, cf. Bužarovska & Mitkovska (2010), who discuss the distribution of the aorist vs. three different perfects on the basis of corpus data and a questionnaire study.

Evidently, the hot-news function can be derived from the specific context and the inherently state-changing semantics of the verb, as can the current relevance meaning. In addition, current relevance is naturally salient for resultative perfects of speech act verbs or other verbs of social interaction. These verbs are not telic in the strict sense, since they cannot entail any tangible resultant state, and yet they are associated with illocutions associated, in turn, with socially relevant situations obtaining after the respective speech acts have been uttered (see §3.5.4). Compare, for instance, (77) for Macedonian, (78) for Polish, (79) for dialectal Russian (Pskov region) and (80) for dialectal Belarusian from the Balto-Slavic contact zone:

- (77) Macedonian (Velkovska 1998: 54)
Veќе ima-m obezbede-no prevoz
 already have-PRS.1SG provide[PFV]-PST.PASS.P.INDECL transfer[M](SG)
na nekolku grupi turisti od mojata zemja vo Egipet.
 “I **have** already **ensured** the transfer of some tourist groups from my country to Egypt.”
- (78) Polish (own knowledge)
Spraw-ę już ma-my załatwio-n-ą.
 matter[F]-ACC.SG already have-PRS.1PL fix[PFV]-PST.PASS.P-ACC.SG.F
 “We **have** already **settled** the matter.”
- (79) dialectal Russian (Pskov region; Sobolev 1998: 75)
im tak-oe del-o ot načal'nik-ov
 3PL.DAT such-NOM/ACC.SG.N matter-NOM/ACC.SG from superior-GEN.PL
zapreti-vši.
 forbid[PFV]-ANT.P
 “this matter (has been) **forbidden** them by their superiors.”
- (80) dialectal Belarusian (Lida district; Erker 2015: 94)
dačk-á vyjša-ŭšy za pravasłáŭn-aya.
 daughter[F]-NOM.SG marry[PFV]-ANT.P for orthodox-ACC.SG.M
 “(my) daughter **has married** / **is married** to an orthodox (man).”

With the experiential meaning the lexical restrictions holding for resultative perfects are loosened even more than for current relevance. From the discourse perspective, the experiential might be distinguished from the current relevance meaning by its discontinuative character: although it is implied that an anterior event bears a certain relevance for the situation at stake, there is some disruption, or at least lack of immediacy.

In Slavic languages, the experiential function is marked with imperfective finite past tense verbs. This holds true irrespective of whether the *I*-form has become a general past or has remained a perfect (Wiemer 2017: §2.1). The experiential

meaning is associated with low specificity of temporal reference. In fact, it is a default in case the speaker just wants to assert that (or ask whether) the situation type denoted by the verb stem has occurred at least once over a certain time span. Since this time span includes the utterance interval, the distinction from the current relevance meaning (namely: disruption) or from the perfect of persistent situation (see below) can get blurred. The experiential meaning is difficult to distinguish from current relevance especially under negation, cf. (81).

- (81) Macedonian (Mitkovska & Bužarovska 2011a: 55)
T-oj nikogaš ne doaĝa-l kaj nas.
 3-SG.M never NEG come[IPFV]-LF(SG.M) at 1PL.ACC
 “He has never come to us.”

In south-western Macedonian dialects the *l*-perfect (= A-type) has acquired meanings of indirect evidentiality as its predominant function (see §3.4.1), but even in these dialects the *l*-perfect can still be used in experiential function (Makarova 2016: 222; 2017: 393). The distribution between B- and C-type perfects in the standard language and the western and southern dialects seems to be reversed. In the colloquial standard, the B-type perfect (BE + *n/t*) is more usual in the experiential function, while with the HAVE-perfect it “has not become common in the standard use, even though it is widely known in the western dialects, where the old [BE]-perfect is rarely used in this function” (Bužarovska & Mitkovska 2010: §4.3; cf. also Makarova 2016: 227; 2017: 395f. on the dialects). See an example from the colloquial standard (82) and an example from an Aegean dialect (spoken in Greece) in (83):

- (82) Macedonian (colloquial standard; Velkovska 1998: 53)
Jas cel život ima-m
 1SG.NOM entire(SG.M) life[M](SG) have-PRS.1SG
rabote-no vo trgovij-a-t-a.
 work[IPFV]-PST.PASS.P.INDECL in trade(F)-SG-ART-SG.F
 “I **have spent** my entire life **working** in trade [but I stopped some time ago].”
- (83) Macedonian (Aegean dialect; Topolinjska 1995: 209)
Jas ima-m veќе doaĝa-no tuka.
 1SG.NOM have-PRS.1SG already come[IPFV]-PST.PASS.P.INDECL here
 “I **have already been** [*lit. come*] here.”

Notably, even if this construction goes with a durative adverbial (e.g., *cel život* “entire life” in (82)), the meaning does not extend into that of a situation persistent at the present moment. As for Russian dialects, compare *žyto* “lived” in (87).

A perfect of persistent situation (compare Engl. 'I have been X-ing') has been noted only for Bulgarian with the A-type perfect based on imperfective verbs (Iatridou et al. 2001: 172), and is clearly very marginal; cf. (84).

- (84) Bulgarian (web-media, *PodMosta* <https://podmost.com/>;
accessed September 26, 2016)
Vinagi sām običa-l-a da piš-a.
always be.PRS.1SG love[IPFV]-LF-SG.F CONN write[IPFV]-PRS.1SG
‘I have always loved to write.’

The Macedonian equivalent of this could be expressed by using the *l*-perfect as well (*Sekogaš sum saka-l-a da pišuvam*, E. Bužarovska, p.c.). The productivity of this function across the lexicon remains to be established, however. The universal perfect is unusual, if not inexistent, with the newer perfects (types B and C). Slavic languages consistently use the imperfective present tense instead.

Finally, and remarkably, newer perfects in some Slavic varieties are compatible with definite time adverbials. For the (standard and dialectal) Macedonian C-type perfect we observe this even with a time adverbial in focus position, cf. (85).

- (85) Macedonian (Velkovska 1998: 54)
Džonatan ima završe-n-o fakultet ušte
PN have(PRS.3SG) finish[PFV]-PST.PASS.P.INDECL faculty already
pred tri godini.
before 3 years
[lit.] ‘Jonathan has finished the faculty already three years ago.’

Moreover, the Macedonian HAVE-perfect can be used as a statement of fact whose relevance for the moment of speech has to be stressed, and this even extends to dead people or things that no longer exist (Friedman 1977: 91f.; Mitkovska & Bužarovska 2011a: §3.4.4). However, this perfect is not used to indicate functions of indirect evidentiality.

Northwest-Russian dialects constitute another area in which definite time adverbials occur with the perfect, although it is difficult to find examples with such adverbials in focus position (Wiemer & Giger 2005: 35, with further references), cf. (86) and (87).

- (86) Dialectal Russian (Sobolev 1998: 75, 78f.)
čerez troi sutki rodi-vši ona syn-a.
after three day+night give.birth[PFV]-ANT.P she.NOM son-ACC.SG
‘After three days and nights she bore a son.’ (southwest of Pskov)

- (87) *u menja s sem-i let po njan'k-am-to*
 at 1SG.GEN since 7-GEN year(GEN.PL) across nanny-DAT.PL-PTCL
pojde-no, u pop-of y d'jak-ov
 go[PFV]-PST.PASS.P.INDECL at priest-GEN.PL and deacon-GEN.PL
žy-to.
 live[IPFV]-PST.PASS.P.INDECL
 “With seven I started working as a nanny, I have lived with priests and deacons.”
 (north of Pskov)

However, despite this shift toward an actional perfect, the Macedonian and the East Slavic dialectal perfects can be used only to report, not as a narrative tense. In this respect, they resemble the Latvian present perfect (see 28 in §2.2.2).

3.4 Intersections with related domains

We should distinguish between extensions beyond the perfect domain that affected already established perfects, on the one hand, and systematic intersections of resultative participles with constructions relevant for voice, on the other. The former applies to extensions into indirect evidentiality (§3.4.1), which probably took place irrespective of the voice-orientation of the relevant participles in the particular variety. By contrast, given the diathetic lability of resultative *n/t*-participles (see §3.2), these participles have been the main input not only of perfect, but also of passive constructions. In addition, objective resultatives are systematically ambiguous with the actional passive in most Slavic languages (§3.4.2), as they are in Lithuanian (§2.1). This ambiguity can be considered ancient, although it presupposes that the participles (*-n/t-* in Slavic, *-t-* in Baltic) underwent stabilization of voice-orientation toward the more patient-like argument of transitive verbs. The subjective use of *n/t*-participles which we notice especially in West Slavic (see §3.3) can be regarded as a manifestation of the stabilization of orientation toward the most patient-like participant independently of numerical valency (one- vs. two-/three-place verbs). Presumably *n/t*-participles have changed their voice orientation more than once since CS times, and *l-* and *vši-* participles have also done so in dedicated micro-areas, possibly during the last 200–300 years (see §4.1).

Limitations of space mean that a comprehensive account of the relationship between perfects and all voice-related constructions must be deferred. In particular, we cannot go into the rise of impersonal (or backgrounding) passive constructions like the Polish *no/to*-participles (which are an equivalent of German *man*-clauses in the past tense) and its differences with respect to the cognate construction in Ukrainian or from Lithuanian uninflected *ta/ma*-participles.¹⁶

16. On Lith. *ta*-participles see §2.1, on the Polish and Ukrainian *no/to*-construction cf. Wiemer & Giger (2005: 61–66, 71f.), Wiemer (2006b: 283f.), Wiemer (forthcoming).

3.4.1 Evidential extension

Evidential extensions of the *l*-perfect do not bring about any alignment changes. Such extensions are conventionalized only in Balkan Slavic. By and large, they function in a similar way to that of the Baltic evidential extensions of past active participles (see §2.1). For a recent comprehensive survey see Makarcev (2014). One main difference is that Balkan Slavic uses only anteriority participles (namely the *l*-forms), which cover the whole range of indirect evidentiality.¹⁷ As a consequence, *l*-forms are used even for unwitnessed situations that are relevant for the moment of speech. For instance, (88a) can be read as a reportive or inferential of (88b):

- (88) Bulgarian (Friedman 2000: 331)
- a. *Ivan spja-l*.
PN sleep[IPFV]-LF(SG.M)
i. “Ivan must be asleep.”; ii. “Ivan is said to be sleeping.”
 - b. *Ivan sp-i*.
PN sleep[IPFV]-PRS.3SG
“Ivan is sleeping.”

In Bulgarian this reading is claimed to be triggered (or indicated) by an omission of the BE-auxiliary in the third person (in Macedonian this auxiliary never occurs in the third person). However, put to an empirical test (on authentic texts), this claim turns out to be an idealization.¹⁸ This parallels the situation reported for the Baltic languages (see §2.1, §2.2.2).

The functional extension into indirect evidentiality has however created new forms: the evidential equivalent of the non-evidential present and imperfect and of all forms with the future marker Bg. *šte* / Mac. *će* combine with the *l*-suffix (see Example 88a against 88b). This combination is not inherited from CS. Figure 1 presents the basic correspondences between evidential (‘non-confirmative’) and non-evidential (‘confirmative’) forms in Bulgarian (an analogous schema applies to Macedonian). The innovated forms are in bold. The exemplar forms belong to the verb *piše* “write.PRS.3SG”:

17. Friedman (1977 and subsequent works) has been dubbing them ‘non-confirmative’ forms, since their general function is that of marking non-witnessed events (plus mirative meanings). For an overview of terminology cf. Guentchéva (1996: 48–52) and Makarcev (2014: 7–36). In Aikhenvald’s terms (2004), we should speak of an evidential strategy, because marking of evidentiality by *l*-forms is neither obligatory, nor can they be considered reliable indicators of indirect evidentiality (against ‘ordinary’ perfect functions).

18. Cf. Guentchéva (1996), Friedman (2000: 332–336; 2001, 2004). As Friedman (2000: 334) puts it: “presence versus absence of the auxiliary is a pragmatic device encoding narrative perspective”. See further references there and in Sonnenhauser (2011).

indic.	present	imperfect	aorist	perfect	pluperfect	future	futurum exactum
	<i>piše</i>	<i>piše-še</i>	<i>pisa</i>	<i>e pisa-l</i>	<i>pisa-l be-še</i>	<i>šte piše</i>	<i>šte e pisa-l</i>
evid.	<i>piše-l (bi-l)</i>		<i>pisa-l (bi-l)</i>		<i>pisa-l bi-l</i>	<i>štja-l (bi-l) da piše</i>	<i>štja-l (bi-l) da e pisa-l</i>

Figure 1. Evidential extension of the perfect in Bulgarian (without *futurum praeteriti* and *futurum exactum praeteriti*)

As the paradigm shows, the evidential forms can be ‘supercomposed’ with the *l*-participle of the BE-verb (*bi-l*), while the non-evidential pluperfect is formed with the imperfect of BE (*be-še*); see §3.6.2. The evidential supercomposed forms remind us of the *Doppelperfekt* in German or the *passé surcomposé* in French, but they evoke strong epistemic overtones (doubt etc.).

Apart from the Balkans, no Slavic variety shows evidential extensions to perfects. Remarkably, they are unattested in regions with considerable Finno-Ugric or Baltic substrates and/or adstrates, that is we do not observe them in Belarusian in the vicinity of Baltic nor in Northwest- or North-Russian dialects (apart from some embryonic evidence in the latter; cf. Wiemer & Giger 2005: 38f.).

3.4.2 *Objective resultatives as distinct from the actional passive*

Particularly in earlier stages of Slavic, but also in many contemporary Slavic varieties, objective resultatives were (or are) systematically syncretic with the actional passive of the preceding temporal plane. Thus, for instance, the present tense resultative would be ambiguous with the passive of the past. By ‘passive’ we understand constructions which jointly fulfil three conditions: (i) The most patient-like core argument is marked as nominative subject; (ii) a morphological change is triggered in the verb (e.g. from finite form to participle); (iii) the focus rests on an event (or process), not on a resultant state. Syncretism of passive and resultative, thus, means that this focus could (or still can) vary. Consider the following example:

- (89) Old East Slavic (Second Novgorod Chronicle, 1207; Feoktistova 1961: 201)
v lét-o 6715 sverše-n-a cerkov’
in year-ACC.SG complete[PFV]-PST.PASS.P-NOM.SG.F church[F](NOM.SG)
svjat-aja pjatnic-a
holy-NOM.SG.F friday[F]-NOM.SG
“in the year 6715 (= 1207) the church of the Holy Friday was [lit. is] **completed**”

We observe a similar situation in modern standard Czech, cf. (90).

- (90) Czech (Štícha 1986: 182f.)
Stavb-a je nedávno
 building[F]-NOM.SG be.PRS.3SG recently
oprav-ova- / -ě-n-á.
 repair[IPFV] / [PFV]-PST.PASS.P-NOM.SG.F
 i. [lit.] “The building is recently repaired.” present resultative
 ii. “The building has recently been repaired.” past passive

Note that here the ambiguity applies with the participle of either aspect (perfective or imperfective). This syncretism of objective resultative and event-related passive is very old; it was most probably inherited from CS and can be found in OCS.¹⁹ In fact, it is attested in quite many languages and was characteristic, among others, of pre-19th century German as well. Compare, for instance, Old Czech in (91a) and its equivalent from the 16th century German in (91b):

- (91) a. Old Czech (Biblie Královská; Večerka 1996: 218)
když by-l vyhná-n
 when be-PST(SG.M) expel[PFV]-PST.PASS.P(NOM.SG.M)
zástup
 crowd[M](NOM.SG)
 b. German (Bible translated by Luther, edition Dresden 1869)
Als aber d-as Volk ausgetrieben war
 when but ART-NOM.SG.N people[N](NOM.SG) expel.PASS.P be.PST.3SG
 (a=b) “When the crowd was expelled ...” (Matt. 9:25)

Here, it is only (knowledge about) the context which disambiguates in favour of an actional reading, not the participial constructions themselves. Compare this with the English translation and Examples (89)–(90).

According to an implicational relationship established by Nedjalkov & Jaxontov (1988: 36), the actional passive reading is most difficult to get in the present tense, while it is facilitated in the past and the future. This implication allows to predict that the actional passive reading is abandoned first (and the resultative reading over-come last) in the present tense. This is what we in fact observe in Russian: whereas predicative *n/t*-participles in the present tense, as in (89), were still attested with a possible reading of an actional passive in the 19th century, this possibility has drastically diminished by now. Compare predicative *n/t*-participles in the present tense, which sound awkward with definite time adverbials or manner adverbs, as in (92).

19. Cf., for instance, Večerka (1996: 217f.), who remarks that combinations of *n/t*-participles and present tense forms of BE in OCS were also employed to translate the Greek perfect or aorist passive.

(92) Russian

*Okn-o**otkry-t-o*ʔ*bystro* / ʔ*v dva časa*

window[N]-NOM.SG open[PFV]-PST.PASS.P-NOM.SG.N quickly / in two hours

[lit.] ‘The window is opened ʔquickly / ʔat two o’clock.’

No such restrictions occur in the past or future tense (*Okno bylo / budet otkryto bystro / v dva časa* ‘The window was / will be opened quickly / at two o’clock’), although a potential ambiguity remains as concerns the reference of definite time adverbials: does *v dva časa* ‘at two o’clock’ specify the time of the event or of the subsequent state?

Whereas in Russian the syncretism of the objective resultative and the actional passive is resolved only by context, Polish and different varieties of Sorbian have broken it up by introducing an explicit morphological distinction, namely a specific passive auxiliary: Polish *zostać*[PFV] / *zostawać*[IPFV], dialectal Upper / Lower Sorbian *wordować* / *wordować*, colloquial Upper Sorbian *hodwać*. The Sorbian auxiliaries are matter-borrowings of Germ. *werden*, whereas in Polish we are dealing with a complex process of pattern-borrowing (on the two types of structural borrowing see Matras & Sakel 2007). These auxiliaries differ quite considerably as to their integration into the grammatical system and distributional restrictions. In this respect, Polish and Sorbian varieties are very similar to Latvian (see § 2.1) and German in having established an auxiliary which distinctly ‘dissimilates’ the actional passive from resultatives. We should emphasize that concomitantly in these Slavic languages the distinction between resultative state and process (or iterative) meaning is marked solely by the aspect of the participle (used together with the BE-auxiliary): the former is marked with participles of perfective stems, the latter with imperfective participles.²⁰

This clear distribution implies that Polish and Sorbian imperfective *n/t*-participles have largely lost their resultative function, and it testifies to a consistent integration of the participles into the aspect system of perfective vs. imperfective stems: imperfective predicative participles have neither become obsolete (as they tend to do in Russian), nor does their usage overlap with the functions of perfective participles, as it still does in the remaining Slavic languages. In the remainder of West Slavic, an overlap of perfective and imperfective *n/t*-participles for both the resultative and the actional passive meaning appears still to occur quite frequently (see the Czech example 90), and similarly for Serbian-Croatian. In the remainder of South Slavic, the distribution is less clear (Giger 2003: 363–368, 469–478; Wiemer 2017: §§ 2.2.1.1–3).

20. Cf. Wiemer (2004: 295f., 302f.), Wiemer & Hansen (2012: 91–95) and Wiemer (2017: § 2.2.1.1), with further references. See also § 3.4.3.

In general, the opposition of perfective and imperfective aspect proves relevant for Slavic perfects insofar as in many varieties imperfective *n/t*-participles tend to be suppressed in regular grammatical operations like the passive (as in standard Russian), or their distributional patterns vis-à-vis perfective *n/t*-participles do not enter into reliable functional oppositions. Clear exceptions are the passives of standard Polish and of the Sorbian languages (see above). Aspect choice proves crucial also with HAVE-based perfects in Polish (see § 3.4.3) and in Macedonian (see § 3.5.3), although for different reasons.²¹

3.4.3 Recipient passive

In standard Polish we come across a construction with HAVE-auxiliary and imperfective *n/t*-participle illustrated in (93) and (94):

- Polish
- (93) *Ząbk-i mia-ł ogląda-n-e*
tooth-ACC.PL have-PST-(SG.M) check[IPFV]-PST.PASS.P-ACC.PL.NVIR
w czerwcu.
in June-LOC
“He **had/got** his teeth **checked** in June.”
- (94) *Co jakiś czas ma leczyć-zęby.*
PTCL some.time have.PRS.3SG cure[IPFV]-PST.PASS.P-ACC.PL.NVIR tooth-ACC.PL
“From time to time s/he **gets** his/her teeth **treated**.”

The syntactic relations superficially resemble HAVE-based resultatives. However, in (93)–(94) the subject-NP cannot be identified with the agent, while the HAVE-based resultative allows for either an agentive or a beneficiary reading. The HAVE-auxiliary with imperfective *n/t*-participles can only be read as a recipient passive (Bunčić 2015). This term (compare Germ. *Rezipientenpassiv*) includes semantic roles that are closely related to the notion of recipient, thus beneficiary/malesiciary and addressee. First, the subject-NP denotes a beneficiary (more rarely a malesiciary). Second, the construction does not refer to a state holding after some telic event; instead, its time reference corresponds to the tense of the auxiliary, i.e. no temporal shift from a telic event to a subsequent resultant state occurs. Imperfective participles can appear without just “copying” the resultative, or anterior, function of their perfective counterparts. Already this shows that we are not dealing with a perfect.²²

21. For a systematic assessment of the interaction between perfects and the aspect opposition in Slavic cf. Wiemer (2017).

22. Such claims have been raised from time to time; most recently by Piskorz (2012). For surveys, discussion and rejection cf. Łaziński (2001), Giger (2003: 369–434; 2016) Mendoza (2013), Bunčić (2015), Wiemer (2017: 148–150).

Imperfective *n/t*-participles have become indicative of the recipient passive in Polish, while this function is not excluded with perfective participles as well, but it then co-occurs with a resultative function (Wiemer 2017: §3.2.4.5). We find recipient-oriented interpretations of HAVE-based resultatives in Czech and Slovak as well (Giger 2000: 19; 2003: 91), cf. an ambiguous Czech example in (95).

- (95) Czech (courtesy of J. Panevová)
Má-m zaplace-n-o.
 have-PRS.1SG pay[PFV]-PST.PASS.P-SG.N
 (i) “I have paid.”
 (ii) “I got paid,” i.e. “Someone paid for me.”
 subject = agent
 subject = beneficiary (agent unknown)

Contrast this with the Polish Examples (93)–(94) in which the imperfective participles evoke an experiential or iterative reading. It is, thus, the aspect of the participle that regulates the actionality features of the whole construction: in Polish, only imperfective *n/t*-participles preclude a temporal shift to a resultant state, provided they do not “copy” the resultative meaning of their perfective counterparts, but are able to convey processes and other meanings common for imperfective verbs in the active voice. This property of imperfective participles parallels our findings concerning the Polish canonical passive (see § 3.4.2).

3.5 Diachronic development

We start with the earliest attestations of the Slavic *l*-perfect (*l*-participle + BE) as well as one remnant of the Indo-European perfect in §3.5.1, before we continue with auxiliation (§3.5.2), diathesis orientation of the participial suffixes (§3.5.3) and the role of the lexical input (§3.5.4).

3.5.1 *The perfect in ancient Slavic*

The only extant reflex of the Indo-European perfect in Slavic was the 1st person singular form *vědě* “I know” attested in OCS, Old East Slavic, Old Czech and Old Slovene (Vaillant 1966: 76, 449). Functionally, it was a (stative) present tense devoid of any reference to a previous event, cf. (96).

- (96) Old East Slavic (Life of Andrew of Constantinople, 12th cent., RNC)
ni azъ j-ego věd-ě kto s-e
 NEG+and 1SG.NOM 3-GEN.SG.M know-PRS.1SG who.NOM this-NOM.SG.N
jes-tb
 be.PRS-3SG
iže na mja tjaža tvoritъ i straša mi i grozja mi
 “Neither do I **know** who it is who pursues me frightening and threatening me.”

The functions of the periphrastic (present) perfect in OCS remain a controversial issue, partly related to the possible discrepancies between different manuscripts as well as to the none too trivial correspondences between the uses of tenses in OCS texts and their Greek originals (on this see e.g. Trost 1972; MacRobert 2013), and partly to the peculiarities of the distribution of this form as opposed to the ‘typological prototype’ of the perfect as formulated e.g. in Dahl (1985: Chapter 5). The classic studies of the perfect in OCS include Dostál (1954), Bunina (1959: 55–78), Dejanova (1970: 129–150), Trost (1972); we base our brief exposition on the more recent studies by MacRobert (2013) and Plungian & Urmančieva (2015a, 2017, 2018).

At the most general level, it is necessary to state that, first, “the distribution of the aorist and perfect tenses in Old Church Slavonic is clearly independent of Greek” (MacRobert 2013: 388) and, second, that “there is a partial overlap between the aorist and the perfect in Old Church Slavonic: instances of these past tenses can be found in virtually identical contexts, or in the same context attested in different manuscripts” (MacRobert 2013: 388). This suggests that the distribution of the perfect as opposed to the aorist in OCS was dependent on factors not directly related to temporal or aspectual semantics, but rather belonging to the domain of discourse.²³

Plungian & Urmančieva (2015a, 2018: 422–423) observed that the OCS perfect is conspicuously absent from many resultative contexts,²⁴ where e.g. the English translation of the Gospel features the present perfect while OCS uses the aorist, cf. (97).

23. For discussion of the use of the perfect instead of the aorist in the 2nd singular in order to avoid the homonymy with the 3rd singular aorist, see MacRobert (2013). Such a purely formal distribution of tenses became the norm in the later versions of Church Slavonic, where “formal equivalence between Church Slavonic and Greek was given a higher priority than it apparently had in Old Church Slavonic” (MacRobert 2013: 389), but was not at all the rule in the most ancient OCS texts.

24. Detailed arguments against the purely resultative analysis of the OCS perfect have been presented already by Bunina (1959: 62–76).

(97) Old Church Slavonic

(Codex Marianus, John 11:41; Plungian & Urmančieva 2018: 422)²⁵

otvč-e xvalj-ρ tebě vřz-daj-ρ jako

father-VOC praise-ACC.SG 2SG.DAT PVB-give-PRS.1SG that

u-slyša mę

PVB-hear.AOR.2SG 1SG.ACC

“Father, I thank thee that thou hast heard (Grk. Aor. ἤκουσάς) me.”

On the other hand, the OCS perfect is systematically used in experiential contexts, e.g. (98).

(98) Old Church Slavonic

(Codex Marianus, Luke 19:8; Plungian & Urmančieva 2018: 424)²⁶

i ašte jes-mř k-ogo č-imv obidě-l-ř

and if be.PRS-1SG who-GEN what-INS injure-LF-SG.M

vřzvrăštř cetvoricejř

“And if I have taken (Grk. Aor. ἐσυκοφάντησα) any thing from any man by false accusation, I restore him fourfold.”

According to Plungian & Urmančieva (2018: 424–428), the perfect in OCS is often employed not to relate events, but to characterize or interpret them in a sort of summary which may either precede or follow a narrative stretch (cf. Levinsohn, this volume). Thus, while the aorist is used to describe new events (in particular those belonging to the main narrative line), the perfect in OCS is often employed in those sections of discourse whose function is argumentative rather than purely narrative. This correlates well with the observation by Bunina (1959: 76) that in the OCS Gospels the perfect is predominantly used in direct speech rather than in the narrative. However, in other types of text the opposition between narration and argumentation becomes clearer, cf. the following fragments from John Chrysostom’s Homily on Christ’s resurrection from Codex Suprasliensis, all describing Jesus through reference to his acts (99a–c) and serving the purpose not of describing these acts for their own sake but of reaching the conclusion about their divine nature (99d):

25. Checked at PROIEL: http://foni.uio.no:3000/source_divisions/672

26. Checked at PROIEL http://foni.uio.no:3000/source_divisions/655

(99) Old Church Slavonic

(Codex Suprasliensis, 80, 91–92, 98;²⁷ Plungian & Urmančieva 2018: 428)²⁸

- a. *vъ pustyn-i pro-g'na-l-ъ slov-omъ množstv-o*
 in desert-LOC.SG PVB-drive-LF-SG.M word-INS.SG multitude-ACC.SG
běs-ъ
 devil-GEN.PL
 “He has driven away many devils in the desert by His word.”
- b. *po-xodi-l-ъ jakože po sux-u vrъxu morj-a*
 PVB-walk-LF-SG.M like on land-DAT.SG above sea-GEN.SG
 “He has walked on the sea as on land.”
- c. *bur-ъ větrъn-ъ utoli-l-ъ slov-omъ*
 tempest-ACC.SG windy-ACC.SG calm-LF-SG.M word-INS.SG
 “He has calmed the hurricane by His word.”
- d. *s-i děl-a vъ istin-ъ sptъ*
 this-NOM.PL.N act-NOM.PL in truth-ACC.SG be.PRS.3PL
boži-ę sil-y
 divine-GEN.SG.F power-GEN.SG
 “These acts are indeed those of a divine power.”

To summarize, the Old Church Slavonic perfect is peculiar in lacking a resultative ‘core’ and in being primarily a discourse-oriented form mainly employed as a means of information management. It remains an open – and hardly solvable – question to what extent these properties of the OCS perfect were determined by the nature of the extant texts in this language. Some light on this issue might be shed by the data from Old East Slavic, which is represented by a much more varied inventory of textual genres.

The consideration of the tense system of Old East Slavic (often called Old Russian) rests on the dichotomy between two major types of texts, i.e. ‘bookish’ texts (mainly chronicles, religious and literary texts) and ‘vernacular’ texts (letters, non-official inscriptions, many legal texts, etc.). In the former, which remained under the constant influence of Church Slavonic, the older synthetic tenses (aorist and imperfect) were still in productive use at least till the 14th century and even later, while the perfect concomitantly occupied a limited albeit important functional

27. Checked at TOROT <https://nestor.uit.no/sentences/168436>, <https://nestor.uit.no/sentences/168446>, <https://nestor.uit.no/sentences/168453>

28. These examples from Codex Suprasliensis feature the bare *l*-form with the omitted auxiliary, which is a characteristic of this particular text not shared by other OCS manuscripts, at least to any significant degree (see Plungian & Urmančieva 2015b for a tentative hypothesis about the discourse function of auxiliary omission).

niche. By contrast, in the vernacular texts the perfect ousted the synthetic tenses and became the major if not the only past tense already by the 12th century.

This is most clearly evident for the Old Novgorod dialect with its large corpus of extant vernacular texts, i.e. birchbark letters. As is shown by Zaliznjak (2004: 173–174), the perfect in the birchbark letters was the predominant past tense form from the very beginning of the 11th century (and thus was not really a perfect anymore). The situation in the Novgorod chronicles, however, was very different, with the aorist and the imperfect being the primary narrative tenses and the perfect largely limited to direct speech. The propensity of the birchbark letters to use the perfect can be linked to the specific genre of interpersonal communication aiming at argumentation and manipulation rather than narration. It is clear, however, that the perfect could also be used as a narrative tense, cf. the following very early example (possibly not without CS influence, as rightly pointed out to us by Hanne Eckhoff):

(100) Old Novgorod dialect

(birchbark letter No. 605, 1080–1130; Zaliznjak 2004: 271)

mene igumen-e ne pusti-l-e a ja
 1SG.GEN abbot-NOM.SG NEG let.go-LF-SG.M PTCL 1SG.NOM
praša-l-ŕ=sja nŕ po-sŕla-l-ŕ sŕ asaf-ŕmŕ
 ask.for.leave-LF-SG.M=REFL.ACC but PVB-sent-LF-SG.M with Asaf-INS.SG
kŕ posadbnik-u mead-u dělja a pri-šŕl-a es-vě
 to mayor-DAT.SG mead-GEN.SG for PTCL PVB-go.LF-DU.M be.PRS-1DU
oli zvonl-l-i
 when ring-LF-PL.M
 “The abbot did not let me go. I asked him for leave, but he sent me with Asaf to the mayor to get mead, and when we two came back, (they) were (already) ringing (the bells).”

The present perfect was also compatible with temporal adverbials such as ‘last year’ or other specifications of the moment of time when the event occurred, cf. (101) from a letter from the same period as the previous one.

(101) Old Novgorod dialect (letter on a lead slab, 1090–1120; Zaliznjak 2004: 261)

zaožerič-ŕ otrok-ŕ loni kri-l-i
 across.lake-ACC.SG.M servant-ACC.SG last.year buy-LF-PL.M

“The servant from the other side of the lake was bought last year [*lit.* they have bought].”

The perfect was also used in birchbark letters in such functions as resultative (102) and ‘current relevance’ (103), but all of them can be subsumed under the most general function of neutral reference to a situation in the past.

Old Novgorod dialect

- (102) (birchbark letter No. 222, end of 12th cent.– ca. 1220; Zaliznjak 2004: 442)

topbr̥vo jes-mo pri-šl-b
 now be.PRS-1SG PVB-go.LF-SG.M
 “Now I have come.”

- (103) (birchbark letter No. 119, 1110–1130; Zaliznjak 2004: 273)

v̥o-da-l-e jes-mv gjurbgevic-u bez devjat-i
 PVB-give-LF-SG.M be.PRS-1SG Gjurgevič-DAT.SG without nine-GEN
kun-č 2 griv̥n-ě v̥čz-vm-čši v̥o-daže pročb
 kuna-GEN.PL 2 grivna-ACC.DU PVB-take-CVB.PST PVB-give.IMP.2SG away
ljud-vmč
 people-DAT.PL
 “I have given Gjurgevič two *grivnas* minus nine *kunas* [a certain sum of money]; take them and give them away to the people.”

A special discourse function of the perfect noted by Zaliznjak (2004: 175) is the performative use whereby the perfect refers to the current speech act, as in (104). Such a use in written texts may have its rationale in the inevitable temporal distance between the act of writing (e.g. issuing an order) and the situation of reading (perception of the order).

- (104) Old Novgorod dialect

(birchbark letter No. 344, end of 13th cent.; Zaliznjak 2004: 526)
jazo tobě brat-u svoj-emu prikaza-l-e pro
 1SG.NOM 2SG.DAT brother-DAT.SG RPOSS-DAT.SG.N order-LF-SG.M about
sebě [tak]o
 REFL.DAT thus
 “I order [*lit.* I have ordered] you, my brother, to do thus.”

It should also be noted that the Old Novgorod birchbark letters contain the earliest attestations of the North Russian perfect of type B composed of the *n/t*-participle and the agent phrase with the preposition *u*. Cf. the following example, still potentially ambiguous between an agentive and a locative interpretation (cf. Wiemer 2004: 308–310 for discussion).

(105) Old Novgorod dialect

(birchbark letter No. 607/562, end of 11th cent.; Zaliznjak 2004: 245)

*Žiznobud-e po-gubl-en-e**u syčevic-ъ*

PN-NOM.SG PVB-kill-PST.PASS.P-NOM.SG at PN-GEN.PL

*novgorod-ъsk-e**smъrd-e**a**za**n-im[i i]*

Novgorod-ADJ-NOM.SG.M peasant-NOM.SG PTCL behind 3-INS.PL.M and

z[a]dъnic-ja

inheritance-NOM.SG

“Žiznobud, a Novgorod peasant, has been killed by the Syčevics (or: at the Syčevics place); they also hold his inheritance [*lit.* behind them [*is*] inheritance].”

Turning to the ‘bookish’ registers, we find there an opposition between the regular narrative tenses (aorist and imperfect) and the perfect. The latter was never used in the main narrative line before the beginning of the 14th century (Zaliznjak 2004: 173) and rather served certain specific functions – albeit partly different from those established above for Old Church Slavonic (e.g. Petruxin 2004: 73–76 for a brief survey of main works and Silina 1995: 443–456 for an extensive analysis). First, we find the resultative perfect from intransitive verbs, as in (106), as well as from transitive verbs, as in (107), both denoting states resulting from past events and holding up to the (present) reference time. Note that in (106) both the *l*-form ‘has died’ and the passive *n/t*-participle ‘has been killed’ have this resultative function, while the event from the main narrative line ‘sent’ is expressed by the aorist.

(106) Old East Slavic (*The Tale of Boris and Gleb*, 12th cent., 440; Silina 1995: 447)²⁹*i pri-sla Jaroslav-ъ kъ Glѣb-u rek-a:*

and PVB-send.AOR.3SG PN-NOM.SG to PN-DAT.SG say-PRS.PA.NOM.SG.M

ne xod-i brat-e; o[tb]c-ъ=ti u-mъr-l-ъ a

NEG go-IMP.2SG brother-VOC father-NOM.SG=2SG.DAT PVB-die-LF-SG.M and

brat-ъ=ti ubij-en-ъ otъ S[vja]topъlk-a

brother-NOM.SG=2SG.DAT kill-PST.PASS.P-NOM.SG.M from PN-GEN.SG

“And Yaroslav sent (messengers) to Gleb saying: don’t go, brother: your father has died and your brother has been killed by Svyatopolk.”

(107) Old East Slavic (*Prolog Lobkovskij*, 1262, 30b; Silina 1995: 447)*poneže bog pri-ve-l=mja v svjat-ѣi*

because God(NOM.SG) PVB-lead-LF(SG.M)=1SG.ACC in holy-ACC.DU

tvo-i ruc-ě i ne otluč-u=sja

2SG.POSS-ACC.DU hand-ACC.DU and NEG leave-PRS.1SG=REFL.ACC

ot tebe

from 2SG.GEN

“Because God has led me into thy holy hands, I will not leave you.”

The experiential perfect is also well attested, most notably from atelic verbs, including the verb ‘be’ itself, cf. (108) and (109).

- (108) Old East Slavic (*The Tale of Boris and Gleb*, 12th cent., 24g; Silina 1995: 448)
a i mnog-yxъ svjat-yxъ rak-y vidě-l-i jes-my
 but and many-GEN.PL saint-GEN.PL shrine-ACC.PL see-LF-PL.M be.PRS-1PL
 “[Nowhere is there such a beauty,] even though we have seen shrines of many saints.”

- (109) Old East Slavic
 (*The Life of Theodosius of Kiev*, 12th–13th cent., 98:2; Silina 1995: 449)³⁰
jako=že něs-tъ by-l-o nikoli=že
 how=PTCL NEG+be.PRS-3SG be-LF-SG.N never=PTCL
 “[And the cattle gave litter,] such as has never been before.”

Some examples of the perfect appear to indicate that it intrudes into the main narrative line (on this issue see also Taube 1980); thus, in (110) the perfect (without the auxiliary) is conjoined with the aorist.

- (110) Old East Slavic
 (*The Life of Theodosius of Kiev*, 12th–13th cent., 96:0; Silina 1995: 449)
po-oblači-l-o=sja n[e]b-o i
 PVB-cover.with.clouds-LF-SG.N=REFL.ACC sky-NOM.SG and
sъn-id-e dъžd-b
 PVB-go-AOR.3SG rain-NOM.SG
 “[C]louds covered the sky and it rained.”

Examples where the perfect from (proto)imperfective verbs denotes a durative or iterative situation in the past, i.e. is used similarly to the imperfect, are attested at least from the end of the 13th century, cf. (111):

- (111) Old East Slavic (*Russkaya Pravda*, 1280, 99:11; Silina 1995: 454)³¹
zane kormi-l i pečalova-l=sja
 because feed[IPFV]-LF(SG.M) and take.care[IPFV]-LF(SG.M)=REFL.ACC
 “[He may take the profit for himself,] because he fed and took care (of the orphans).”

On the other hand, we find examples of the perfect from apparently imperfective verbs in clearly resultative contexts, e.g. in inscriptions on various objects, cf. (112), where the ‘protoimperfective’ prefixless verb is used instead of a ‘protopresentive’ prefixed one (see Kukuškina & Ševeleva 1991 and the ensuing literature on the

30. Checked at TOROT <https://nestor.uit.no/sentences/193022>

31. Checked at TOROT <https://nestor.uit.no/sentences/172285>

status of aspectual derivation in Old East Slavic), which would unambiguously signal the culmination of the event of making:

- (112) Old East Slavic (inscription, 12th cent.; Silina 1995: 455)
s-b *sъsud-ъ* *petr-ov-ъ* ... *kost-a*
 this-NOM.SG.M vessel-NOM.SG PN-POSS-NOM.SG.M PN-NOM.SG
děla-l-ъ
 make[IPFV]-LF-SG.M
 “This is Peter’s vessel ... Kosta made it.”

As has been shown by Petruxin (2004; with references to Istrina 1923 and Klenin 1993), the perfect could occur in the so-called ‘retrospective’ or ‘backshifted’ use, i.e. reference to an already known event preceding the main narrative line and whose results do not necessarily still hold at the reference time; in this function the perfect usually occurred in subordinate clauses. Thus, in (113) the event referred to in (113b) by the perfect (the assault of the Livonian Order against Pskov) is first introduced into the narrative by an aorist form a few clauses earlier (113a).

- (113) Old East Slavic
 (*Novgorod Primary Chronicle*, 1253, 132v-133r; Petruxin 2004: 82)
- a. *t-og[o]=že* *lēt[-a]* *prid-oša* *němc-i*
 that-GEN.SG.N=PTCL year-GEN.SG come[PFV]-AOR.3PL German-NOM.PL
pod Pľskov *i* *po-žg-oša* *posad*
 to Pskov(ACC.SG) and PVB-burn[PFV]-AOR.3PL suburb(ACC.SG)
 “In the same year the Germans came to Pskov and burned the settlement.”
- b. *sam-i=bo* *na sebe* *poča-l-i*
 EMPH-NOM.PL=because on REFL.LOC begin[PFV]-LF-PL
 “[In the same year the Novgorodians] went with Pskovians to fight the Germans [...] and the Pskovians defeated them with the might of the Holy Cross:] because [the Germans] themselves began [this war] [...]”

Again, the function of this use of the perfect was not to narrate new events in their temporal succession, but to remind the reader of the chronicle of previous events somehow relevant to the main narrative line; according to Petruxin (2004: 86), situations encoded by the perfect belong to pragmatic presupposition. Cf. the following formulation by Cornelis van Schooneveld (1959: 165; quoted from Petruxin 2004: 86) on the Old East Slavic perfect: “The perfect denotes a process anterior to the moment of the utterance which, in contradistinction to the main body of the story, already belongs to objective knowledge.” In this function, the perfect was opposed to the pluperfect (see §3.6)

A few words should also be said about the formal aspects of the perfect in Old East Slavic, i.e. the use vs. gradual loss of the auxiliary. Already in the most ancient

vernacular texts the auxiliary was systematically used only in the 1st and 2nd persons (Zaliznjak 2004: 178–181; Silina 1995: 443–444), but not in the 3rd person, cf. (100) above. In the 1st and 2nd person the auxiliary was in almost complementary distribution with free nominative pronouns in the vernacular, which have gradually supplanted the auxiliary by the 17th century (see Zaliznjak 2008: 239–262 and recent typologically informed overviews in Kibrik 2013 and especially Budennaya 2018 with references therein). In bookish texts the consistent use of the auxiliary was the norm for all persons, albeit examples of auxiliary omission are attested even in earlier texts.

3.5.2 *Auxiliation*

The process of auxiliation, in particular of HAVE in perfects of Standard Average European-type languages, was scrutinized by Kuteva (2001). As many others, she assumes that different stages of auxiliation involve changes affecting not only the HAVE-verb, but different parts of the entire construction. The structural corollaries of this process are the loss of object agreement (and of inflection as such) in the participle, reanalysis into a verbal complex (inflected HAVE + participle) and the omissibility of the object. In accordance with her model (Kuteva 2001: 40), the most advanced stage has obviously been reached by the Macedonian HAVE-based construction: first, its participle is invariable and, thus, does not agree with any core argument, which may be considered an indication that HAVE and the participle have turned into a verbal complex. Second, the fact that this construction hardly knows any lexical restrictions (Wiemer 2017: §2.4) implies that objects can be omitted, so that the last of Kuteva's stages seems to be reached.

However, Kuteva's schema is primarily oriented toward structural changes and does not say much about how such changes might be correlated with the semantic evolution of the construction. In particular, a perusal of Slavic HAVE-based resultatives reveals that the omissibility of an object-NP need not correlate with the spread of lexical input, nor with a shift to an event-oriented perfect. For instance, Georgiev (1976) draws attention to a HAVE-based construction in Bulgarian whose participle agrees with an object-NP that cannot be omitted:

- (114) Bulgarian (Georgiev 1976: 299, slightly adapted)
Ima-m porāčan-i vāglišt-a, no ošte ne sa
 have-PRS.1SG ordered-PL coal-PL but yet NEG be.PRS.3PL
pristigna-l-i.
 arrive[PFV]-LF-PL
 'I have ordered coal, but it hasn't arrived yet.'

This resultative construction has not moved beyond an initial stage (Kuteva 2001: 41f.). Note that, despite its transparent compositional structure, this resultative does not code any possessive notion: the second clause indicates that the subject of the HAVE-construction has not yet got hold of what was ordered. Of course, this has to do with the lexical input: illocutionary acts do not imply resultant states; note that such verbs are often among the first attestations of objective resultatives in different languages (see §3.5.4). In addition, whether the subject-NP is an agent or only a beneficiary of the desired state is open to contextual interpretation. These semantic properties show that resultativity is not tied up to possession (see further §3.5.4). If we want to assume that possession is the starting point for ‘possessive perfects’, we are forced to also assume that semantic bleaching of HAVE has occurred already at this initial stage. Models like Kuteva’s cannot account for this. Nor do they account for another feature which has been considered as a reliable indicator of auxiliiation: in (114) one cannot omit the participle or, if one does, the meaning of the clause changes to its opposite (and the entire sentence becomes nonsensical): ?*I have coal, but it hasn’t arrived yet*. That is, the participle still morphologically behaves like a modifier of the object-NP, although semantically and syntactically it is an indispensable part of the predication.

The same holds true for South Slavic beyond Balkan Slavic, i.e. farther to the northwest; see the Serbian Example (115) and the Slovene Example (116):

- (115) Serbian (courtesy of J. Grković-Major)³²
Ima-m skuva-n ručak
 have-PRS.1SG prepare[PFV]-PST.PASS.P(ACC.SG.M) lunch[M](ACC.SG)
za sutra.
 for tomorrow
 “I **have** lunch **prepared** for tomorrow.”
 (said by a woman, thus the participle agrees with the object)
- (116) Slovene (Nomachi 2006: 80)
Slik-o ima-m proda-n-o.
 picture[F]-ACC.SG have-PRS.1SG sell[PFV]-PST.PASS.P-ACC.SG.F
 “I have **sold** the painting.”

32. Cf. also Friedman (1976: 97). The marginal status of such constructions is confirmed by the fact that native speakers’ judgments about their use and acceptability vary enormously: they range from acceptance (under certain circumstances) to downright denial of their existence (explicable probably from prescriptivist norms).

These observations apply to the majority of HAVE-based resultatives in Slavic,³³ including high-contact varieties like the Resian dialects of Slovene (north-eastern Italy) and Molise Slavic (southern Italy); for some details and references cf. Wiemer (2017: §2.3). Analogous cases were noticed for Polish already by Nitsch (1913: 102), and we find similar examples all over Slavic where the HAVE-schema predominates for possession:

- (117) Polish (Nitsch 1913: 102)
On ma t-o miejsc-e
 he.NOM have.PRS.3SG DEM-ACC.SG.N place[N]-ACC.SG
sprzeda-n-e.
 sell[PFV]-PST.PASS.P-SG.N
 “He **has sold** this place.”

Most details pertinent for an assessment of auxiliation of HAVE-based resultatives are provided by West Slavic languages. Such resultatives existed already in Old Czech (end of 12th century), Old Polish (end of 13th century), and they are attested in the oldest Slovak documents from the early 17th century, but their degree of auxiliation has remained astonishingly low, and we can hardly observe shifts to an actional perfect. Almost all semantic and syntactic types known in the contemporary languages were already present (Giger 2003: 416–422; 2016: 284f.; Mendoza 2013, 2018). Admittedly, sometimes participles lacked agreement with an object-NP. However, such cases were infrequent, and most of them can be explained by the choice of the neuter as a default if agreement controllers were lacking or untypical, e.g. with quantifying expressions (see below). Moreover, in modern Polish, HAVE and the participle seem to be adjacent with each other more frequently than in earlier stages. However, this seems to be part a more general diachronic tendency of Polish, so that it is not clear how significant an increase in bondedness can be as an indicator of auxiliation (Mendoza 2018: 177f.).

Objectless resultatives can be subject-oriented, e.g. with ingestive verbs, as in (118) (compare it with the Macedonian Example (131) below):

- (118) Czech, Hanakian dialects, central Moravia (Damborský 1967: 105)
Už má-m dojed-l-ý.
 already have-PRS.1SG eat.up[PFV]-LF-SG.N
 “I have already eaten / had my fill.”

33. They apply even to the Lithuanian HAVE-based resultative (see §2.2.6). The latter differs from the bulk of Slavic HAVE-based resultatives only in that the active participles consistently agree with the subject.

Colloquial Polish provides a number of objectless resultatives from telic transitive verbs whose semantics is difficult to generalize. Here resultative and recipient-passive readings can co-occur (see §3.4.2); compare (119):

- (119) Polish (NKJP)
i gdzie ma-m posprząta-n-e (śmiech)
 and where have-PRS.1SG tidy.up[PFV]-PST.PASS.P-SG.N (laughter)
 “I have my place where I live, for which I pay regularly,”
 i. and where I have tidied up. [laughs]”
 ii. and where I get tidied up (by someone). [laughs]”

In either reading temporal reference corresponds to the tense of *mieć* “have”; in (119) the state is simultaneous to utterance time, regardless of whether a recipient-passive reading is involved (ii) or not (i). In none of the aforementioned cases do we observe a shift away from resultative states. If such instances are at all compatible with definite time adverbials (or conjunctions) these specify the time of the state, not of an associated preceding event.

The same applies to HAVE-resultatives whose base verbs do not imply any accusative-marked object at all, as e.g. in the Serbian Example (120) with a prepositional object:

- (120) Serbian (Nomachi 2012: 93)
Već ima-m polože-n-o za vožnj-u.
 already have-PRS.1SG put[PFV]-PST.PASS.P-SG.N for driving[F]-ACC.SG
 “I have already passed the driving test [*lit.* for driving].”

In yet other (very rare) cases lack of agreement applies if the potential agreement controller is a quantifying expression. We find such examples in Polish (121), Slovak (122) and Czech:

- (121) Polish (Weiss 1977: 371)
Część materiał-u ma-m już
 part[F](ACC.SG) stuff[M]-GEN.SG have-PRS.1SG already
porobio-n-e.
 do[PFV]-PST.PASS.P-SG.N
 “I have already done part of the stuff.”
- (122) Slovak (Giger 2016: 288)
Má kúpe-n-é liter vín-a.
 have.PRS.3SG buy[PFV]-PST.PASS.P-SG.N litre[M](ACC.SG) wine-GEN.SG
 “S/he has bought a litre of wine.”

Again, the focus of temporal reference remains on the resultant state.

Admittedly, for modern Czech and Slovak, Giger (2003: 394–403; 2016) pointed out that lack of agreement cannot in all instances be explained by the lack of a suitable agreement controller, cf. the Slovak example (123) with an overt accusative direct object:

- (123) Slovak (Giger 2016: 288)
Idete na hokej?
Nie, ja už má-m dohovore-n-é
 no 1SG.NOM already have-PRS.1SG agree[PFV]-PST.PASS.P-SG.N
televízi-u.
 television[F]-ACC.SG
 “Do you go to the hockey game? No, I **have** already **decided** on TV.”

In Czech we even encounter examples that look like subject agreement:

- (124) Czech (Giger 2016: 290)
Sv-é kúr-y má
 REFL.POSS-ACC.PL hen[F]-ACC.PL have.PRS.3SG
příprave-n-a i D. Havlov-á.
 prepare[PFV]-PST.PASS.P-NOM.SG.F too PN[F]-NOM.SG
 “D. Havlová **has prepared her hens**, too.”

Their frequency is very low (at least in writing), although not so negligible as to be dismissed as ‘errors’ (Giger 2016: 290). Nonetheless, the temporal reference even of these resultatives remains unchanged. Moreover, in practically all cases the participle is derived from a perfective stem.

Slovincian – the closest relative of Kashubian that died out in the early 20th century – went further than contemporary Czech in many respects. In the preserved recordings we not only find many instances where no agreement with an object-NP applied, but come across examples which resemble Czech (124) with subject agreement. The following example contains an *l*-participle (on this extension see §3.1, §3.5.3):

- (125) Slovincian (Löttsch 1967: 30f.)
mă mōu-mă voĩn-q přięš-l-i
 1PL.NOM have-PRS.1PL war[F]-ACC.SG go.through[PFV]-LF-PL
 “We **have experienced** (the) war.”

However, in most cases the participle of the HAVE-based construction was marked with the neuter (-*é*) and only rarely showed agreement with an object-NP (Löttsch 1967: 30; Wiemer & Giger 2005: 83f). Löttsch (1967: 28f., 38f.) gives many examples with participles both from transitive and intransitive verbs of either aspect,

including many loan verbs from German, the verb *mjēc* “have” itself and GIVE as causative and existential verb. This seemingly unlimited extension of the lexical input was accompanied by symptoms indicating that the HAVE-resultative had turned into an experiential perfect (Example (125) can be read this way) or even a general past. See the following example with the temporal adverb *fčeráq* “yesterday”:

- (126) Slovincian (Wiemer & Giger 2005: 84)
jáo móʷ-m fčeráq na pol-ú robʹju-n-ě
 1SG.NOM have-PRS.1SG yesterday on field-LOC work[IPFV]-PST.PASS.P-N
 “Yesterday I **worked** on the field.” [*lit.* “I have worked”]

Heavy pattern-borrowing (or polysemy copying) from German permeated the entire network of complex verb forms in Slovincian, such as the perfect, the passive, the causative, and the future. An analogous situation obtained as well in 19th and 20th century Kashubian in the period of German rule (Wiemer & Giger 2005: 83f.; Knoll 2012: 89–95, 99–114, with references). This unprecedented case of pattern replication (not observed even in Sorbian) was obviously due to an extreme contact situation characterized by massive asymmetric Slavic-German bilingualism. It is therefore safe to assume that the occasional examples of subject agreement of the participle in HAVE-resultatives in colloquial Czech and the various instances of lack of agreement discussed above for West Slavic are due to unrelated, maybe even internal reasons.

So far, we have seen that Slavic HAVE-based resultatives show only limited symptoms of auxiliation. Almost all have entered a stage where the auxiliary and the PASS.P form a complex with or without agreement of PASS.P and object. Even if objects can be omitted, temporal reference has not shifted toward a focus on events themselves. However, the loosening of lexical restrictions went further than morphosyntax: the input to HAVE-resultatives are not only telic verbs, but verbs conveying illocutions or socially relevant events, and this seems to mark off the start of the development, not its continuation (see §3.5.4). We observe only two exceptions to these restrictions: Pomeranian Slavic (Kashubian, Slovincian) which found itself under extreme German influence, and the Macedonian HAVE-based construction with uninflected participle.

In order to better assess the rise of the latter, we have to realize that Macedonian has not only the construction with the uninflected participle, but also the commonplace construction with participles showing object agreement. See Mitkovska & Bužarovska (2011b: §3.1), who cite examples from Topolińska (1983: 30), not only with an *n/t*-participle of a perfective transitive verb (127), but also with an *n/t*-participle of a perfective intransitive verb (128):

- Macedonian (Topolińska 1983: 30)
- (127) *Ima-m sedām jazovc-e utepa-n-i.*
have-PRS.1SG seven badger-PL kill[PFV]-PST.PASS.P-PL
“I have killed seven badgers.”
- (128) *Dvesta duš-e partizan-i ima-še pojde-n-i.*
200 soul-PL partisan-PL have-IPRF.3PL go[PFV]-PST.PASS.P-PL
“Two hundred partisan souls were [lit. had] gone.” (i.e. they died)

This construction has been known from different dialects all over Macedonia since the 19th century and could be traced to the early 18th century (L. Mitkovska, p.c.). One wonders whether this construction with participles that agree in number with object-NPs was the direct source from which the HAVE-perfect with non-agreeing participle emerged (Friedman 1976: 97f.; Makarova 2016: 224f.). Probably, the latter construction arose independently, in a way that would explain, first, why agreement marking was lost and, second, why this construction was originally restricted to a tiny region near Lake Ohrid. Gołąb (1984) provided an explanation on the basis of intense contact with Aromanian speakers, who partially shifted to local Macedonian. Following Gołąb’s argument, we can assume mutual pattern-borrowing of present perfect constructions by which Macedonian copied a structure with an indeclinable participle from Aromanian, while Aromanian adopted a Macedonian pattern consisting of a BE-auxiliary and an agreeing participle. This, in turn, led to a copied structure with the *n/t*-participle in Macedonian. Table 3 has been adopted (with slight modifications) from Makarova (2016: 231f.), who followed Gołąb (1984). Grey shadowing marks the newly introduced construction at the particular stage.

Table 3. Mutual pattern-borrowing of auxiliary-participle combinations (Macedonian – Aromanian)

	Macedonian		Aromanian	
	“I have eaten dinner.”			
Stage 1	<i>sum</i>	<i>večera-l(-ø)</i>	<i>am-^u</i>	<i>cina-t^ə</i>
(inherited)	be-PRS.1SG	dine-PST.PA(-SG.M)	have-PRS.1SG	dine-PST.PASS.P(INDECL)
Stage 2	<i>sum</i>	<i>večera-l: ima-m večera-no</i>	← <i>am-^u</i>	<i>cina-t^ə</i>
		have-PRS.1SG dine-PST.PASS.P(INDECL)		
Stage 3	<i>ima-m</i>	<i>večera-no: sum večera-l →</i>	<i>am-^u</i>	<i>cina-t^ə: esk-^u cina-t-^u</i>
			be-PRS.1SG	dine-PST.PASS.P-SG.M
Stage 4	<i>ima-m</i>	<i>večera-no: sum večera-n(-Ø)</i>	← <i>esk-^u</i>	<i>cina-t-^u</i>
		be-PRS.1SG dine-PST.PASS.P(-SG.M)		

Gołąb's reasoning implies that Macedonian and Aromanian speakers built up a common diasystem of past tenses by mutually adopting auxiliary-participle combinations that had not been employed before. It also implies that the BE+*n/t*-pattern occurred after the HAVE-pattern with indeclinable participle.³⁴ This model thus requires us to assume that the BE+*n/t*-pattern was reintroduced and is totally unrelated to subjective resultatives of the B-type which are so widespread in West Slavic (see §3.1, §3.3, §3.5.3). Moreover, there would be no relation to the HAVE-based resultative with agreeing participles of intransitive verbs (see 128 above), known also from northern dialects. The occurrence of participles from intransitive verbs might be explained by analogical expansion from transitive verbs (as in 127). This latter process has not occurred in Bulgarian.

As the West Slavic and the Macedonian HAVE-based constructions with uninflected participle demonstrate, lack of agreement with an object-NP cannot *ipso facto* be considered a reliable indicator of grammaticalisation. In addition, the Macedonian construction does not show other morphosyntactic symptoms of grammaticalisation, e.g. the HAVE-verb and the uninflected participle do not behave like clitic and prosodic host (which is remarkable since Macedonian is known for special clitics and clitic clusters). Their combination can be split up by a focused nominal object, as in (129). The linear order of the auxiliary and the participle can also be permuted if the participle is topicalized, as in (130).

Macedonian

- (129) *Ima-m pism-o napisa-no, a ne porak-a.*
 have-PRS.1SG letter[N]-SG write[PFV]-PST.PASS.P.INDECL CONJ NEG message-SG
 "It is a **letter** I have written, not a message." (E. Bužarovska, p.c.)
- (130) *Kakv-i vozač-i ste Vie? Polože-no ima-m*
 which-PL driver-PL be.2PL 2PL put[PFV]-PST.PASS.P.INDECL have-PRS.1SG
od 2005ta, [...] a redovno voza-m veќе 4 godin-i.
 from and regularly drive[IPFV]-PRS.1SG already year-PL
 "What kind of driver are you(PL)? I have **got** my license in 2005 [...] but regularly I have been driving already for four years."
 (forum.femina.mk; accessed September 26, 2016)

These facts do not speak in favour of grammaticalisation. Alternatively, one can argue that word order rules are not that important for grammaticalisation. Word order regularities in Slavic languages are generally motivated by pragmatic and not

34. Gołąb assumed exactly this order from stages 2 to 4, although there is no obvious reason why stages 2 and 3 might not have occurred in parallel or in reverse order. Makarova (2017: 397f.) considered the BE+*n/t*-pattern the most recent one, but only because it underlies stricter limitations than the HAVE-pattern (see §3.3).

syntactic factors; the significance of marked topic or focus structures thus gains another status compared to languages like German, in which, despite stricter syntactic rules, the analytic past tense (< perfect) allows for different splits as well. The comparison with German shows that information structure factors may overrule otherwise well-established syntactic rules that are assumed to be indicative of a decrease of syntactic variability. Furthermore, this comparison demonstrates that decrease of syntactic variability can turn out to be an epiphenomenal feature of grammaticalisation, since it forms part of a more pervasive property in German (in comparison with Macedonian).

As for BE-based perfects, the question of auxiliiation makes little sense, for reasons similar to those in the discussion of Baltic perfects (§2.3.2). The A-type perfect has survived in Balkan Slavic (see §3.1, §3.3), and the behaviour of its BE-verb as a clitic presumably has not much changed since CS times. It has been integrated into the system of enclitics, but this is a general process in Balkan Slavic and not peculiar for auxiliaries in compound verb forms. The same has happened in Old East Slavic (Zaliznjak 2008: 221f.), though there the auxiliary was lost by the 17th century. Conversely, the retention of the BE-auxiliary as a clitic has not prevented the *l*-perfect from turning into a general past, as in Czech and Slovak, but also in Slovene. In Slovene (as well as in Upper Sorbian and Old East Slavic) the BE-auxiliary tends to be omitted in the third person,³⁵ while in Czech and Slovak it is omitted obligatorily (as is its semi-agglutinated cognate in Polish). In East Slavic this auxiliary was simply lost, while in Polish it has been lingering between enclitic and agglutinated status. In Balkan Slavic, again, the BE-auxiliary tends to be omitted in the evidential use of the *l*-perfect. However, this is no reliable rule and anyway “rather part of the process of total auxiliary loss in the third person” (Friedman 1986: 176; cf. also Friedman 2001). The difference in comparison to East Slavic is that the presence/absence of third person BE with the *l*-participle can be used for a distinction between deictically anchored utterances (= perfect) and utterances that are detached from the speaker origo (as in the narrative past or in evidential usage). This distinction was vital in early East Slavic, and in 14th c. Czech (Dickey 2013), until the ultimate decay of the aorist-imperfect system.³⁶

35. Meermann & Sonnenhauser (2016: 84f.) find it plausible to explain the retention of BE in the third person as a result of German influence.

36. The comprehensive assessment by Meermann & Sonnenhauser (2016) shows that the perfect > past shift in North Slavic (and Slovene) and the evidential extension of the *l*-perfect in Balkan Slavic are based on common tendencies affecting the BE-auxiliary across Slavic. The inner-Slavic development bifurcated by the 14th c., and this was obviously conditioned by independent factors.

This rough survey shows that the areal distribution of the BE-auxiliary – whether it has been lost, changed its behaviour as a clitic, or has been moving toward agglutination – by no means coincides with the present perfect > general past shift, which is so commonplace in the middle of the European continent (see § 3.1). By analogy, B-type resultatives have, *mutatis mutandis*, not been subject to auxiliation effects, either. Their evaluation in terms of grammaticalisation depends, after all, entirely on the behaviour and lexical range of the participles (see § 3.5.4).

3.5.3 *Diathetic orientation of participles*

As mentioned in § 3.2, it is difficult to determine at which period, and in which variety, *n/t*-participles had an orientation fixed toward the more agent-like or the more patient-like argument, or whether they were labile. Nedjalkov & Jaxontov (1988: 22) claim that in different languages objective resultatives are more frequent (in type terms) than subjective resultatives, which are, in turn, a precondition for possessive resultatives (since these are subjective resultatives applied to transitive bases). Whether this frequency relation reflects a diachronic sequence (objective > subjective resultatives) is not entirely clear. If we assume this, *n/t*-participles would have served as input for objective resultatives first, and this implies that they already had stabilized in this orientation. This leaves open the question of the age of subjective resultatives with *n/t*-participles well attested in West Slavic. Subjective resultatives with *n/t*-participles found, for instance, in Macedonian B-type constructions (131) and C-type constructions, both with the indeclinable participle (see 68 above) and with object-agreeing participle (see 129), are most probably recent phenomena (see § 3.5.2, § 3.5.4).

- (131) Macedonian, uttered by a female speaker (Makarova 2016: 226)
Jas sum jade-n-a.
 1SG.NOM be.PRS.1SG eat[IPFV]-PST.PASS.P-SG.F
 “I have eaten.” (implying “I am not hungry now.”)

Example (131) involves an ambitransitive ingestive verb. The situation might have been different for subject-oriented *l*-participles with ambitransitive verbs in West Slavic, as in Example (118) from Hanakian dialects (see § 3.5.2). Since *l*-participles were subject-oriented already in CS times (§ 3.2), this is certainly not a new phenomenon. More spectacular is usage with transitive verbs without an object, as in (72) above from the same dialects (Wiemer & Giger 2005: 88): *Mám rožlý* “I have **lit up** (a cigarette) / **switched on** (light in the room).” Expansion to transitive verbs, with retained subject-orientation, certainly occurred later.

In turn, *vši*-participles started being employed with transitive verbs no earlier than the 19th century (Kuz'mina 1971: 134, 142); see Example (86). We may assume that their object-oriented use (as in example 137 below) is even more recent, since it

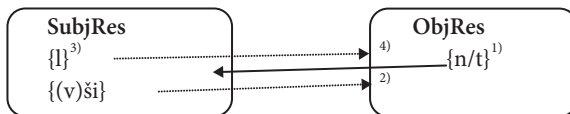
presupposes the use of transitive verbs. Most Russian dialects north and northeast of Pskov tend to employ only *n/t*-participles for resultatives of any diathetic orientation (Kuz'mina 1993: 133–142; Pożarickaja 2014a), whereas East Slavic dialects in close vicinity to Baltic display a complementary distribution of *vši*-participles for subjective vs. *n/t*-participles for objective resultatives (Wiemer & Giger 2005: 33). The latter pattern corresponds to the strict diathetic distribution in Baltic (see §2.1).

Very occasionally, and only in Belarusian and Polish varieties spoken in immediate vicinity to Lithuanian, *vši*-participles have intruded into HAVE-based resultatives (type C). See Grek-Pabisowa & Maryniakowa (1999: 38–41) for ‘borderland Polish’ (Pol. *polszczyzna kresowa*) and Erker (2014: 138f.) on Belarusian:

- (132) dialectal Belarusian (Erker 2014: 138)
- jan-á mé-l-a kupí-ŭšy kvarcír-u.*
 she-NOM have-PST-SG.F buy[PFV]-ANT.P flat[F]-ACC.SG
 ‘She **had bought** a flat.’

In this construction only telic transitive verbs with an accusative object occur. These instances have to be considered pattern-borrowings from the Lithuanian construction discussed in §2.2.6. They differ from the Lithuanian model only in that the anterior participle is incapable of showing agreement; its subject orientation has remained unchanged.

Figure 2 summarizes the basic distribution and patterns of expansion of Slavic participial suffixes encountered in resultatives.



¹⁾ presupposes the diathetic stabilization of *n/t*-participles

²⁾ only in some Russian dialects of the Pskov region

³⁾ only in West Slavic (and in some adjacent East Slavic varieties)

⁴⁾ only in colloquial Czech, Hanakian (central Moravian) and in Kashubian, Slovincian

Figure 2. Chronological relation of suffixes spreading over resultatives/perfects

Figure 2 can be combined with a one-sided implication: if a Slavic language has resultatives with a HAVE-auxiliary, it also has them with a BE-verb. This applies for both subjective and objective resultatives (> perfects). We should further remember the more general implication that, if a language has subjective resultatives it also has objective ones (see above). Jointly, these implicational hierarchies predict that HAVE-based subjective resultatives are the latest stage to develop (if a language uses a HAVE-based resultative at all).

The critical case showing this in Slavic is Macedonian. Given the otherwise widespread occurrence of HAVE-based resultatives in South and West Slavic and the history of the Macedonian HAVE-resultative with uninflected participle (see §3.5.2), the subjective HAVE-perfect in Macedonian is exceptional, and is a late-comer. Consider the following example.

- (133) Macedonian (Topolinjska 1995: 210)
Jas ima-m uče-n-o tri godin-i na
 1SG.NOM have-PRS.1SG learn[IPFV]-PST.PASS.P-SG.N 3 year-PL on
bolgarsk-o škol'j-e.
 Bulgarian-SG school[N]-SG
 “I have studied for three years in a Bulgarian school.”

In terms of diathetic orientation, the exact opposite to the Macedonian HAVE-perfect is the expansion of the *l*-participle into objective resultatives observed in colloquial Czech, cf. (70), and Hanakian as well as in Slovincian and Kashubian. See (125) for a HAVE-based construction and (134) for a BE-based resultative:

- (134) Kashubian (Breza & Treder 1981: 134)
koni-e bē-t-ē zaprzęg-t-é.
 horse[M]-NOM.PL be-PST-PL harness[PFV]-LF-PL
 “The horses were harnessed.”

By analogy, the East Slavic *vši*-participles have consistently acquired object-orientation only in the very tiny region of Seliger and Toržok (north of Tver'; Kuz'mina 1993: 145; Wiemer & Giger 2005: 33). Only here do we encounter examples like (135):

- (135) North West Russian dialects (Kuz'mina 1993: 145)
korov-a proda-vši
 cow[F]-NOM.SG sell[PFV]-ANT.P
 “The cow has been / is sold.”

The transition from subject- to object-orientation might have produced syntactically ambiguous instances, as in (79), adduced in §3.3.1.

3.5.4 Range and extension of lexical input

By definition, resultatives are formed from telic verbs. The transition from a resultative to a more event-oriented perfect (and thence to a general past) is conditioned, first of all, by an extension of the input beyond this narrow base of verbal lexemes. As Lindstedt (2000: 368) pointed out, an increase in the number of atelic lexemes occurring in the construction is indicative of a switch from ‘current result’

to ‘current relevance’, since the specific cause-effect connection with the preceding event becomes looser.

On this basis, it is noteworthy that verbs denoting illocutionary or other socially relevant acts are among the first attestations of objective resultatives in different languages. This is one reason why resultatives have been claimed to arise, not as a device to mark temporal relations of resultant states, but to highlight obligations and other social commitments in everyday rhetoric (cf. Detges 2000). Remarkably, one of the first attestations of the Macedonian HAVE-perfect dated 1706³⁷ contains verbs conveying illocutions with social (or legal) consequences; in a sense, we are dealing with a kind of generic performative (compare the performative use of the perfect/past in Old Novgorod birchbark letters, see example 104 in §3.5.1):

- (136) Old Macedonian (Koneski 1965: 171)
ima-m̃ go *aforesa-n-̃* i
 have-PRS.1SG he.ACC excommunicate-PST.PASS.P-M.SG and
prokle-t-̃ i *zaveza-n-̃* do
 curse[PFV]-PST.PASS.P-M.SG and bind[PFV]-PST.PASS.P-SG.M until
strašen-̃ sut-̃.³⁸
 terrible-M.SG judgment-SG
 “[whoever intends to steal it] I have (= declare) him excommunicated and
 cursed and bound/arrested (?) until Judgment Day.”

Within South Slavic, only in Macedonian did this construction extend its lexical input to intransitive verbs (see 133), and only here do we find it with inanimate subjects (e.g., *Nož=ov me ima iseče-n-o* “This here knife **has cut** me”; Friedman 1976: 98f., his translation) and with participles of imperfective verbs (Wiemer 2017: §3.2.5).

As for West Slavic, imperfective *n/t*-participles in resultatives constitute a clear minority, and intransitive verbs practically do not exist in any variety. An exception is a tiny class of ambitransitive verbs, see (118) above, and, in general, Slovincian, where there do not seem to have been any restrictions on the lexical input due to wholesale copying from German (see §3.5.2). Apart from that, if imperfective *n/t*-participles are employed predicatively they more often than not have the same resultative value as their perfective counterparts. Standard Polish and the Sorbian languages are exceptions (see §3.4.2).

37. Cf. Friedman (1976: 97), Makarova (2016: 224).

38. The participles agree with the pronominal object (*go* “him”). By this time, Macedonian dialects had already lost cases so that there were no accusative and nominative endings anymore capable of distinguishing subject and object (V. Friedman, p.c.).

In East Slavic, the Belarusian dialects of the Baltic-Slavic contact zone do employ imperfective participles, but in subjective resultatives with the *vši*-participle, while the few examples on *n/t*-participles (e.g. adduced by Erker 2015: 93) appear ambiguous inasmuch as they can also be read as verbal adjectives denoting a stable property, cf. (137).

- (137) dialectal Belarusian (Erker 2015: 93)
u nas xl'ep užo by-u
 at 1PL.GEN bread[M](NOM.SG) already be-PST(SG.M)
pěča-n-y.
 bake[IPFV]-PASS.P-NOM.SG.M
 “we already had **baked** bread [or: we had bread baked ?]” [*lit.* “... at us the bread already was baked.”]

By contrast, the Russian dialects farther to the north(east) employ imperfective *n/t*- and *vši*-participles to different degrees (Kuz'mina 1993: 140, Wiemer & Giger 2005: 37f.; Wiemer 2017: §3.2.3), cf. (138) and (139).

- North Russian dialects (Sobolev 1998: 75, 77)
 (138) *zdes' volk-am(i) mnogo xodi-vši i mnogo*
 here wolf-INS.PL much walk[IPFV]-ANT.P and many
utašči-vši ovec.
 pull.away[PFV]-ANT.P sheep.GEN.PL
 “Many wolves **have been** [*lit.* walked] here and have carried away many sheep.”
 (139) *sīže-no by-l-o u menja.*
 sit[IPFV]-PST.PASS.P³⁹ be-PST-SG.N at 1SG.GEN
 “I have/had **sat** here.” [*lit.* “(it) was **sat** at me”]

Two more things deserve emphasis. First, the lexical groups of verbs that serve as inputs for subjective resultatives with *n/t*-participles in West Slavic differ markedly from the lexical inputs for subjective resultatives in the Northwest-Russian dialects and in Macedonian. Second, Russian dialects north(east) of Pskov are largely insensitive to agreement of *n/t*-participles. The formally neuter form (-*no/-to*) has turned into an indeclinable form, and in some dialects the formally masculine, feminine and plural forms behave alike. Thus, we find instances like *ona ujden-a* “she has left” (participle agreeing for feminine-singular) alongside with *ona ujden-Ø* (formally masculine singular) or *ona ujden-y* (formally plural). From the dialectological literature it is not very clear whether agreeing and non-agreeing participles can co-occur in the same specific dialect, or whether this is a matter of variation

39. Ending with unclear status.

scattered across different dialects (Kuz'mina 1993: 134–138; Wiemer & Giger 2005: 33; Požarickaja 2014a: 114f.). It seems justified to assume that this lack of agreement features, widespread in the northern part of Russian dialects, is a manifestation of Finnic contact influence. However, regardless of agreement loss, the relevant participial constructions have hardly started moving away from resultative or experiential functions.

3.6 Pluperfect, future perfect and related constructions

Slavic languages clearly support the view of the pluperfect as a separate gram type belonging to the domain of “frame past” (Dahl 1985: 144–149) or “discontinuous past” (Plungian & van der Auwera 2006), see primarily Sičinava (2013). Evidence for this comes from the divergent diachronic paths of perfects and pluperfects outside of more conservative Balkan Slavic: while in most Slavic languages the old (type A) perfects show early development into past tenses, pluperfects persist for a longer period (in some languages up to the present) and are either functionally stable or evolve into markers of the “antiresultative” like the Russian constructions with the fossilized neuter past tense of the copula *bylo*.

While in Baltic the perfect freely and productively combines with different tenses (semantically non-compositional interpretations of past and future perfects set aside; see §§2.1, 2.2.3–2.2.4), the situation in Slavic is very different. First, in most Slavic languages the relations between the past perfect (pluperfect) and the (original) present perfect are hardly trivial, not least because, apart from Balkan Slavic and North-West Russian and northern varieties of Belarusian, the pluperfect does not have any present perfect counterpart in modern Slavic languages (on Slavic pluperfects in general see e.g. Mološnaja 1996; Sičinava 2013). Second, the reflexes of the CS pluperfect (or, rather, pluperfects) in the modern Slavic languages have followed quite different developmental paths.

3.6.1 Old Slavic

As a starting point, consider that already in Old Church Slavonic there was variation in pluperfect formations: a pluperfect with the auxiliary in the aorist (*bě/bystŭ prišlŭ* “had come”) and the auxiliary in the imperfect (*běaše prišlŭ* “had come”). Lunt (2001: 113–114) draws a functional distinction between these two formations (“[t]he use of the imperfect auxiliary shows that the past moment is coordinated with some other moment, mentioned or simply implied by the context; the use of the aorist states an independent action, simply a moment in the past”), but gives no empirical support for his observations. See an example in the meaning of ‘discontinuous past’ in (140):

- (140) Old Church Slavonic (Codex Marianus, John 20:12)⁴⁰
i vidě dŏva anŏgela v bělaxŏ sědęšta [...]
ide=že bě leža-l-o těl-o Iisusov-o
 where=PTCL be.AOR.3SG lie-LF-SG.N body-NOM.SG.N of.Jesus-NOM.SG.N
 “And she sees two angels in white sitting [...] where the body of Jesus had lain [before].”

Specifically for *Codex Suprasliensis*, Plungian & Urmančieva (2016) observe that the choice of the auxiliary correlates with information structure: the aorist of the auxiliary is used in this manuscript when the event described by the form of the pluperfect was already known, cf. (141), while descriptions of new events feature the imperfect of the auxiliary, as in (142).

- (141) Old Church Slavonic (Codex Suprasliensis, 19:510; Plungian & Urmančieva 2016: 2)⁴¹
i ukrasi-še měst-o t-o iżde=že
 and decorate-AOR.3PL place-ACC.SG that-ACC.SG.N where=PTCL
bě mŏčenik-ŏ po-strada-l-ŏ
 be.AOR.3SG martyr-NOM.SG PVB-suffer-LF-SG.M
 “And they decorated the place where that martyr had suffered.”
- (142) Old Church Slavonic (Codex Suprasliensis, 8:123–125; Plungian & Urmančieva 2016: 2)⁴²
ne u bo bě-aše dotolě vidě-l-ŏ aggel-a
 NEG yet because be-IPRF.3SG until.then see-LF-SG.M angel-GEN.SG
aky kŏ člověku bo besědova i vŏzira na=njŏ
 “[Having heard that, the blessed man became frightened,] since he had not yet until then seen an angel speaking to a man and looking at him.”

In Old East Slavic (cf. Sičinava 2013: 187–204 for an overview and comprehensive references) we observe two formations in a kind of register variation: the ‘standard’ pluperfect with the aorist or imperfect of the auxiliary, mainly attested in bookish registers, and the more colloquial ‘supercompound’ pluperfect with the perfect form of the auxiliary. Though their ranges of uses overlapped, the supercompound pluperfect was mainly attested in the contexts of annulled result, cf. (143), where the use of the pluperfect in reference to an act of giving an oath implies that the oath was subsequently broken and hence serves as an accusation of treason.

40. TOROT <https://nestor.uit.no/sentences/42941>

41. TOROT <https://nestor.uit.no/sentences/137614>

42. TOROT <https://nestor.uit.no/sentences/134520>

- (143) Old East Slavic (Hypatian Chronicle, 1161; Sičinava 2013: 194)
a xrbst-ǫ jes-te by-l-i čělova-l-i ko mně
 and cross-ACC.SG be.PRS-2PL be-PST-PL.M kiss[IPFV]-LF-PL.M to 1SG.DAT
 “You had sworn to me by kissing the cross [that you wanted to have me as your duke, and now you have broken your oaths.]”

The ‘standard’ pluperfect also had such uses, but occurred as anterior or resultative in the past as well, cf. (144):

- (144) Old East Slavic (Kiev Chronicle, 1146; Sičinava 2013: 188)
i bě Igor-ǫ razbolě-l-ǫ-sę v
 and be.AOR.3SG PN-NOM.SG fall.ill[PFV]-LF-SG.M=REFL.ACC in
porub-ě i bě bolen-ǫ velmi.
 prison-LOC.SG and be.AOR.3SG ill-NOM.SG.M very
 “[Izjaslav, the son of Mstislav, came to Kiev,] and Igor had fallen ill in the prison and was very ill.”

3.6.2 South Slavic

Of the modern Slavic languages retaining the old pluperfects, those with the most transparent relationship between the past and the present perfect are Bulgarian and Macedonian. Consider the meanings of the Bulgarian pluperfect according to Maslov (1981: 256–258), which include such compositional functions as resultative in the past (145), temporal precedence with respect to a past event (146), and experiential in the past (147):

- Bulgarian
 (145) *Čel-o-t-o mu be-še runtav-o, kosm-i-t-e*
 forehead-SG-DEF-SG.N 3SG.M.DAT be-IPRF.3SG shaggy-SG.N hair-PL-DEF-PL
se bja-xa zavi-l-i na malk-i kolelc-a.
 REFL.ACC be-IPRF.3PL curl[PFV]-LF-PL PREP little-PL circle-PL
 “It’s (ox’s) forehead was shaggy, the hair had curled into little circles.”
 (Maslov 1981: 256)
- (146) *Goljam-a-t-a dōšterj-a kōrpe-še nov-a-t-a*
 big-SG.F-DEF-SG.F daughter-SG mend[IPFV]-IPRF.3SG new-SG-DEF-SG.F
pokrivk-a za mas-a, koj-a-to baj Mitō be
 cover-SG for table-SG what-SG-REL Mr PN be.AOR.3SG
izgori-l s cigar-a-t-a si.
 burn.[PFV]-LF(SG.M) with cigarette-SG-DEF-SG.F REFL.DAT
 “The elder daughter was mending the new table-cloth that Mr. Mitjo had burned with his cigarette.”
 (Maslov 1981: 257)

- (147) *Gospoŝ-a Xristina ima-še loš-a slav-a. [...] Vednoŝ Levski*
 lady-SG PN have[IPFV]-IPRE.3SG bad-SG fame-SG once PN
be-še prenoštuva-l u neja.
 be-IPRE.3SG spend.night.[PFV]-LF(SG.M) at her
 “Mrs Khristina enjoyed bad fame. [...] Once Levski had spent a night at her place.”
 (Maslov 1981: 257)

Functions such as reference to a past event not relevant for the present (‘discontinuous past’), as in (148), and counterfactual in conditional protases with past time reference, as in (149), are also attested:

- Bulgarian
 (148) – *No az ne sm kra-l! – I az ne*
 but 1SG.NOM NEG be.PRS.1SG steal[IPFV]-LF(SG.M) and 1SG.NOM NEG
bja-x ubiva-l.
 be-IPRE.1SG kill[IPFV]-LF(SG.M)
 “– But I have not stolen! – I had not killed (before), either. [But when there was need, I killed two people.]”
 (Maslov 1981: 257)
- (149) *Večerta, kogato se vŕnax (Aor) v kŕšti, polučix (Aor) ot bašta si tokava plesnica,*
če ako be posledva-l-a i vtor-a, sigurno
 that if be.AOR.3SG follow[PFV]-LF-SG.F and second-SG certainly
štja-x da padn-a v nesvjast.
 FUT-PST.1SG CONN fall[PFV]-PRS.1SG in unconsciousness
 “In the evening, when I returned home, father gave me such a blow, that had a second one ensued, I would certainly have lost consciousness.”
 (Maslov 1981: 259)

In Macedonian, in parallel to the three different perfect constructions, at least two pluperfects coexist, viz. the inherited one with the past tense of the BE-auxiliary and the *l*-participle and the new one with the HAVE-auxiliary with the neuter passive participle. According to Friedman (2002: 32), the two pluperfects are functionally differentiated: the BE-pluperfect expresses the temporal precedence of one event to another event in the past, cf. (150a), while the HAVE-pluperfect “is marked for past statal resultativity”, cf. (150b) with a past experiential meaning:

- (150) Macedonian (Friedman 2002: 32)
 a. *Toj mi ja pokaŝ-a, no jas veke*
 he.NOM 1SG.DAT 3SG.F.ACC show[PFV]-AOR.3SG but 1SG.NOM already
ja be-v vide-l.
 3SG.F.ACC be-IPRE.1SG see[IPFV]-LF(SG.M)
 “He pointed her out to me, but I had already seen her (I spotted her before he did).”

- b. *Toj mi ja pokaž-a, no jas veće*
 he.NOM 1SG.DAT 3SG.F.ACC show[PFV]-AOR.3SG but 1SG.NOM already
ja ima-v vide-no.
 3SG.F.ACC have-IPRF.1SG see[IPFV]-PST.PASS.P.INDECL
 “He pointed her out to me, but I had already seen her (on some previous occasion).”

In Bosnian-Serbian-Croatian, according to Alexander (2006: 283), the pluperfect can be formed either with the synthetic imperfect of the auxiliary ‘be’ (*bijah išao* “I had gone”) or with the compound past (*bio sam išao* “I had gone”) with no difference in meaning. An example of the past resultative / anterior use is given in (151).

- (151) Serbian-Croatian (Mološnaja 1996: 572)
Selo pod Susjedom bijaše (IPRF) kao mrtvo, sve je spavalo (PRF). A i na gradu
sv-e je usnu-l-o bi-l-o.
 all-NOM.SG.N be.PRS.3SG fall.asleep[PFV]-LF-SG.N be-LF-SG.N
 “The village near Susjed seemed dead, everyone was sleeping. In the town everyone had fallen asleep, too.”

The compound past type of the pluperfect has in principle been retained in Molise Slavic (spoken in southern Italy and isolated from Serbian-Croatian for 400 years), but the BE-verb no longer inflects and the *l*-participle can be truncated. We thus have, for instance, *sa bi doša* (BE + particle (< *bio*) + truncated *l*-participle) “I had come” (Breu 1998: 352).

3.6.3 Modern West Slavic

In the West Slavic languages the pluperfect is obsolete, although still attested on rare occasions in written registers to signal anteriority in the past, cf. the Slovak Example (152) and the Polish one in (153).

- (152) Slovak (Mološnaja 1996: 566)
Čita-l list, ktor-ý mu bo-l-i
 read[IPFV]-LF(SG.M) letter(ACC.SG) which-ACC.SG.M 3SG.DAT be-LF-PL.M
donies-l-i deň predtým.
 bring[PFV]-LF-PL.M day before
 “He was reading the letter that they had brought to him the day before.”
- (153) Polish (Swan 2002: 262)
Podgórski przedtem już zauważył by-ł
 PN-NOM.SG earlier already notice[PFV]-LF(SG.M) be-LF(SG.M)
zbiegowisk-o.
 gathering-ACC.SG
 “Podgórski had already noticed the gathering earlier.”

As for the Sorbian languages, the pluperfect is in use in the written standard (cf. Šewc-Schuster 1984: 171), but is largely obsolete in the colloquial language (Scholze 2008: 214).

3.6.4 Modern East Slavic

The modern East Slavic languages feature both the continuants of the old ‘super-compound’ pluperfect and some innovative formations. The former are manifested in two types of construction, one directly reflecting the old pluperfect with the agreeing *l*-form of the *be*-auxiliary, the other, a more specifically East Slavic development, containing a frozen neuter *l*-form of the auxiliary (Rus., Bel. *bylo*, Ukr. *bulo*). The pluperfect with an agreeing auxiliary is absent from Standard Russian and Southern Russian dialects, but is retained in Ukrainian and Belarusian as well as in the North Russian dialects. The functions of this construction include past anteriority (154) and annulled result (155); cf. Sičinava (2013: 296–313).

- (154) Belarusian: past anteriority (Sičinava 2013: 308)

Kator-yja ne pajš-l-i by-l-i z-za hod
which-NOM.PL NEG go[PFV]-LF-PL be-PST-PL because.of age(GEN.PL)
sva-ix
RPOSS-GEN.PL

na vajnu, sjadzeli sabje ŭ svaim haradku.

‘Those who had not gone to war because of their age, stayed in their small town.’

- (155) Ukrainian: annulled result (Sičinava 2013: 310)

C-i hroš-i vin pozyčy-v bu-v
this-ACC.PL money-ACC.PL 3.NOM.SG.M borrow[PFV]-LF(SG.M) be-LF(SG.M)
u mene svojeji peršoju vizyty do mene.

‘He had borrowed this money when he first visited me [uttered at the moment the loan is returned].’

Uses in past counterfactuals are also attested, cf. (156).

- (156) Ukrainian (Sičinava 2013: 311)

I j-omu=b=že lešše bu-l-o, jak-by todi
and 3-DAT.SG.M=SBJV=PTCL easier be-LF-SG.N if-SBJV then
povez-l-o bu-l-o.
succeed-LF-SG.N be-LF-SG.N

‘It would have been easier for him (now), if he had been lucky then.’

In Standard Ukrainian this construction is still current, though not frequent, while in Belarusian it is mostly considered as a feature of archaic registers. Note that (154) illustrates standard Belarusian. Belarusian dialects in vicinity of Baltic use the *vši*-participle (instead of the *l*-participle); see below.

In the North Russian dialects (Arkhangelsk and Vologda regions), the pluperfect with the *l*-form of the auxiliary⁴³ has discontinuous past as the most prominent function (cf. Požarickaja 1991, 2014b; Sičinava 2013: 198–203), cf. (157):⁴⁴

- (157) North Russian dialects: discontinuous past

Skol'ko-to tože by-l on ved' side-l,
 how.much-INDF also be-LF(SG.M) he(NOM) PTCL sit[IPFV]-LF(SG.M)
a potom-to vsju žizn' predsedatelem rabotal (Past).

‘He had been [*lit.* had sat] in prison for some time, but afterwards he worked as a head of the kolhoz for the rest of his life.’ (Sičinava 2013: 199)

In Standard Russian, the only direct reflex of the Old East Slavic pluperfect is the fossilized formula *žil-był* (*žila-byla*, *žili-byli*) ‘once upon a time there was’ [*lit.* ‘lived-was’], originally used as an introduction in traditional folktales, but nowadays also used in fiction and the press.

Another productive vestige of the old pluperfect in Standard Russian is the construction with the invariable particle *bylo* (be.PST.SG.N), whose functions only partly overlap with those of the pluperfect. The morphosyntax and peculiar semantics of this construction have been subject to many studies, see Barentsen (1986), Sičinava (2013: 204–295) and references therein. The main function of this construction is to signal ‘a disturbance of the natural flow of events’ (Barentsen 1986: 52), i.e. either an attempted or imminent event that did not take place, as in (158), or an event that occurred but did not reach the desired result, as in (159). Note that the result not reached in (159) is not the ‘target state’ of the telic verb ‘take’ but rather the pragmatically natural consequences of the act of taking a glass, i.e. drinking out of it.

Standard Russian (Sičinava 2013: 258)

- (158) *Pozaby-l by-l-o vam skaza-t'*
 forget[PFV]-LF(SG.M) be-PST-SG.N 2PL.DAT say[PFV]-INF
 ‘I almost forgot to tell you [about another quite remarkable fact.]’
- (159) *Vzja-l by-l-o rjumk-u, posmotre-l na*
 take[PFV]-LF(SG.M) be-PST-SG.N glass-ACC.SG look[PFV]-LF(SG.M) at
neë, postavi-l na mest-o.
 3.ACC.SG.F put[PFV]-LF(SG.M) at place-ACC.SG
 ‘He took the glass, looked at it, and put it back [without drinking].’

43. Importantly, there is no consensus among scholars as to whether this construction is a reflex of the Old East Slavic ‘supercomposed’ pluperfect, see e.g. Požarickaja (1991).

44. In the source the examples are rendered in standard Russian orthography, so the transliteration does not reflect the original phonology.

Similar constructions are attested in Ukrainian and, more marginally, in Belarusian as well, cf. examples (160–161):

- (160) Ukrainian (Sičinava 2013: 300)
Hercen, ščo poviry-v bu-l-o v social'n-u
 PN(NOM) that believe[PFV]-LF(SG.M) be-PST-SG.N in social-ACC.SG.F
respublik-u ...
 republic-ACC.SG
 “Herzen, who once came to believe in a social republic [later changed his opinion].”
- (161) Belarusian (Belarusian-Russian parallel corpus, RNC)
Haražnik-i by-l-o paduma-l-i, što paramah-l-i,
 garage.owner-NOM.PL be-PST-SG.N think[PFV]-LF-PL that win[PFV]-LF-PL
jak u pačatku leta ŭsiox vyklikali ŭ padatkovuju ins'pekcyju, dze vypisali padatak
i štraf.
 “The garage owners thought that they had won, but when the summer began all of them were summoned to the fiscal office and had to pay taxes and fines.”

It remains unclear whether all three East Slavic languages have developed the construction with the invariable particle stemming from the neuter auxiliary in parallel, or whether its use in Belarusian and Ukrainian arose as a result of Russian influence. Some standard Belarusian grammars treat the construction as a calque from Russian and stigmatize its use (Sičinava 2013: 299).

Another pluperfect construction, attested in the North West Russian dialects and in the North Belarusian dialects, as well as in the Polish varieties in Lithuania and Belarus, is based on the invariable *vši*-participle. It is used more generally in the locally innovated perfect constructions (see §3.1). Thus, in these varieties, in contrast to standard East Slavic languages and standard Polish, the pluperfect, rather than being an isolated form, belongs to the whole paradigm of perfect constructions, similarly to Balkan Slavic and Baltic. The contact influence of the latter is evidently responsible for the sustainability of the perfect paradigm in these Slavic varieties. These pluperfect constructions are used in the past resultative (162), past anterior (163), and ‘discontinuous past’ (164) meanings.

- (162) North West Russian dialects (Trubinskij 1984: 161)
Ja fsta-fšy by-l-a, kak Pavel=to
 1SG.NOM get.up[PFV]-ANT.P be-PST-SG.F when PN=PTCL
prosnu-l-sja.
 wake.up[PFV]-PST(SG.M)-REFL
 “I had already got up when Pavel woke up.”

- (163) Belarusian dialects (Sičinava 2013: 303)
Kahda parczizan-y by-l-i atstupi-ŭšy na star-uju
 when guerrilla-NOM.PL be-PST-PL retreat[PFV]-ANT.P at old-ACC.SG.F
zon-u, n'emc-y dz'areŭn'-u vypaŭ'i-l'-i.
 zone-ACC.SG German-NOM.PL village-ACC.SG burn.down-PST-PL
 "When the guerrillas had retreated to the previous zone, the Germans burned the village down."
- (164) North West Russian dialects (Kuz'mina 1971: 165)
ët-i vs-e polj-a ranše zaros-šy
 this-NOM.PL all-NOM.PL field-NOM.PL earlier overgrow[PFV]-ANT.P
by-l-i les-om
 be-PST-PL forest-INS.SG
 "These fields used to be covered with forest before."

3.6.5 Future perfect

Apart from Balkan Slavic and East Slavic in the proximity of Baltic or Finnic (Northwest-Russian dialects, northern Belarusian), there are hardly any future perfects in modern Slavic.

In Bulgarian, the future perfect formed by the periphrastic future of the BE-auxiliary and the standard *l*-form of the main verb employed in other tenses of the perfect, displays a range of uses closely resembling those attested in Lithuanian and Latvian, i.e. anterior in the future, (165), and inferential (166).

- Bulgarian (Maslov 1981: 260)
- (165) *Kogato nie pak sreštнем* (Present with future reading),
vie šte ste veče zabravi-l-i dori i
 2PL.NOM FUT be.PRS.1PL already forget[PFV]-LF-PL even and
ime-t-o mi.
 name(SG)-DEF-SG.N 1SG.DAT
 "When we meet next time, you will have forgotten even my name."
- (166) *Deteto je jalo* (Perfect) *nešto zeleno.*
Ot nego šte mu je priloša-l-o.
 from it.OBL FUT 3SG.M.DAT be.PRS.3SG become.bad[PFV]-LF-SG.N
 "The child has eaten something unripe. It must have been the cause of his sickness."

In Serbian-Croatian the so-called "second future" with the *budu*-form of the BE-auxiliary and the *l*-form of the lexical verb is only used in temporal and conditional clauses with reference to future events (Alexander 2006: 260–261); see (167).

- (167) Serbian-Croatian (Browne & Alt 2004: 40)
Kad (ako) bud-emo govori-l-i s Marij-om, sv-e
 when (if) be.FUT-1PL speak-LF-PL.M with Marija-INS.SG all-NOM.SG.N
će bi-ti jasn-o.
 FUT be-INF clear-NOM.SG.N
 “When (if) we speak with Marija [in the future], everything will be clear.”

In North West Russian dialects the perfect with the anterior participle in *-vši* is also attested with the future auxiliary (Kuz'mina 1971: 181); however, it is not clear from the presentation which meanings these constructions express. Example (168) is most probably interpreted as resultative in the future, while (169) might have an inferential interpretation.

- North West Russian dialects (Kuz'mina 1971: 181)
 (168) *umer-ši=to vs-e bud-em*
 die[PFV]-ANT.P=PTCL all-NOM.PL be.FUT-1PL
 “We will all be dead.”
 (169) *sejčas ony daleče bud-ut uexa-vši*
 now they.NOM far be.FUT-3PL drive.away[PFV]-ANT.P
 tentative translation: “They must have driven far away by now.”

The situation was different in ancient Slavic languages, which had a periphrastic form consisting of the *l*-form of the lexical verb with the *budu*-future of the BE-auxiliary (on Old East Slavic see Andersen 2006 and Pen'kova 2014, on Old Church Slavonic see Lépissier 1960). According to the recent comprehensive study by Pen'kova (2016), this form had three basic uses: (i) anteriority in the future, i.e. the ‘classic’ future perfect, as in (170); (ii) succession or posteriority in the future, as in (171); and inference about past or generic events, as in (172).

- (170) Old Czech (Gospel, 14th cent., John 12:24, WLČ 1845: 1070; Pen'kova 2016: 478)
ač zrn-o žitn-é padn-a w zem-i
 if corn-NOM.SG wheat-NOM.SG.M fall-PRS.PA.NOM.SG.M in earth-LOC.SG
u-mr-l-o [ne]-bud-e, to sam-o
 PVB-die[PFV]-LF-SG.N NEG-be.FUT-3SG then alone-NOM.SG.N
ostan-e
 remain[PFV]-FUT.3SG
 “If a corn of wheat falling on the ground does not die [*lit.* will not have died], it will remain alone.”

(171) Old East Slavic

(*Life of Andrew of Constantinople*, 12th cent. 3636–3638; Pen'kova 2014: 166)

da **bud-etb** **imě-l-a** **soton-u**

CONN be.FUT-3SG have-LF-SG.F Satan-ACC.SG

obi-vš-a=sja okolo sebe

wreathe-PST.PA-ACC.SG.M=REFL.ACC around REFL.GEN

“[The magician ordered her to gird herself under her clothes] so that she would have Satan wreathed around her.”

(172) Old East Slavic (*Tale of Akir the Wise*, 12th cent., 83; Pen'kova 2016: 481)

ubožestv-o **prinudi-l-o=i** **bud-etb**

poverty-NOM.SG force-LF-SG.N=3.ACC.SG.M be.FUT-3SG

“[My son, if a poor man steals, pardon him, since it is not himself who did it:] poverty must have forced him.”

The last, purely modal, function of the future perfect, well attested in the eastern part of the Slavic area, was not known to Old Czech (Pen'kova 2016: 481). By contrast, the latter has developed this form into a pure future tense that was later ousted by the synonymous form with the infinitive, cf. (173).

(173) Old Czech

(*Spor duše s telem*, 14th cent., WLČ 1845, I, 369; Pen'kova 2016: 479)

má-š **u-mřie-ti**, **i** **bud-eš** **pyka-l**

have-PRS.2SG PVB-die[PFV]-INF and be.FUT-2SG suffer[IPFV]-LF(SG.M)

“You must die and will be suffering.”

Such an extension of the future perfect into the domain of plain future was attested across Slavic (including Old East Slavic; cf. Pen'kova 2016: 479). However, the construction has fallen into disuse in most parts of the Slavic area. The only modern Slavic language whose future tense forms continue the old Slavic future perfect is Slovene. A *budu*-future with the *l*-participle exists in Polish as well, but its direct descendancy from the CS *futurum exactum* has been questioned for a variety of reasons (Whaley 2000; Błaszczak et al. 2014: 185–191). In Polish, only imperfective verbs allow for the periphrastic future with either the *l*-participle or the infinitive, while in Slovene the future with the *l*-participle is the only formation and is possible with verbs of either aspect. From Polish the imperfective future with the *l*-form has spread into eastern Slovak and western Ukrainian dialects (Pen'kova 2016: 479).

3.7 Summary on Slavic

We may summarize the main features of perfects in Slavic and of their development as follows.

In general, resultatives – as the first stage in the functional development of a perfect gram – demonstrate an astonishing stability, i.e., in the majority of cases, their propensity to become event-oriented perfects has been shown to be low over the period of many centuries. The big exception is the construction of *BE+I*-participle, which has performed an entire run through all stages from resultative (in CS) to general past (with narrative uses) in northern Slavic and Slovene. The general past stage was reached early, probably somewhere between the 12th and 14th centuries (see §3.5.1). Only in Balkan Slavic has the *I*-perfect been preserved, which can be regarded as largely reflecting a stage known from OCS. Instead, it has undergone an extension into indirect evidentiality.

Pluperfects and future perfects have survived as productive grams only in Balkan Slavic and those East Slavic dialects that have been exposed to Baltic and/or Finnic contact. In both these areas we notice transparent uses of the pluperfect as a resultative/anterior in the past, which is clearly sustained by the respective contact languages.

The experiential meaning has not developed out of resultatives in most Slavic varieties. The experiential meaning is tightly connected to imperfective aspect, while ‘current relevance’ is associated with perfective aspect, regardless of the absence/presence of a dedicated (non-resultative) perfect and of the relative complexity of the past tense system in the given variety. Interaction with the new stem-derivational aspect opposition (PFV: IPFV stems) requires that resultative perfects have been associated with perfective passive participles (of telic verb stems), so that imperfective participles have been continually ousted (particularly in standard Russian). Otherwise, imperfective passive participles either ‘copy’ the resultative default of their perfective counterparts, or they have been integrated into the aspect system to the extent that their distribution coincides with the aspect functions of finite verbs in the active voice; however, the latter has happened consistently only in standard Polish and Upper Sorbian.

HAVE-based constructions are particularly resistant to change. They are widespread all over West and South Slavic, but only in two areas have they moved somewhat in the direction of an actional perfect (independently of one another): (i) Macedonian (Ohrid region), (ii) in West Slavic, namely: (a) colloquial Czech, (b) Pomeranian Slavic. An area in which *BE*-based resultatives have shown signs of an actional perfect are (iii) Northwest-Russian dialects. In all three cases contact with non-Slavic languages appears to have played a role: Aromanian, possibly also Albanian and Greek for (i), German for (ii), Finnic and/or Baltic, depending on

the concrete location, for (iii). However, the mere fact of contact cannot explain everything, since even in high-contact situations resultatives happen to remain rather unaffected by contact (e.g., Molise Slavic, Resian; Sorbian).

South and West Slavic HAVE-based resultatives also provide excellent illustrations of the fact that structural features of grammaticalisation need not go hand in hand with changes in function and/or the lexical input (see §3.3, §3.5.4, §4.2).

4. Bringing the threads together

In a pan-Slavic perspective, the successive, possibly sometimes even parallel, development of perfects has been based on three different types of participles and on two different quasi-auxiliaries (BE vs. HAVE). This yields three different construction types on the basis of participles multiplied with the auxiliary opposition, thus a theoretical maximum of six types. Actually, all six types have been, or are still, attested, albeit to a very different extent in terms of age, continuity, areal spread and various arguable parameters of grammaticalisation (see §4.2). No Slavic variety has more than three types, the 'leaders' being Macedonian (BE+*l*, BE+*n/t*, HAVE+*n/t*), on the one hand, Pomeranian Slavic (Kashubian, extinct Slovincian) and some Czech varieties (BE+*n/t*, HAVE+*n/t*, HAVE+*l*), on the other. The same holds true for diathetic orientation: across Slavic, none of the six types is a *prima facie* reliable indicator of subject- or object-orientation, but for each particular variety a fairly clear pattern obtains. Problems arise only if a particular type spreads at the expense of another (e.g. *n/t*-participles in those north Russian dialects which do not have *vši*-participles, and vice versa). In sum, the history and synchronic picture of perfects in Slavic is much more complicated than in Baltic because of multiple layering and intertwining of different resultative constructions which also showed different spread in the lexicon and sometimes developed into other perfect functions.

4.1 Main lines of diachronic development and patterns of areal spread

Baltic and Slavic share only one 'hard core' feature of perfects, which is the etymology of the *t*- and the **ues*-participles. As for the former, it is impossible to determine whether prior to documented stages, and if so at which period, Slavic or Baltic varieties used the *t*-participle (in Slavic in morphologically-determined variation with the *n*-participle) in any stabilized diathetic orientation. However, we can be rather sure that at the earliest documented stages of either group, (*n/*) *t*-participles still betrayed many traits of purely resultative participles focusing on the most affected participant. This brought about their complex interaction with voice-related constructions which, through the history of Baltic and Slavic, have

been interfering with diverse perfect constructions all over both groups. In Slavic, *l*-participles extended into objective resultatives only in some West Slavic varieties and much later (probably not before the 17th century); *vši*-participles in some Russian dialects did so even more recently (not earlier than in the 19th century). These ‘switches’ of diathetic orientation, in both BE- and HAVE-based constructions, do not have equivalents in Baltic, which differs markedly from Slavic perfects in the strictly complementary distribution of participles between subjective and objective resultatives. There is no reason to doubt that this state is ancient.

In addition, Baltic does not betray a plethora of HAVE-based resultatives comparable to West and South Slavic. Latvian lacks a HAVE-verb, while the meaning “have” for Lith. *turėti* is recent (Latv. *turēt* has only the older meaning “hold”). The Lithuanian HAVE-based resultative, with low type and token frequency, reveals some typologically curious properties, which also make it a counterexample to otherwise valid implicational hierarchies holding between resultatives/perfects in a language (see §§2.2.6, 3.5.3). Thus, Baltic is conservative with regard to HAVE-based perfects (as it lacks them almost entirely), but this feature corresponds to a larger areal cline, as Finnic lacks a HAVE-verb as well, whereas the use of *imet’* “have” in Russian (the north-eastern-most representative of Slavic) is fairly restricted and (as in Finnic) is dominated by the location-pattern in the expression of possession. In other respects, Baltic standard varieties are very different from standard varieties of their closest Slavic neighbours (Russian, Belarusian, Polish).

The picture differs drastically for Slavic dialects: East Slavic and Polish dialects in contact with Baltic varieties have accommodated to the latter, and not the other way around. This applies in almost all aspects: construction types, diathetic orientation of the participles, admissible lexical input, and the elaboration of the paradigm (including pluperfects and future perfects) as a whole. This might be indicative of Baltic substrates. Only the functional expansion into indirect evidentiality has not been followed by the Slavic dialects of the region (in contrast to Slavic on the Balkans). Concomitantly, convergence between East Slavic dialects and Baltic and Finnic brings about a huge difference between Slavic standard varieties and the dialects of that area; by contrast, as concerns perfects, Baltic varieties are much more homogeneous.

4.2 On grammaticalisation parameters

Regardless of the aforementioned differences between Baltic and Slavic perfects (and resultatives), they have in common an overall low degree of grammaticalisation. They do not correlate well with accepted structural parameters of grammaticalisation, and they show that these parameters need not reliably correlate with the functional development from resultatives to other kinds of perfects (or further into

a general past). Above we already commented on auxiliation (see §§2.3.2, 3.5.2). We have also argued that the expansion of lexical input to participles (from telic to other verbs) is probably a more reliable and telling parameter than structural criteria (see §§2.3.1, 3.5.4). We need not repeat these arguments here, but briefly put the pertinent pieces together.

1. Phonological erosion (attrition):

It either does not occur, or proves irrelevant for functional development.

2. (Morphological) decategorisation (concomitant to other processes):

This parameter proves applicable to Slavic (but hardly to Baltic) resultatives/perfects, inasmuch as in some cases perfects involve participles which show loss of agreement features and/or have remained as isolated (fossilized) forms after their original paradigms decayed. The *vši*-participles are the result of both loss of agreement and paradigmatic isolation. Their productivity and functional development correlates with geographical closeness to Baltic. In turn, the indeclinable participle in the Macedonian HAVE-based perfect is, with all likelihood, a pattern-borrowing from Balkan Romance, its rise thus not conditioned by becoming a (non-resultative) perfect.

As for West Slavic, in cases when HAVE-based resultatives seem to lose agreement, and in the rare instances when they acquire subject-orientation (in Czech), they do not move into actional perfects, but remain resultatives. The same applies to HAVE-based constructions with the *l*-participle. In Slovianian the loss of agreement co-occurs with a shift toward an actional perfect (or even further into a general past), but this obviously was the side-effect of global polysemy copying from German compound tenses (and verb complexes in general); see §3.5.2.

3. Semantic bleaching:

This criterion is hardly applicable to BE-verbs. As for HAVE-verbs, Lith. *turėti* is hardly affected (see §2.2.6). In Slavic, the loss of semantic content of HAVE-verbs seems to correlate to a certain extent with the formation of auxiliary complexes (see §3.5.2 and further below). However, a more principled caveat is appropriate here: the regularly attested use of verbs denoting speech acts or other kinds of social interaction as the input of HAVE-based resultative perfects in their earliest attestations (see §3.3, §3.5.2, §3.5.4) casts doubt on the idea that so-called possessive perfects are primarily conditioned by a strong association with possession (cf. also Detges 2000 for Ibero-Romance).

4. Morphosyntactic integrity, syntagmatic variability, and syntactic scope:

Integrity is low, variability high, and scope has remained wide as evidenced by the omission of auxiliaries in coordination. In particular, the order BE/HAVE – participle (with or without intervening material) can be altered for reasons of information structure. Combinations of BE/HAVE and participle do not differ in

this respect from other multi-word expressions. Finally, nowhere do we observe the coalescence of the components of periphrastic constructions. In languages with stricter rules pertaining to clitics, as in South Slavic, *BE*, but not *HAVE*, is subject to essentially the same constraints as other clitics in the respective languages.

5. Paradigmatic variability:

In most varieties, participles with different suffixes and *BE* vs. *HAVE* cannot be substituted for one another without a change of grammatical meaning. In this respect, their distribution is often close to being complementary. Exceptions may be colloquial and Hanakian Czech, Slovincian and Kashubian (*n/t*- vs. *l*-participles with either *BE* or *HAVE*) and some Russian dialects (*n/t*- vs. *vši*-participles). In Macedonian, B-type and C-type perfects cannot be ‘mixed up’ since the *n/t*-participle is inflected in the former and indeclinable in the latter.

Therefore, paradigmatic variability tends towards zero. Among all Lehmann-like parameters, decategorisation and lack of paradigmatic variability appear to be the only reliable indicators of grammaticalisation for Baltic and Slavic perfects.

Now, recall that a reliable parameter indicative of a move from resultative to event-oriented perfect functions is an increase in the admissible lexical input, i.e. loosening of the constraint on telic verbs. This is arguably a parameter of grammaticalisation as well. The increase in admissible lexical input and the decrease in paradigmatic variability have in common that they are related to distributional processes operating on the inventory of lexical units; in this they differ from all other parameters. We may thus conclude that the grammaticalisation of perfects in Baltic and Slavic are best characterized in terms of distributional properties, not in terms of morphosyntactic properties visible at surface level.

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- LKŽe The Dictionary of the Lithuanian Language, electronic version, <http://www.lkz.lt>
- NKJP Polish National Corpus (Narodowy korpus języka polskiego), <http://nkjp.pl>
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CHAPTER 6

Paradigmatisation of the perfect and resultative in Tocharian

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In this chapter I consider a periphrastic construction based on the resultative participle and the auxiliary. The semantics are those typical of a perfect grammaticalized from a resultative construction. The combination with time adverbials as well as contextual information show that the reference time coincides with the moment of speech and is not prior to it. In addition to the inherited meaning of the resultative perfect, other meanings typical of a perfect are also found, e.g., the experiential perfect. Finally, there are no selectional input restrictions: all Vendler classes are found in this construction – a situation that may not be found with early resultatives. Even though, these properties suggest an advanced grammaticalisation degree of the construction, there are also indications for its recent development. For example, there is no evidence for a non-compositional interpretation of the auxiliary such as remote past – a meaning facet typical of pluperfects.

Keywords: Tocharian, perfect, resultative, orientation

1. Introduction

Tocharian – Tocharian A (henceforth TA) and Tocharian B (TB) – are the most eastern Indo-European languages originally spoken in the northern part of the Tarim Basin (Xinjiang region, China). Tocharian B has a number of diachronically and diatopically grounded varieties (cf. Malzahn 2007; Peyrot 2008), traditionally referred to in the literature by the place of origin, such as Ming-Öy-Qizil, Šorcuq, etc. The texts in this language are from the period from 5th to 8th AD. The decipherment of Tocharian by the two German Indologists Emil Sieg and Wilhelm Siegling dates back to 1908 (see Sieg & Siegling 1916[1908]).

The Tocharian past tense system functionally consists of three main categories: the ‘preterite’, ‘imperfect’ and the ‘periphrastic construction’. The latter is based on a set of auxiliaries all stemming from verbs with the original (and still attested)

meaning ‘to be’ and the lexical verb being nominalized in the form of the past participle (PRET.P, traditionally ‘preterite participle’), henceforth the ‘PRET.P construction’. The relevant morphological patterns for the preterite – but also some imperfects in Tocharian A and the PRET.PS – are highly complex and there is a considerable degree of allomorphy and, especially in the preterite, of suppletion.¹ The function of the preterite – the most frequent past tense form in the texts – is that of an aorist (perfective past) and, rarer, of a perfect (Thomas 1957). The exact range of its actional and aspectual properties still awaits a comprehensive investigation. Historically, the Tocharian preterite is the result of an earlier merger of the morphological aorist and perfect patterns of Proto-Indo-European (see *inter alia*, Adams 1978: 282, 1988: 82; Ringe 1990; Winter 1994; Hackstein 2005; cf. the overview in Malzahn 2010: 208–214). Thus, many Tocharian preterite forms go back to Proto-Indo-European aorists of the respective verbs (cf. various entries in LIV²). The very morphological pattern of the Tocharian preterite III rests on the morphological pattern of the *s*-aorist of Proto-Indo-European: it employs the vowel gradation typical of Proto-Indo-European *s*-aorists (cf. Narten 1964) as well as the suffix/ending *-s* (Ringe 1990). Thus, functionally, Tocharian is very similar to Latin in its development of the Proto-Indo-European aorists and perfects which merged into a perfective past (traditionally referred to as *perfect* in Latin grammars) while the imperfect is a new category not inherited from Proto-Indo-European in either.

The present study sets out to describe the function and syntactic properties of the PRET.P construction and crucially relies on Thomas (1957: 244–306) and Seržant (2016), while the morphological peculiarities of the PRET.P formation, along with the different forms of the auxiliaries, are not in the scope of this paper. Yet, it is not an easy task to describe the function and syntax of a category in a dead language. Therefore, methodologically, I will provide two types of evidence that may be used in argumentation: (i) *formal or ‘objective’ evidence* such as combinability with time adverbials, selectional input restrictions, tense/aspect markers of the neighbouring verbs, etc., and (ii) *‘subjective’ evidence* based on philological and contextual interpretation. Needless to say, that (i) is generally given more weight than (ii).

The paper is structured as follows. In the next section (§ 2), I lay out the general framework, providing definitions for the category of perfect, the category of resultative, and the properties that distinguish between these two. Sections 3–5 describe the properties of the relevant Tocharian forms: § 3 is devoted to some morphological remnants of the old, Proto-Indo-European perfect in Tocharian A. Section 4

1. The reader is referred to Malzahn (2010), the most extensive morphological treatment of Tocharian verb forms in both synchronic and diachronic perspective.

discusses the morphosyntactic properties of the *PRET.PS* such as the presence vs. absence of auxiliaries (§ 4.1), their orientation and the alignment of arguments (§ 4.2). Section 5, in turn, is devoted to the function of the *PRET.P* construction: semantic properties typical for resultatives (§ 5.1) and the semantic properties typical for perfects but not for resultatives (§ 5.2) which the *PRET.P* construction acquired in the course of time. Subsection 5.3 discusses the meaning of the *PRET.P* construction headed by the auxiliary in the past tense ('pluperfect') and the distinction between the imperfect auxiliary (§ 5.3.1) and preterite auxiliary (§ 5.3.2). § 5.4 briefly mentions the use of the preterite as a perfect. Finally, § 6 summarizes the discussion and provides more general conclusions.

2. Perfect as a cross-linguistic category

Before turning to the description of the relevant categories in Tocharian, I lay out here my notional framework. The relevant categories – the 'resultative', 'perfect', 'aorist', 'past' – cross-linguistically often represent different historical stages of one and the same development. These stages are ordered chronologically on the following cline (as per Breu 1988, 1998: 90f.; Kuryłowicz 1964: 141ff.; Serebrennikov 1974: 234–236):

- (1) (a) resultatives > (b) perfects > (c) aorists > (d) past tense

According to Nedjalkov & Jaxontov (1988: 6) "[t]he term resultative is applied to those verb forms that express a state implying a previous event", cf. English *to hang* vs. *to be hung*: while both denote states, the latter, but not the former, entails a preceding event. Accordingly, not all verbs may form resultatives. Only if the lexical meaning of the verb entails some inherent endpoint – that is, if the verb is telic – may it form a resultative. Furthermore, in order for the resultant state (as opposed to simple states) to be meaningful, one of the verb's arguments has to be able to be affected by the action, for example, in terms of a change of state (Haspelmath 1994: 160f.). However, some telic non-change-of-state verbs such as 'to find' may also form resultatives, cf. English *paradise found*. Moreover, resultatives may have other lexical input restrictions as well alongside the requirement on telicity. I define 'resultative' as follows:

- (2) Resultatives denote a state that entails a preceding event and this state is lexically inherent and context-independent.

A 'resultative' is a verbal category that denotes the meanings meeting this definition. If, however, a category expresses the meaning in (2) alongside some other meanings

then one may speak about the *resultative meaning* of that category but not about the category of ‘resultative’. For example, I argue below that the Tocharian PRET.P construction is a perfect which may also have resultative meaning.

Resultatives are semantically complex and encode two meaning components: the state is the foreground information while the preceding event is a background entailment. Since the immediately preceding event is only vaguely denoted, resultatives typically do not carry entailments concerning the exact make-up of the preceding event, in particular in regard to whether or not the event was controlled by an agent or not. Furthermore, more specific information on the preceding event is often incompatible with resultatives. For example, quantifying or manner adverbials that scope over the preceding event (cf. *?the window is quickly broken*) or references to other participants of the preceding event, e.g. agent phrases (cf. *?the window is broken by this man*) are generally avoided. In turn, additional information on the state itself – i.e. the foreground information of a resultative – is very natural (cf. *the window is still broken*). Moreover, adverbs typically have scope over the state and not over the preceding event as in the English sentence *usually, the window is broken*.

Here, *usually* is more likely to refer to the state of a broken window, not referring to the preceding event itself. That is, the window is found broken again and again by the observer regardless whether because the window is never repaired by someone once it is broken or because someone breaks the window again and again. The resultative is typically used as a predicative modifier of an NP.

In the course of development, a resultative may start admitting an increasing number of verbs to which it may be formed. When this happens, its overall meaning may shift from the specific meaning of featuring the lexically pre-determined result into a more general meaning of some kind of result that is distinct from what may be derived from the lexical meaning of the verb alone. This development is a development from a very specific category of resultative into a more general category of perfect. Lindstedt (2000: 368) describes this semantic change as “the generalization of meaning from ‘current result’ to ‘current relevance’”. However, it is mostly not a generalization but rather an extension of the meaning because perfects often retain the ability to code the original, resultative meaning alongside the new, more abstract meanings. The overall meaning thus emerged is notoriously difficult to describe in terms of a *Gesamtbedeutung*. Most commonly, this new meaning is referred to as the meaning of ‘current relevance’ in the literature (first introduced in MacCoard 1978; *inter alia*, Lindstedt 2000: 366; Dahl & Hedin 2000: 392) but it may be split into different subtypes such as experiential perfect, resultative perfect, evidential perfect, etc.

Having said this, the notion of ‘current relevance’ is too broad to be objectively applied and is easily misinterpretable since any situation described in a discourse will have some current relevance for the narration. Dahl & Hedin (2000: 393), relying on Inoue (1979), are more specific and argue that, for example, the English perfect tends to be used in clauses which provide “a causal explanation of a state-of-affairs referred to in another clause” and “a sentence in the Present Perfect conveys an explanatory sense” (Dahl & Hedin 2000: 393). Causal explanation of a state-of-affairs is a more specific criterion than current relevance and is therefore better operationalisable. This explains the inability of perfects to code subsequent past events in a narration (cf. Lindstedt 2000: 366). This property is important as it may be objectively confirmed on the basis of texts (the ‘objective evidence’).

3. The old perfect

Proto-Indo-European had a verbal category which fulfilled the functions typical for a perfect (such as the resultative meaning of a perfect) (Meier-Brügger 2010: 390; LIV²: 20). Morphologically, this category was formed by means of the reduplication of the root-initial consonant with the invariable vowel *-e- of the reduplication syllable, dedicated person/number endings, and graded root vowel (*o in the singular vs. zero in the plural). As has been mentioned above, the most frequent Tocharian past tense form, namely, the ‘preterite’, continues not only the morphological patterns of the old Proto-Indo-European aorists (most notably, the morphological type of preterite III) but also of the aforementioned perfect pattern (principally in the person/number endings, cf. Ringe 1990) while functionally being an aorist (i.e. a perfective past). Crucially, there are a few clear remnants of the old Proto-Indo-European perfect in terms of both the morphological pattern involved and the meaning in Tocharian A (Seržant 2014: 93–97):

(3) Old perfects among class II preterites

- *sa-srukā-t* “killed himself” (REDUPL-kill-3SG.MID),
- *ka-kām* “became”² (REDUPL-be.3SG.ACT),
- *ka-kāl* “bore” (REDUPL-bear.3SG.ACT),
- *pa-pyutāk* “arose” (REDUPL-emerge.3SG.ACT), etc.

These verb forms were traditionally incorrectly categorized as causatives due to morphological similarity with the latter (cf. Krause & Thomas 1960): the strong

2. I rely on the meaning given in the translation of YQ 1.29 1/1 b3 in Ji et al. (1998: 29).

causative preterite of Tocharian A is also formed with the reduplication of the initial consonant and (an analogical) **o*-grade of the root vowel (synchronically **-æ-* under A-umlaut turned into *-a-*). Moreover, at least some of these forms also attest the typical function of a perfect such as current relevance, cf. the hot-news perfect (McCawley 1971) in (5) below. Thus, the Tocharian A *sa-srukā-t* (REDUPL-kill-3SG.MID) “[he] has killed himself” and *sruk-sā-t* (kill-PRET-3SG.MID) “[he] killed himself” from the root *sruk-* “to die/to kill”³ are not distinct in terms of diathesis, i.e. causative vs. basic, as has traditionally been assumed, but differ in that the former still preserves the perfect meaning of current relevance while the latter – historically an aorist – still functions as an aorist. The contrast between examples (4) and (5) illustrates this. The former aorist form (= preterite III) occurs in a narrative, surrounded by past tenses such as imperfect and preterite. Both examples are from the story about the mechanical maiden constructed so perfectly by the mechanic that the painter, when visiting him, falls in love with her. Once the maiden falls apart, the painter finds out that the maiden is mechanical and, in retaliation, paints a picture of his suicide so perfectly that now the mechanic takes it as real:

(4) About the painter:

“... he came” (IPRF) ... she did the service (IPRF) ... he touched (PRET) ... she fell apart (PRET)

... *kīpyo* *sruk-sā-t* *āñcām* *sām*

shame.INS.SG kill-AOR-3SG.MID⁴ REFL.OBL 3SG

... [then] he killed himself out of shame.” (Sieg 1944: 12, [TA; 9a1])

The situation in the following example is different both contextually and, crucially, as regards the tense reference in neighbouring clauses:

3. It is quite difficult to determine the basic meaning of this verb: in the dedicated *Inagentive* (middle-like paradigm) (present III, subjunctive V, preterite I) it has the meaning ‘to die’ while in the paradigm of preterite III it has the meaning ‘to kill’. I have argued in detail that the paradigm of present VIII, subjunctive I/II and preterite III is used for the basic verb (Seržant 2014: 1–16) while the *Inagentive* paradigm is a derivation from it. Hence, the meaning ‘to kill’ is likely to be basic here, while the meaning ‘to die’ is a derived meaning due to the inagentivizing morphology of the paradigm of present III, subjunctive V, preterite I.

4. Although both forms *sruk-sā-t* and *sasrukāt* are traditionally referred to as ‘preterite’, I gloss them according to their functions in these two examples (while elsewhere I leave the traditional term ‘preterite’ as the gloss): the simple, non-reduplicated form *sruk-sā-t* is functionally an aorist (historically corresponding to the PIE aorist formed by means of the suffix *-s-* with some Tocharian innovations) while the reduplicated form *sa-sruk-ā-t* is functionally a perfect (historically corresponding to the PIE perfect formed by means of the reduplication of the first consonant with some Tocharian innovations such as the quality of the reduplication vowel, stem gradation and some other morphological properties).

- (5) “Now, the mechanic – completely distraught by the painter’s suicide – goes to the king and reports him what happened:

... *ñi waštā kākärpu šeš*
 1SG.GEN house.PERL.SG descend.PRET.P.NOM.M AUX.IPRF.3SG
 he has come to my house.
säm täpärk kip şurmaşi şñi āñcām
 3SG.NOM.M now shame.OBL.SG because REFL.POSS self.OBL.SG
*sasrukāt*⁴
 kill.PRF.3SG.MID
 He now has committed suicide because of shame.”

(adapted from Sieg 1952: 12, [TA; 9a5])

In this example, there is a present time adverbial *täpärk* “now” which is unexpected with an aorist but at the same time is typical for a perfect.

While *sa-sruk-ā-t* “has killed himself” indeed refers to the current situation (to the moment of speech) and not to the time of the preceding event of the suicide, the form *ka-kām* (‘REDUPL-become.3SG.ACT’) “became” refers to the time prior to the moment of speech:

- (6) (a) *jite tränkäš äntāne säs klyom metrak oktapuklyi*
 Ajita say.3SG.ACT when DEM.3SG noble Metrak.NOM eight_year
ka-kām:
 REDUPL-become.3SG.ACT
 “Ajita says: When this noble Metrak **became** an eight-year old.”

(Ji et al. 1998: 29, [TA; YQ 1.29 b3–4])

The same meaning of ‘becoming *x* years’ is found in the perfect form of this verb (**ġenh*₁–) in other Indo-European languages such as Ancient Greek (cf. Hdt. *Hist.* 1.119.5–7, Hdt. *Hist.* 3.50.3; Seržant 2014: 93–94). Otherwise one finds a similar situation in Old Church Slavic which – similarly to Tocharian A – attests only remnants of the old perfect that do not only continue the perfect morphology but also retain its original meaning, cf. the perfect *vědě* “I know” originally from ‘I have seen’.

4. The new perfect. Morphosyntactic properties

I turn now to the new construction of the resultative / perfect. It is formed by means of an auxiliary and the past participle – that is the complex resultative form strategy according to the classification in Nedjalkov & Jaxontov (1988: 19) – to encode the resultative and perfect.

4.1 The auxiliaries

The auxiliary in the present indicative is often dropped (see below). Where present, it comes from the verbs that elsewhere have the lexical meaning “to be, to exist” such as *nes-* (TB) / *nas-* (TA) “to be”, *mäsk-* (TB/TA) “to be” (cf. Batke 1999: 42ff. on semantic differences between them):⁵

Table 1. Overview over the third person singular auxiliary (Krause & Thomas 1960: 196; Thomas 1957: 251f.; Seržant 2016: 239)

	Present	Imperfect	Preterite	Subjunctive	Optative
TA	<i>ø, naš, mäskatär</i>	<i>şeş</i>	<i>tāk</i>	<i>tāš</i>	<i>tākiş</i>
TB	<i>ø, (nesäm) ste/star-/stäre,⁶ mäsketär</i>	<i>şai</i>	<i>tāka</i>	<i>tākaṃ</i>	<i>tākoy</i>

The PRET.P predominantly (50%) occurs in subordinate clauses – both with a finite auxiliary and patterning as a converb denoting anteriority. Much less frequently it is found in main clauses (23%) and as an NP modifier (24%) (Seržant 2016: 243). The PRET.P may be substantivized and assume secondary cases in the way only head nouns do elsewhere.⁷

Bybee et al. (1994: 67f.) claim that constructions of this type are compositional in that the auxiliary provides (i) the tense reference – typically present – and (ii) the stative actionality whereas the participle refers to (iii) a dynamic situation in the past. In contrast, I claim for Tocharian that the participle fulfils the last two of these functions (ii-iii) whereas the auxiliary is used for other purposes including function (i) (see below). The stative actionality of the PRET.P may be observed independently from the predicative position, namely, in the attributive position when modifying the head noun with which it agrees:

5. Ilya Itkin (p.c.) claims that the third person singular form in Tocharian B *nesäm* “be.PRS.3SG. ACT” does not occur in this construction. I am inclined to think that this is rather due to the mere fact that the third person present singular is generally the morphologically unmarked form. Precisely this form tends to lack an overt exponent in many languages (Bickel et al. 2015), for example, in many Turkic languages. The reason for this is that the third person singular present form is the semantic and frequential default and therefore need not any dedicated marking.

6. Cf. MSL 19, 160 (Thomas 1957: 251).

7. The Tocharian case system consists of three core cases: the nominative (unmarked), the oblique and the genitive. All other cases, such as the allative or the instrumental (‘secondary cases’), are formed by adding the case affix mostly only once and onto the head noun which must be in its oblique form (*Gruppenflexion*). Thus, if the PRET.P bears the secondary-case affix it should be considered nominalized head of that NP.

- (7) *pissankis* *el* *wawu* *pissank-aṃ*
 community.GEN.SG gift.NOM.SG give.PRET.P.NOM.SG community.SG-LOC
kälko *el* *tränkträ*
 go.PRET.P.NOM.SG gift.NOM.SG say.PRS.3SG.MID
 “a gift that is given to the Community is called ‘gift gone to the Community’
 (i.e. Sanskrit *saṃghālabana* or Pāli *saṃghāgata-*).”
 (cf. Ji et al. 1998: 177, 180.10–12, [TA; YQ 1.41 b3])

In this case, *kälko* “gone” modifies the noun *el* “gift” and has – as also most adjectives do – a clearly stative actionality.

When it comes to the auxiliary, it is absent in most cases: 62% of all PRET.P constructions in Maitreyasamiti-Nāṭaka (TA). If it is present it typically follows and rarely precedes the PRET.P; the auxiliary and the PRET.P need not be adjacent and may be separated by some other words. In those instances where the auxiliary is present it conveys some additional information not found in the respective counterpart without the auxiliary. The functions of the auxiliary are manifold. First, except for the present indicative, the auxiliary encodes additional semantic information on the mood and/or tense. For example, the subjunctive auxiliary *tākaṃ* marks the resultant state as potentially possible:

- (8) *empelona ra yāmwa tākaṃ yāmornta*
 horrible also do.PRET.P.NOM.PL be.SBJV.3PL deed.NOM.PL
 “Even [if] horrible deeds have been done, (by self-reproach they become entirely annihilated).” (TB; PK AS 7C b2)^{8,9}
- (9) *seṃ te-yāknesa yāmor yāmu ket*
 DEM.NOM.SG this-way.PERL deed.NOM.SG do.PRET.P.NOM.SG INDEF.GEN.SG
tākaṃ
 be.SBJV.3SG
 “By whom a deed of this kind may have been done, (even [if] he is reborn in hell, quickly he will be redeemed completely).” (TB; PK AS 7C b3)

8. If not otherwise indicated, all manuscripts quoted were taken from CEToM. (<https://www.univie.ac.at/tocharian/?manuscripts>) in May–October 2017.

9. Georges-Jean Pinault (in collaboration with Melanie Malzahn and Michaël Peyrot) translates (11) “But what is the deed accumulated but not done?”. I refrained from this translation because it assumes that the PRET.P is used attributively to the subject NP *yāmor* “deed”. The clear attributive uses of the PRET.P as well as adjectives typically precede the noun and do not follow it. I therefore analyse this clause as having a dropped present indicative auxiliary (after the PRET.P). The same applies to (12). I have no explanation for *sū*.

- (10) *toṃ tary=aiśamñenta eru ka tākaṃ*
 DEM.PL three=knowledge.PL evoke.PRET.P.SG only AUX.SBJV.3SG
 “only if he has evoked such threefold knowledges, (he is the pupil of the Omniscient)”
 (TB; THT 31 b1)

Observe that both the subjunctive auxiliary and the PRET.P form only one predication semantically: the auxiliary does not bear any lexical information. This suggests that the whole construction is grammaticalized in Tocharian.

At the same time, the auxiliary does not just serve tense-aspect-mood inflection for the lexical verb but does bear its own function. In the indicative present, the auxiliary does not convey any additional meaning in terms of truth conditions with one exception: the presence of the present indicative auxiliary seems to correlate with independent assertions. Contrast questions in (11) or (12) without an auxiliary with the assertion in (13) with the present indicative auxiliary:

- (11) *k_use no sū yāmor kakraupau mā no*
 REL.NOM but 3SG.NOM deed.NOM collect.PRET.P.NOM NEG but
yāmu
 do.PRET.P.NOM
 “But which deed is accumulated but not done?” (TB; PK AS 7C b5–6)⁹
- (12) *intsu no yāmor yāmu mā no kakraupau*
 REL.NOM but deed.NOM do.PRET.P.NOM NEG but collect.PRET.P.NOM
 “But which deed is done but not accumulated? (This also I will tell.)”
 (TB; PK AS 7C b4)⁹
- (13) *se yāmor yāmu mā kakkraupau māsketrä*
 DEM.NOM deed.NOM do.PRET.P.NOM NEG collect.PRET.P.NOM be.PRS.3SG
 “this deed is done but not accumulated, (like a seed that is sown, but not cared for afterwards.)”
 (TB; PK AS 7C b5)¹⁰

Both (11) and (12) differ only minimally from (13), except for the illocutionary acts they express.

Having said this, it seems that the primary function of the auxiliary is that of structuring discourse. First, it is used as a referential device indexing the person, especially non-third persons and particularly in the contexts with a topic shift such as the following (Seržant 2016: 239):

10. As mentioned in fn. 9 the attributive translation is not supported by the word order. The PRET.P is rather used predicatively here. Moreover, the verb *māsketrä* does not mean “remains” but rather “is” in all its other utterances, cf. a very similar context in PK AS 7I b2 *kakraupau špä māsketrä yāmor* “and the deed is accumulated”.

- (14) *mā kāswoṇe kaklyuṣu naṣt mā tuṇk*
 NEG virtue.OBL.SG hear.PRET.P.NOM.SG be.PRS.2SG NEG love.NOM.SG
naś=śi metrakn-aṃ tämyo tṣaṃ mā
 be.PRS.3SG=2SG.OBL Metrak.OBL-LOC therefore here NEG
kakmu ʃet
 come.PRET.P.NOM.SG be.IPRE.2SG

“You have not heard of his virtue. You have no love for Metrak. Therefore, you did not come here ...” (Ji et al. 1998: 40, [TA; YQ 1.17 1/1 b1])

The subject and topic of the first clause is the second person while the subject of the second clause is *tuṇk* “love”. Since the person is not marked on the PRET.P itself, there is no other way to encode the second person but to add the auxiliary inflected for the second person or the second-person pronoun. Moreover, there is a more general tendency for the PRET.Ps referring to a non-third person to have an overt auxiliary even in the present indicative in main clauses (cf. YQ 1.17 1/1 b1, YQ 1.8 1/2 a7, A 76+83 b1, PK AS 6A a2, A 296 a4; exceptions: PK AS 6A a5); this is not true of converbial use of the PRET.P in which the non-third person is indexed on the main verb, cf. *yāmoṣ ... rīntsāṃte* (do.PRET.P.NOM.PL abandon.PRET.1PL.MID) “having made ... we abandoned” in THT 273 a5 (TB).

Secondly, the auxiliary is found in the context of introducing a new discourse topic. For example, the focus ‘this view’ in (15):

- (15) “The Buddha, the master, was in Rājagṛha at that time. The venerable Ānanda entered the town to collect alms. He went to the house of a pupil of these Ājīvikas. This one spoke to Ānanda:
ñi se pilko ste
 1SG.GEN DEM.NOM.M view.NOM.SG.M AUX.PRS.3SG
prākr=eṇku
 fixed.ADV=take.PRET.P.NOM.SG.M

By me this view is held firmly: (there is no gift, nor sacrifice either, good deed [and] evil deed, both do not exist. But you, the followers of Śākya, deceive beings without number.)” (TB; THT 23 b4)

4.2 PRET.P orientation

I turn now to the alignment of arguments of a two-place predicate in the PRET.P construction. Thomas, in his seminal investigation of the Tocharian PRET.P construction, preterite (functionally an aorist) and imperfect, claims that the periphrastic PRET.P construction was predominantly used to encode the passive perfect (1957: 209). While Thomas (1957) is very rigorous in other respects, this view must be revised.

The Tocharian PRET.P – in contrast to past participles in many other languages – is not part of the voice system of Tocharian. It is neutrally oriented, i.e. it may refer to, or agree with, any of the three generalized roles without any statistical inclination towards A, S or P (cf. Table 2).¹¹ This property of the PRET.P sets Tocharian apart from all other archaic Indo-European languages which all employ this PRET.P – etymologically **-wos-/-us-* participles derived from the perfect stem in Proto-Indo-European – for A/S-orientation (Greek, Baltic, Slavic, Vedic).¹² At the same time, the Tocharian PRET.P does bear the morphological markers of the perfect system of Proto-Indo-European such as the reduplication and thus does not deviate otherwise from the Proto-Indo-European perfect participle. Note, however, that the Proto-Indo-European perfect equally did not take part in the voice system in that it had an inflectional subject person/number set that was distinct from both the active and the middle sets. In fact, a true resultative is not even expected to alternate for voice. Semantically, resultatives are genuinely middle-like expressions in that they can highlight only one participant of a two-place predicate at a time. This is because states typically concern one participant and not an interaction between two or more participants (Seržant 2012: 359). Even if the preceding event involved two participants the resultative state will only be meaningful with the participant that was considerably affected by the preceding event.

The morphology of the PRET.P is not sensitive to the type of the preceding event (Seržant 2016: 240f.). The orientation of the PRET.P is contextual (cf. Haspelmath 1994: 154) which means that one and the same PRET.P may be either A- or P-oriented (Krause & Thomas 1960: 185), depending on discourse structuring factors, e.g. TB *yāmu* from the verb *yām-* ‘to do’ may mean both ‘having done’ and ‘having been done’ (examples below). The following table illustrates the orientation proportions of PRET.Ps in Maitreyasamiti-Nāṭaka fragments (TA) as edited in Ji et al. (1998):

Table 2. Orientation distribution of PRET.Ps in Maitreyasamiti-Nāṭaka (Seržant 2016: 242)

	Hits	In percentages
S	53	55%
A	20	23%
P	24	25%

11. I use the terms A, S and P for the three generalized roles: A corresponds to the agent of a prototypical transitive verb (say, ‘to break’) and P corresponds to the patient while S is the sole argument of an intransitive verb such as ‘to sleep’ (cf. Comrie 1989: 111).

12. Note, however, that this applies to the meaning of the verb in other forms. If the verb shows P-lability (with A vs. S<P) then the perfect participle may also show this lability.

The orientation is contextually defined although certain verbs show particular preferences (Tables 3–6 below). Alongside the lexical factor the orientation is crucially conditioned by the discourse topic in the Givónian (1976, 1983) sense. It is the topical NP that triggers the orientation. Consider the following example. Here, the following discourse is about the experiencer referent of the verb *klyuṣ-* “to hear” and not about the stimulus ‘the virtue’, cf. (14) repeated here for convenience:

- (16) *mā kāswoṇe kaklyuṣu naṣt mā tunk*
 NEG virtue.OBL.SG hear.PRET.P.NOM.SG be.PRS.2SG NEG love.NOM.SG
naś=śi metrakn-aṃ
 be.PRS.3SG=2SG.OBL Metrak.OBL-LOC
 “You have not heard of [his] virtue. You have no love for Metrak. (Therefore you did not come here.)” (Ji et al. 1998: 40, [TA; YQ 1.17 1/1 b1])

In turn, the following example illustrates P-orientation with the stimulus being under discussion and not the experiencer of the same verb ‘to hear’:

- (17) “Mogharāja says: Oh teacher, is it to be believed that (in such a Kaliyuga era, in a short lifetime a Buddha) will appear in the world?
bādhari trāṅkāṣ perāk ñi se k_yalte
 Bādhari.NOM.SG say.PRS.3SG credible 1SG.POSS son because
kaklyuṣu ñi neṣinās knānmānāñcäs
 hear.PRET.P.NOM.SG 1SG.POSS early.OBL.PL know.PRS.PTCP.OBL.PL
kāṣṣis-äṣ mäskatär
 teacher.OBL.PL-ABL be.PRS.3SG.MID
 Bādhari says: My son, it is to be believed, because I [have] heard it from the clever wise men of the past.” [lit. “... it was heard by me from the clever wise men ...”] (adapted from Ji et al. 1998: 69, [TA; YQ 1.2 1/2 b2–3 + A 214 a7])

Analogically, the indefinite NP ‘few’ is not likely to orient the PRET.P whereas the discourse topic NP is:

- (18) “If there should be here a monk having the threefold knowledge, [therefore] keeping away, separated from veneration, destroying death [and] free from [evil] influences since they know that
totkānts aiku
 few.GEN.PL know.PRET.P.NOM.SG
 he is known by few” (TB; THT 31 a6)⁹

Similarly, the PRET.P *eṅku* “seized” is A-oriented, cf. (19), when the A argument is the discourse topic and it is P-oriented if the P argument is the discourse topic, cf. (20):

- (19) “**this householder** of sorts **who** (possesses) the jewels is superior. ... **This one** will always stand against me,
ārwer eñku *naumyenta*
ready seize.PRET.P.NOM.SG jewel.OBL.PL
holding the jewels ready” (TB; PK AS 17D b1)
- (20) “**He** [= the old/ill person] does seeing without brilliance, [the eye sight] becomes blurred, it blurs [all] forms. The throat [is full of] mud, the body [is] grey/pale;
...
srukalñeṣṣana *yentents* *eñku*
death.ADJ.OBL.PL wind.GEN.PL seize.PRET.P.NOM.SG
he [= the old/ill person] is seized by the winds of death” (TB; PK AS 7M b2)

Observe that the P-oriented PRET.P may also have an NP referring to the A participant explicitly. In this case, the A-referring NP is coded by the genitive case in most cases, and the construction is ergatively aligned. The genitive-marked NP need not be adjacent to the nominative NP and, hence, the purely possessive meaning of the genitive must be excluded here.

When it comes to the lexical inclinations of particular verbs towards P- or A-orientation I have the following picture for some selected PRET.Ps (obtained on the basis of all their occurrences in the CEToM corpus). First, both reception verbs *kālp*- “obtain” and *eñk/ents*- “seize” are much more frequently A-oriented:

Table 3. Reception verbs more frequently A-oriented¹³

	A-oriented	P-oriented	Unclear
<i>kālp</i> o “obtained”	7	2	8
<i>kālp</i> au “obtained”	5	1	5
	80% (12)	20% (3)	
<i>eñt</i> su “seized”	3	–	6
<i>eñk</i> u “seized”	10	5	12
	72% (13)	28% (5)	

The tendency of these verbs to be used in an A-oriented fashion, i.e. with the regular accusative alignment of both A and P, may be explained semantically and implicationally by frequency of use. This verb class is one of the few classes of transitive verbs (along with verbs of (un)dressing) which entail not only a change at the P participant (moving from one possessor to another one) but also a change

13. I have checked all instances of these PRET.Ps in CEToM and excluded all unclear and fragmentary attestations under *Unclear*.

in the A participant (Nedjalkov & Jaxontov 1988). The A-participant – after having obtained something (e.g. knowledge, release or goods) – may be conceptualized as having undergone a change. These verbs – in contrast to many other transitive verbs – thus fulfil the necessary precondition for a resultative to be formed from both arguments.

The predominant A-orientation of experiencer verbs such as the below (Table 4) may be accounted for along the same lines: the experiencer undergoes a mental change-of-state here, e.g. by acquiring new knowledge. This change makes these verbs semantically compatible with the A orientation. By way of example, consider the German verb *erfahren* ‘to learn, to find out’ which is morphosyntactically a transitive verb assigning the nominative case to the experiencer and the accusative case to the stimulus. However, the respective resultative *erfahren* ‘knowledgeable’ (and not ‘known’) – homonymous with the infinitive – is A-oriented.

Table 4. Other more frequently A-oriented verbs

	A-oriented	P-oriented	Unclear
<i>kārso</i> ‘known’	5	–	3
<i>kārsau</i> ‘known’	1	1	3
	86% (6)	14% (1)	
<i>pälko</i> ‘seen’	3	1	13
<i>pälkau</i> ‘seen’ ¹⁴	1	–	
	80% (4)	20% (1)	
<i>aru</i> ‘evoked’	–	2	
<i>eru</i> ‘evoked’	5	–	8

In turn, the action of adorning something or someone does not really bring about any change in the A participant but only in the P participant. Consequently, the P-orientation unequivocally prevails with this verb:

Table 5. *yät-* ‘adorn’ (caus. only), P-oriented

	A-oriented	P-oriented	Unclear
<i>yetu</i> ‘adorned’	–	6	7
<i>yaitu</i> ‘adorned’	1 (?)	8	10
	7% (1) (?)	93% (14)	

14. I have not considered TB *lyelyaku* ‘see.PRET.P’ here.

The following verbs predominantly attest P-orientation:

Table 6. Other more frequently A-oriented verbs

	A-oriented	P-oriented	Unclear
<i>aiku</i> “known” ¹⁵		3	
<i>aipu</i> “covered” ¹⁵		4	4

Finally, the following verbs do not show any statistically clear tendencies towards a particular orientation. This is most clear with the verb *yām-* “to do” while the lack of a clear orientation tendency with other verbs may be due to the rarity of occurrence. While the P participant is always highly affected if this verb is used lexically, the A argument is mostly affected when this verb is used as a light verb with an adverb that actually provides for the lexical meaning of an experience such as *yneś yām-* “to make clear, to realize”:

Table 7. Verbs with no statistically clear orientation tendency

	A-oriented	P-oriented	Unclear
<i>yāmu</i> “made” (TA)	1		4
<i>yāmu</i> “made” (TB)	19	19	29
<i>āklu</i> “taught, brought up” ¹⁵	1		1
<i>kaklyušu</i> “heard”	1	1	4
<i>keklyaušu</i> “heard”		1	2
<i>lyelyku</i> “seen”		1	

5. Functions of the PRET.P construction

In general terms the reference time of the PRET.P construction coincides with the speech time or the topic time but not with the event time which is prior to the reference time. For example, time adverbials that are preferentially used here are TA *tāpārk* “now” in contrast to, e.g., *tmāš* “then” (this.ABL.SG) which is employed to link subsequent events. Thus, among the 97 examples in the sample, I found 2 examples with the adverbial *tāpārk* “now” and no examples with any other time adverbial. This is true except for converbial use of PRET.PS where they often code anteriority to the event of the main clause.

15. No TA counterpart is attested.

5.1 Resultative meaning

A resultative meaning is found when the PRET.P construction denotes a state that entails a preceding event and this state is the lexically integrated and context-independent consequence of the preceding event (Nedjalkov & Jaxontov 1988: 6; cf. Seržant 2016: 251). This meaning is most frequently found in the attributive use of the PRET.P. It is also widely attested with the PRET.P construction, cf. (21), and is most probably also the oldest meaning of this construction.

- (21) *ciñcrone puk kälymentw-aṃ sätko tñi*
 charm.NOM.SG all direction.PL-LOC expand.PRET.P.NOM.SG 2SG.POSS
 “Your [scil. Bhadrā’s] charm is expanded in all directions.”
 (Thomas 1957: 257, [TA; 66 a2])

The fact that a resultative meaning of the PRET.P construction is very frequent can be shown in the case of essive vs. lative case selection with movement verbs. Seržant (2016: 272–274) examines the verb *i /kälk-* “to go”. The finite forms of this verb are almost always used with the allative case with animate NPs, and mostly with inanimate NPs (cf. (22)), thus indicating a dynamic meaning:

- (22) *orkmac kälkāc*
 darkness.SG.ALL go.SBJV.2SG
 “You will go to the dark.” (Ji et al. 1998: 103, [TA; YQ 1.5 1/1 b3])

In turn, the respective PRET.P *kälko* (TA) / *yku* (TB) “gone” takes primarily the locative case-marked NP, indicating thus a state, cf.:

- (23) *pissanik-aṃ kälko el*
 community.SG-LOC go.PRET.P.NOM.SG gift.NOM.SG
 “gift gone into the Community”¹⁶ (Ji et al. 1998: 180.9, [TA; YQ 1.41 1/1 b1])
- (24) *om no ce_u kaläl-ne ykuweṣ kau-tsi-śco*
 there then 3SG.OBL womb-LOC go.PRET.P.OBL.SG kill-INF-ALL
speltke yam-aṣ-äṃ
 effort.OBL do-PRS-3SG
 “There it [scil. the lie] makes efforts to kill him who entered the womb [lit. gone in the womb].” (cf. Thomas 1954: 755, [TB; 333 a4])

Many PRET.PS in Tocharian have lexicalized their resultative meaning. There are two main types here: (i) although the resultant state is inherent and thus independent of the context, it is no longer straightforwardly derivable from the preceding action; (ii) the entailment of the preceding action has been lost. Lexicalized resultatives

16. An idiomatic expression rendering Pali *saṃghagata* “supporting the Community” (Ji et al. 1998: 180 fn. 9).

of type (i) are still resultatives because they adhere to the definition in (2) above, in that their results are context-independent and they still entail some preceding action. In turn, the lexicalization of type (ii) derives a simple Vendlerian state (Vendler 1957), with no preceding-action-entailment, from the complex resultative meaning and is, therefore, no longer a resultative. Common to both lexicalization types is that they abandon the transparent relationship between the resultative and the lexical verb in terms of compositionality.

Under the first lexicalization type (i), the preceding action of a resultative is not the same as the meaning of the underlying verb. This happens either when the resultative PRET.P develops a somewhat different meaning or – as in the case of PRET.P *nāṃtsu* (TA) “having become” – when the finite forms of the respective verb undergo a semantic change which is not shared by the resultative PRET.P. The PRET.P *nāṃtsu* “having become” relies for its meaning on the preceding event of change-of-state (‘became’) while the respective verb *nas-* no longer has this change-of-state meaning and denotes only ‘to be, exist’, although it presumably had it earlier given the meaning of its resultative and its etymology. Here, the meaning entailed by the PRET.P seems to be older than the one of the finite forms of the lexical verb.¹⁷ The change-of-state-entailing resultative meaning of *nāṃtsu* is found, for example, with the indeclinable predicatives such as *weyeṃ* “surprising, surprised”, *kātkmāṃ* “joyful”, *lyutār* “more, over”, *pākār* “evident”, *wsok* “happy”.

In turn, under the second lexicalization type (ii), the preceding-action-entailment is lost. Nedjalkov & Jaxontov (1988: 14) call this type of expression ‘quasi-resultative’ which is misleading because they do not adhere to any definition of resultatives. These are just Vendlerian states, historically derived from resultatives. This type of lexicalization is found with resultatives that denote conventional states such as ‘to be’ (e.g. TA PRET.P *šimo* “having positioned oneself > be”; TA *nāṃtsu* “having become > be”), *to lie*, *to stand*, *to hang*, *to be ripe*, *to be called* (cf. TB PRET.P *weweṇu* “be called > have a name” and *we-s-tār* (call-PRS-3SG.MID) “is called”), experiential predicates such as *to be anxious* (cf. TA *yutko* “having become anxious > be anxious”), *to trust* (cf. TA PRET.P *spānto* “trusting”), but not with atypical states such as ‘to be destroyed’ (Seržant 2016: 254–259). Resultatives denoting conventional states are easier/more prone to lexicalize by abandoning the preceding-action-entailment while it is harder to lose the preceding-action entailment with less typical states such as ‘to be destroyed’.

Note that I do not consider PRET.Ps derived from verbs with the lexically predetermined ambiguity between the inchoative and the stative reading such as *kārs-* (i) ‘to know’ (stative) and (ii) ‘to understand’ (inchoative) as instances of lexicalization. The

17. Cf. the analogical development from ‘to become’ to ‘to be’ in Sanskrit *bhū-* “to be”, Baltic and Slavic **bū-* “to be” which originally stem from Proto-Indo-European verb **b^hueh₂-* “to grow, to become”, cf. Ancient Greek *p^hŷ-o-mai* “grow.PRS.1SG.MID”).

PRET.P resides here in the inchoative reading (ii) of the verb, cf. *kārso* (TA, e.g. in A 20 b5) “knowing” possibly from originally ‘having got to know, understood’. In turn, the fact that the meaning of the resultative *kārso* “knowing, known” partially coincides with the first reading (i) ‘to know’ of this verb is not relevant in this context.

Once the resultative meaning is simplified into a state, the PRET.P morphology can no longer be interpreted as meaningful. This allows these new states to undergo further changes. A number of PRET.Ps in Tocharian develop into prepositions, cf.: TA *kaknu* (from *kān-* “arise”) with instrumental case “endowed with” (TB with the perlocative case); *rittau* (TB) / *ritu* (TA) (from TA *ritw-*/TB *ritt-* “to connect”) with the comitative case “related to”. I summarize:

- (25) Lexicalization (ii)
resultatives > states > prepositions

5.2 Perfect meaning

Since Thomas (1957: 245) it has been well known that the function of the PRET.P construction was to highlight the after-effects (“Nachwirkungen”) emerging from the preceding action. As has been mentioned above (§ 1), resultatives often undergo semantic extension from denoting the resultative proper to denoting the more general meaning of any kind of new situation that may follow from the preceding action in the given context. Consequently, the selectional input restrictions become loosened because the new (resultant) situation does not need to be crucially dependent on the achievement of the inherent endpoint and, consequently, on the existence of any inherent endpoint in the lexical meaning of the verb. Indeed, this is what one finds in Tocharian: Table 8 illustrates the frequency of verbs in the PRET.P construction depending on their actionality class determined on the basis of their English translations in Maitreyasamiti-Nāṭaka (TA):

Table 8. The distribution of the PRET.Ps across the actional classes in Maitreyasamiti-Nāṭaka (Seržant 2016: 263)

Accomplishment	Gradual accomplishment ¹⁸	Achievement	Activity	State
15 (16%)	19 (19%)	47 (49%)	10 (10%)	6 (6%)

18. I distinguish here between accomplishments proper (e.g. ‘to open’) and gradual accomplishments (e.g. ‘to warm (a room)’). The distinction is in the design of the entailed telos or endpoint: with the former it is a discrete cut-off point after which the action cannot continue in the same sense (e.g. once the window is opened) while, with the latter, the cut-off point is vague and one can theoretically still continue with the same action (e.g. once the room is warmed up one can always warm it a bit more). Gradual accomplishments are semantically closer to activities, a point that will be important below.

I suggest that the transition from resultative to perfect and the concomitant loosening of the selectional input restrictions proceeded as follows:

- (26) From Resultative to Perfect: loosening of the selectional input restrictions
telic verbs only > *telic + gradual accomplishments* > *telic + gradual accomplishments + activity verbs* > *telic + gradual accomplishments + activity + stative verbs*

As has been discussed above, a resultative needs a telic verb with an inherent endpoint whose achievement initiates the state of the resultative. For example, the telic verb ‘to die’ has the inherent endpoint of death after which the resultant state of ‘being dead’ holds. While ‘die’ entails a clear-cut inherent endpoint there are verbs which have a vague inherent endpoint like ‘to warm’ or ‘to weaken’. This type of accomplishment verbs is referred to in the literature as ‘gradual accomplishments’, cf. the resultative PRET.P *kurosām* in the following example formed from the gradual-accomplishment verb *kur-* “to age, weaken”:

- (27) *kurosām* *kapšīñño*
 weaken/age.PRET.P.OBL.SG body.INS.SG
 “with weakened / aged body” (TA; A 288 b7)

The reason is that the endpoints of these verbs are to some extent cumulative: e.g., one can always warm something a little bit more. As illustrated in the cline in (26), I assume that the extension from clear telic verbs, namely, achievements and accomplishments to gradual accomplishments represents the first step in loosening of the input restrictions. Gradual accomplishments represent a stage in between (non-cumulative) accomplishments, on the one hand, and activities, on the other.

Since gradual accomplishments entail an activity with a vague inherent endpoint and are therefore cumulative, they come very close to activity verbs which do not entail any kind of endpoint at all. Yet, many activity verbs may acquire a telic interpretation especially if they take an object. For example, such activity verbs as ‘speak’ or ‘say’ may be interpreted as telic if the object of communication provides for an inherent boundary. For example, a sentence may be said and there will be no possible continuation of saying that sentence once it has been uttered. Consider the causative of the verb *kārs-* “to know” with the meaning “to instruct”. The meaning ‘to instruct’ is as such, of course, an activity. However, if one thinks of a particular set of instructions that have to be given in a certain context, and there are no further instructions in that context available (i.e. the object is not cumulative), the whole predication may be reinterpreted as an accomplishment with the inherent endpoint after which all the available instructions are given. The following example illustrates the resultative *śaśārsu* “instructed”:

- (28) *Haimavati trāṅkāṣ tāpārک şakkats klyom metrak*
 Haimavati.NOM say.PRS.3SG now surely noble.NOM.SG Metrak.NOM
śuddhavā=şi-nās ñāktas-ā śaśārsu
 Śuddhāvāsa=ADJ-OBL.PL god.OBL.PL-PERL know.CAUS.PRET.P.NOM.SG
 “Haimavati says: Now surely the noble Metrak has been/is instructed by the
 Suddhāvāsa gods.” (cf. Ji et al. 1998: 23, [TA; YQ 1.30 1/2 a3])

I suggest that examples like this one, formed as it is with an added endpoint, must have been a transitional means by which the input restrictions from true accomplishments to activities were loosened.

Moreover, there is also interpretational evidence for the new, perfect meaning of the PRET.P construction. The following example demonstrates that the PRET.P construction may also have the perfect meaning of current relevance:

- (29) “Then spoke Ānanda, confused by suffering, with folded hands, lamenting, these words to the omniscient: Oh shelter and refuge, oh Lord, do not leave us. In the directions
tetrikū po trikau nesau
 confuse.PRET.P.NOM.SG all go_astray.PRET.P.NOM.SG AUX.PRS.1SG
laklesa
 suffering.PERL.SG
 having confused everything, I have gone astray through the suffering. (The laws heard I had grasped, but all I have forgotten, by myself alone the burden will not be borne).” (TB; THT 17 a2)

In this example, Ānanda describes the new situation that has emerged through sufferings. Crucially, his intention here seems to be not to communicate the mere fact of being confused and having gone astray, but to appeal to Buddha asking for help. Thus, the context suggests the interpretation of the PRET.P construction in terms of contextually induced after-effects of ‘being heavily in need of help because of being confused’. Consider the following example in which the king speaks to his ministers:

- (30) *wāl trāṅkāṣ hai şokyo nu oklopac kakmu*
 king.NOM say.PRS.3SG alas very PTCL fear.ALL come.PRET.P.NOM
nasam
 AUX.PRS.1SG
 “the king speaks: ‘Alas, I have truly run into danger.’” (TA; A 342 b4)¹⁹

19. Translation of *oklopac* is according to Carling et al. (2009: 104).

- (31) *sanune kekamu nesau*
 danger.LOC come.PRET.P.NOM AUX.PRS.1SG
 “I have truly run into danger.” (TB; THT 79 b6)

In this utterance, the focus is on the current relevance of the preceding action of running into a danger and on the new situation of being frightened by this danger. Analogically, the following example highlights the perfect rather than the pure resultative meaning:

- (32) Some wild animals speak to Metrak and ask him for a permission to follow him in order to understand the Saṃsāra and to be freed from all woes. Metrak approves this and tells them to avoid evil deeds and explains:
omäskēnām lyalypur-ā yas caṃ
 evil.OBL.SG deed.OBL.SG-PERL 2PL.NOM.PL this.OBL.SG
šon-aṃ tatmu-š naś
 bad.form.of.existence.OBL.SG-LOC give.birth.PRET.P-NOM.PL be.PRS.2PL
 “Because of your bad actions you have been born in this reincarnation class.”
 (Ji et al. 1998: 103, [TA; YQ 1.5 1/1 b2])

What matters here is that the animals are currently suffering the repercussions of being born in a particular reincarnation class but not the resultative state of being born, i.e. of existing (in a particular reincarnation class).

However, it has to be noted that the new, perfect, meaning of the PRET.P construction must still be somewhat incipient, since a number of typical semantic extensions found with perfects cross-linguistically (cf. McCawley 1971; Comrie 1976) are not found in Tocharian. This means that they either did not exist at all, or were extremely rare. For example, the experiential perfect is found only rarely. An experiential perfect denotes a situation in which the subject of the clause is construed as an experiencer who has, or has never, experienced a particular event denoted by the verb, for example: *I have seen a typhoon on two occasions*. Very often the lexical verb is an experiencer verb itself. For this reason, I have checked all occurrences of the TA PRET.P *pälko* “seen” in CEToM. The result was that I have not come across any good evidence for an experiential-perfect meaning. By the same token, I have no evidence for what is often called in the literature ‘the universal perfect’, i.e. a perfect that refers to a preceding event that reaches into the moment of speech, e.g., *I have lived in London since 1925*.

Furthermore, there is certainly no evidential-perfect meaning in Tocharian at all. The evidential perfect is found not infrequently across languages such as the Scandinavian HAVE perfects or the Georgian perfect (Harris 1981) and denotes a situation in which the preceding event is guessed on the basis of the observed, resultant state (cf. Aikhenvald 2004: 112–114).

5.3 Pluperfect

In this section, I discuss the PRET.P construction headed by the auxiliary in the past tense – a construction that typically functions as a pluperfect (cf. Thomas 1957: 296). I argue that this is not the case in Tocharian. As shown below, Tocharian does not attest typical pluperfect meanings such as remote past or anteriority to a past-tense verb in a joined clause.

The auxiliary occurs in the preterite or in the imperfect tense, yielding two distinct interpretations of the PRET.P construction. I show in §5.3.1 that the imperfect auxiliary denotes background states or after-effects in the past often temporally unlimited. The preterite auxiliary, in turn, provides for foreground information, it denotes after-effects that are crucial for the respective discourse chunk (§5.3.2).

5.3.1 Headed by the imperfect auxiliary

The imperfect auxiliary projects the resultant state into the past, as measured relative to the topic time. Consider the following example:

- (33) *jñātiṃ seyi granthi pilko prākre*
Jñāti.OBL.SG son.GEN.SG Grantha.GEN.SG view.NOM firmly
eṅku ṣai
take.PRET.P.NOM AUX.IPRF.3SG
 “By Jñāti’s son, the (Nir)grantha, the view was firmly taken. (Who should ask him, [to him] he would reply: I am the omniscient)” (TB; THT 28 b5)

It follows from the context that there is no temporal delimitation of the resultant state of holding the view. Analogically, the following examples equally provide the meaning of a resultant state holding in the past as a background for something that happens on the scene:

- (34) “He for sure killed (pret.) his father, the great righteous king, and
empele rano yāmu ṣey=ne yāmor
horrible PTCL do.PRET.P.NOM.SG be.IPRF.3SG=OBJ.3SG deed.NOM.SG
su
DEM.NOM.SG
 although such a horrible deed **had been done** by him, (nevertheless he felt remorse (**pret.**) afterwards and felt revulsion (**pret.**).)” (TB; PK AS 7C a6)
- (35) *keklyauṣwa eṅku pelaiḱnenta ṣaim po*
hear.PRET.P.OBL.PL grasp.PRET.P.NOM.SG law.OBL.PL AUX.IPRF.1SG all
mārsāwa
forget.PRET.1SG
 “I **had grasped** the laws [which were] heard [but then] I forgot them all”
 (TB; THT 15 a2)

In both these examples, along with others in Seržant (2016: 275–277), the *PRET.P* with the imperfect auxiliary sets the stage for the following events. In the examples cited in Seržant (2016: 275–277) this background state holds true throughout the reference time. In contrast, observe that the preterite *mārsāwa* ‘I forgot’ (35) cancels the resultant state of ‘having grasped the laws’. Thus, the event denoted by the imperfect auxiliary with the *PRET.P* may also be bounded and precede the main event. Contexts such as (35) may give rise to the taxis function of anteriority to the construction (cf. Bybee et al. 1994: 69).

The imperfect auxiliary projects the reference time into the past. The reference time is either anterior to the topic time (other past-tense events) or coincides with it.

- (36) *tāmyo yutkos lmos šeš*
 therefore be.anxious.PRET.P.NOM.SG.F sit.PRET.P.NOM.SG.F be.IPRF.3SG
 “Therefore she was sitting there anxious.” (Thomas 1957: 302, [TA; 111 a1])
- (37) *tāmyo tšāṃ mā kakmu šet*
 therefore here NEG come.PRET.P.NOM.SG be.IPRF.2SG
 [lit.] “Therefore, you were not here.” (Ji et al. 1998: 41, [YQ 1.17 1/1 b1])
- (38) “Then the pearl of mankind, the king Araṇemi tarried there in the town of Araṇavati.
yaitu šai sū krentaunaššem tsaiññentsa
 adorn.PRET.P.NOM AUX.IPRF.3SG 3SG virtue.ADJ.PL.OBL ornament.PL.PERL
 Adorned he was with the ornaments of the virtues.” (TB; THT 77 a6)

As long as the taxis function has not been conventionalized the whole construction may be considered as compositional in meaning, i.e. the imperfect auxiliary provides the tense while the *PRET.P* the resultant state. Thus, the meaning of the overall construction is derived in the same way as the meaning of the imperfect of the verb ‘to be’ with a predicative adjective. It is only once typically pluperfect meanings (such as remote past, the taxis function of *consecutio temporum*, etc.), which are not derived by adding the meaning of the auxiliary to the meaning of the *PRET.P*, are found, that the construction may be referred to as a pluperfect.

5.3.2 Headed by the preterite auxiliary

I have argued that the imperfect auxiliary typically provides information about the background that often holds true for the whole time frame of the foreground event, but it may also be temporally delimited by the beginning of the foreground event. The meaning of the whole construction is the resultative (or perfect) in the past. By contrast, the preterite auxiliary is very different from this.

The preterite auxiliary provides foreground information that is central in the respective discourse chunk (Seržant 2016: 279–283). Consider the following example:

- (39) (*k_use*) ... *āraṇyakāmñe dhutaḡūm ... eṇku*
 REL.NOM.SG dwelling_in_forest dhūtaguṇa seize.PRET.P.NOM.SG
tāka
 AUX.PRET.3SG
 “(The one who) has taken the Dhūtaguṇa (consisting of dwelling in the forest)...
 (this one now finally ...)” (TB; PK NS 55 a1)

In this example, the relative clause headed by the preterite auxiliary describes one of the crucial properties, namely, having taken the Dhūtaguṇa, an exercise in ascetic catharsis. This is not incidental information; it is necessary for understanding of what follows. A very similar construction is found in PK AS 7C a2. Here, analogically, the indefinite relative pronoun is found with the preterite auxiliary and PRET.P: “By whom deeds have been done and accumulated [PRET.P + AUX.PRET], ... his rebirth will take place among the gods with form”. Similar to the preceding example, the main clause is in the present or future but not in the past.

5.4 Preterite functioning as a perfect

Before concluding, I discuss the claim of Thomas (1957: 209) that the Tocharian preterite may also code the resultative or perfect meaning (“Bezeichnung eines Zustandes” i.e. “denotation of a state”). For example, Thomas (1957: 209) writes that the verb *ār-* “to stop, vanish” has the perfect meaning “ist zu Ende” (here “has come to an end”) in the preterite, and adds the following example:

- (40) *maitreyasamitināṭkaṃ gurudaṛsaṃ ñomā śākṣapint*
 Maitreyasamiti-nāṭaka.LOC Gurudaṛsana name.PERL eleventh
nipānt ār
 act.NOM end.PRET.3SG
 “In Maitreyasamiti-nāṭaka, the eleventh act, by name Gurudaṛsana, **has come to an end.**” (A 253 a5–6; Thomas 1957: 209)

This use of *ār* is by no means special; very similar utterances are attested in A 287 a3, A 288 b5, A 347 b3, A 391 b6, A 156 a4, YQ 1.30 1/2 a7; YQ 1.1 1/2 b6; YQ 1.43 1/1 b7, etc. Moreover, there are no PRET.P forms attested for the Inagentive (middle-like) paradigm of this verb “to end” either in TA or in TB (Malzahn 2010: 527f.). This suggests that preterite forms were indeed also used in contexts typical for a perfect. However, this does not mean that the function of the preterite (with this verb) also included the encoding of a perfect. For example, standard Russian does not have a perfect and, hence, employs the perfective simple-past forms in the contexts in which languages with a perfect would have used the perfect. Notably, the immediately preceding clause about the characters in the eleventh act equally contains a preterite form:

- (41)
- lcār poñś*

go.PRET.3PL all.NOM.PL

“All have left.”

(A 253 a3)

Yet, this form cannot be claimed to be functionally a perfect, since it may be found elsewhere in narrative contexts with a sequence of past-tense forms (pace Thomas 1957: 214) such as the following:

- (42) “having fallen down scattered far away on the mountain Lokāloka among the rocks,

kupārāṣ penu lcār sāl māṇṇ oki

deep.ABL even go.PRET.3PL fly.PTCP.PRS as

even from the deep they **came out**, as if flying, [they **came** together, ... they all **joined** ...]”

(TA; A 12 a5)

What is more, the form *ār* itself does occur in a context typical for an aorist and not for a perfect. The following fragment is from a story about Daśagrīva. In the preceding discourse, the imprudent actions performed by Daśagrīva are listed; the whole text portion is a narrative:

- (43) “Then Rāma, the hero, having anointed Vibhīṣana,
- gave**
- him the throne with the name of Lañkeśvara even at first in Rañkā-city.

tām ṣurmaṣ daśagrīve śla āmāśās pukyo lo ār

DEM reason.ABL Daśagrīva with minister.OBL.PL all.INS away end.PRET.3SG

Owing to this Daśagrīva **came** to an end with ministers altogether.”

(TA; A 11 a2–3; Tamai 2012: 176)

The reference time here is the same as in the whole story about Daśagrīva, i.e. prior to speech time – something that is not found with true perfects or resultatives.

Analogically, other examples from Thomas (1957) with the preterite being used in a context where a perfect may have been used are surrounded by clauses headed by verbs in the past tense and the overall time reference of the respective discourse chunk is typically prior to speech time, i.e. lies in the past. For example, the preterite TB *śem* “came” has also been claimed by Thomas (1957: 213) to attest the perfect, indeed even the resultative meaning “to be present” (i.e. after having come). This has been criticized already by Malzahn (2010: 526). Indeed, this form is, from a historical perspective, unequivocally an aorist and has never been a perfect. Crucially, the reference time of the whole discourse chunk with *śem* discussed by Thomas (1957: 213) is prior to the moment of speech. This is evident from the verb forms used in the surrounding clauses here (TB; THT 246 a1–5): ‘saw’ (opt.) ... flew (iprf.) ... entered (opt.) ... bowed (iprf.) ... **came** (pret.) ... destroy (pret.) ... destroy (pret.)’.

I conclude here that the preterite is not used in those contexts in which a situation holding at the speech time is discussed. The primary reference time of the preterite is prior to speech time.

6. Conclusions

In this paper I have taken a semasiological approach, departing from the form and not from a particular meaning. Drawing on Thomas (1957) and Seržant (2016) I claim that the PRET.P construction codes the meaning of perfect, and very frequently the resultative perfect, in Tocharian. The reference time of the PRET.P construction is the same as the moment of speech and not prior to it. The latter is coded by the preterite (and imperfect).

This perfect of Tocharian is not a young category. This conclusion follows from a number of aspects pertaining to both its meaning and morphosyntax. First, the resultative meaning is certainly not the only one, although it is most probably the original one. In many instances, the PRET.P construction denotes meanings typical of a perfect, such as the explanatory meaning, and rarely the experiential meaning (§5.2). It thus shows signs of progress along the developmental cline in (1) above. Moreover, the PRET.P often functions as an anteriority converb which is unlikely if the PRET.P had only had the resultative meaning elsewhere. This is because anteriority presupposes that the dynamic meaning component, namely, the preceding-action entailment must have become more foregrounded. Secondly, the combinability of the PRET.P construction with cross-cutting categories, for example, by means of co-occurrence with the past-tense or subjunctive auxiliary is an indication of advanced grammaticalisation.²⁰ Thirdly, there are no selectional input restrictions onto which lexical verbs may occur in the PRET.P construction: all Vendler classes are found in this construction – a situation that may not be found with early resultatives.

At the same time, the perfect meaning of the PRET.P construction cannot be too old since semantic extensions typically found with perfects in other languages are not found in Tocharian. For example, the evidential meaning is not found in Tocharian while the experiential meaning may be suggested only for some rare examples. I have not come across the universal-perfect meaning. Moreover, I have argued above that the imperfect auxiliary does not yield a distinct category (pluperfect), i.e. one that cannot be analyzed in terms of the composition of the resultative/perfect meaning with the meaning of the auxiliary.

20. Languages that have resultatives proper – i.e. with no on-going development into perfects – sometimes restrict them to the present tense only (Nedjalkov & Jaxontov 1988: 36f.). The compatibility with all tenses and moods in Tocharian, in contrast, suggests that the PRET.P construction here has become one predication.

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CHAPTER 7

The synthetic perfect from Indo-Iranian to Late Vedic

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This paper outlines the origin and development of the synthetic Perfect from Indo-Iranian, the reconstructed common ancestral stage of the Iranian and Indo-Aryan languages, to Vedic, the oldest attested stage of Old Indo-Aryan. Comparative evidence from Old Iranian, Homeric Greek and a number of other Indo-European languages shows that this morphological category ultimately originates from Proto-Indo-European. In the course of its history, the synthetic Perfect develops from a P-oriented stative construction in Indo-European, via an anterior construction in Indo-Iranian to a general past tense with an emerging indirect evidential sense in Old Indo-Aryan. The present contribution highlights the various stages of development reflected in Vedic, but it also includes reference to the Indo-Iranian prehistory of the Vedic Perfect, as well as to its demise in later stages of Indo-Aryan. The development of the Indo-Iranian Perfect indicates that anterior categories tend to be rather unstable diachronically.

Keywords: Indo-Iranian, Indo-Aryan, stative, anterior, evidentiality

1. Introduction

Among the various inherited tense-aspect categories in the Vedic verbal system, the synthetic Perfect of the type *tataḥśa* “has made, fashioned” (from the verb root *takṣ-* “fashion, make”) represents an intriguing and elusive case. The synthetic Perfect is an inherited category, at least of Proto-Indo-Iranian age, as shown by Iranian data like Gatha Avestan *tataša* “has made, fashioned” (cf. Kümmel 2000). Moreover, data from Homeric and Classical Greek as well as a number of other Indo-European languages strongly indicate that the synthetic Perfect was part of the Proto-Indo-European verbal system.

While this much is uncontroversial, the semantic properties of the synthetic Perfect remain somewhat more disputed. According to one rather well established

line of thought, the original construction had a resultative stative present meaning and was mainly formed from punctual unaccusative change of state verbs (e.g. Delbrück 1897; Jasanoff 1978), a situation which is still largely reflected in Homeric Greek (e.g. Jasanoff 1978: 14). However, as convincingly shown in Kümmel (2000), there is sufficiently clear comparative data from Early Vedic and Gatha Avestan to conclude that the Indo-Iranian synthetic Perfect had developed a more general semantics, possibly approaching a present anterior meaning (e.g. Dahl 2011b). In Vedic Sanskrit, on the other hand, we witness a number of further developments. At the beginning of the Vedic tradition, the synthetic Perfect appears to have a present anterior meaning, but from early on this meaning approaches a general past meaning, the Perfect ultimately developing into an indirect evidential past category (e.g. Dahl 2012, 2014, 2015).

This paper explores the development of the synthetic Perfect from Indo-Iranian to Late Vedic. Section 2 contains a brief outline of the theoretical framework on which this work is based (§2.1) and an overview of the necessary philological information (§2.2). Section 3 discusses the Indo-Iranian situation (§3.1) and briefly comments upon the development of the synthetic Perfect in Old Iranian (§3.2), where it is eventually replaced by a periphrastic construction (cf. Jügel, this volume). Section 4 outlines the development of the synthetic Perfect in Old Indo-Aryan, from Early Vedic (§4.1) via Middle Vedic (§4.2) to Late Vedic (§4.3). Section 5 summarizes the main points made in the course of the paper.

2. Theoretical and philological preliminaries

2.1 Theoretical considerations

I take it as uncontroversial that one of the universal functions of sentences consists in relating individuals and situations to times and worlds. The semantic domains of tense and aspect both concern the relation between individuals, situations and times, whereas modality concerns the relation between individuals, situations and possible worlds. Most language-specific tense systems seemingly presuppose a linear concept of time and, as a first approximation, this is taken to be a constitutive and hence universal feature of natural language. Accordingly, the linguistic concept of time may be defined as a dense, monodirectional directed path structure (cf. Dahl 2010: 31 with references).



Figure 1. Time as a dense monodimensional directed path structure

Tense distinctions involve implicit reference to at least two points or intervals in time, the time of the utterance or speech time and the time of the situation or event time. However, as first noted by the logician Hans Reichenbach (cf. 1947), two temporal parameters are insufficient to account for the difference in meaning between categories like the English Simple Past and Present Perfect in a principled manner. Both of these two types of categories are or at least can be used to express that a situation is located prior to the time of speech. This is not the whole story, however, since while the Simple Past is perfectly compatible with adverbial expressions denoting a specific time in the past, the Present Perfect is generally incompatible with this kind of adverbial, as illustrated by the opposition between *He visited me (yesterday)* and *He has visited me *(yesterday)*. In order to account for the semantic difference between the Simple Past and Present Perfect, Reichenbach introduced a third parameter, reference time. Along the lines of works like Kamp & Reyle (1993), Eberle & Kasper (1994) and Kiparsky (1998, 2002), the present model presupposes four temporal parameters. These are speech time (t_s) or the time of the utterance, event time (t_E) or the run time of the event denoted by the predicate, reference time (t') or the time spoken about, and evaluation time (t_0) or the temporal perspective of the speaker. Evaluation time is understood as the temporal perspective from which something is regarded as past, present or future. This parameter is usually anchored in speech time but may be shifted to other times by various morphosyntactic means. Intervals rather than points are taken to constitute the basic values of the temporal parameters; points being regarded as minimal intervals. Furthermore, tense is understood as a type of relation between evaluation time/speech time and reference time, whereas aspect is a type of relation between reference time and event time.

In the present context, the anterior/perfect aspect is particularly relevant. Bybee et al. (1994: 54) define anteriors as follows:

‘Anteriors (or ‘perfects’ as they are often called) differ from completives in being relational: an anterior signals that the situation occurs prior to reference time and is relevant to the situation at reference time. Anteriors are often translated by the English Perfect and often accompanied by the relational adverbs ‘already’ and ‘just’. Anteriors may occur with past or future tense marking.

In the time-relational framework outlined above, the anterior aspect may be defined in terms of a partial precedence relation between event time and reference time such that event time precedes or overlaps with reference time (e.g. Dahl 2010: 82). This definition is intended to capture an important feature that is left implicit in Bybee et al.’s (1994) definition of anteriors, namely that categories of this type tend to be vague with regard to whether the situation denoted by the predicate has been completed prior to reference time or not. Indeed, it is characteristic of this kind

of category that the range of interpretations associated with a given form with anterior semantics depends on the semantic properties of the underlying predicate. For example, English Perfect forms of state predicates like *has slept* or *has lived* are vague with regard to both of the meanings identified above. On the other hand, corresponding forms of accomplishment predicates, e.g. *has built a house* or *has read the book* are only compatible with the completive reading. The relational dimension becomes somewhat more precise later in the text, where anteriors are defined in terms of “a past action with current relevance” (Bybee et al. 1994: 61). It is not entirely clear how a notion like current relevance can be accounted for in the time-relational framework. In previous work (e.g. Dahl 2010: 85), this was resolved by introducing an ‘extended now’ present reference time, which is in essence a reference time extending from some indefinite time in the past. It typically, though not necessarily, includes speech time as its final subinterval. The main motivation for introducing the extended now operator is the so-called universal reading associated with present anterior categories like the English Present Perfect. In a sentence like ‘I have lived here since 2005’, the Perfect expresses that the situation denoted by the predicate extends through the past and still holds at the time of the utterance, a reading enforced by the time adverb. It is dubious, however, whether this subtype of present time reference fully captures the notion of current relevance. This is because current relevance seems to imply a more general relation than the universal reading, which tends to be restricted to stative predicates, as just noted. We will return to this question.

As noted in the introduction, the synthetic Perfect develops into an inferential past category in Old Indo-Aryan, a fact implying that evidentiality becomes a grammatically relevant semantic dimension in the language (cf. Cardona 2002; Dahl 2012). It is not immediately clear how a neo-Reichenbachian framework of the type just outlined can be accommodated to incorporate evidentiality distinctions. A revision of the model is therefore appropriate and necessary.

At the beginning of this section, we introduced the linear notion of time as a constitutive and hence universal feature of natural language, defined as a dense monodimensional directed path structure in Figure 1. The hypothesis that this notion of time is universal has the immediate advantage that it is falsifiable, since a priori it precludes, amongst other things, the possibility that any natural language has a tense system based on, for instance, the notion of time as a repetition of cycles. There is reason to believe, however, that this definition of linear time may be somewhat too strong. Drawing on data from various Bantu languages, Botne & Kershner (2008) make a strong case for the claim that two distinct conceptualizations of time play a role in natural language, arising from two distinct metaphors, time as path and time as stream. In the first conceptualization, time “is construed as a stationary time-line along which the Ego, the conceptualizer, moves” (Botne &

Kershner 2008: 148). In the latter, time is conceptualized as moving and, in addition, “either Ego or Event may be perceived of as moving with respect to the other” (Botne & Kershner 2008: 148). They represent the relationship between the various dimensions of temporal conceptualization in the manner shown in Figure 2, where (a) symbolizes the stationary timeline, while (b) symbolizes moving time.

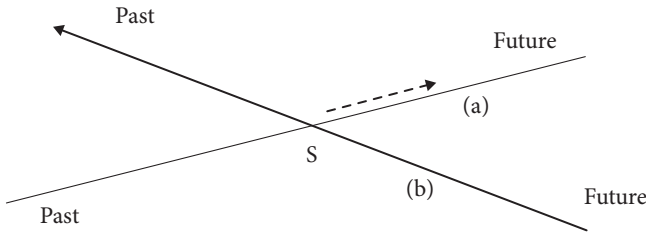


Figure 2. Linguistic construals of time (line) combined (after Botne & Kershner 2008: 149)

Figure 2 illustrates how two of the construals of time distinguished above may combine to form a two-dimensional conceptual space for temporal interpretation. These observations suggest that time as expressed in language may also have more than one dimension, inviting the conclusion that the linguistic notion of time is neither monodimensional nor, strictly speaking, directed, contrary to the initial assumptions made in this section.

Botne & Kershner (2008: 152) define tense as a “relation that holds between S (the locus of the speech event) and a cognitive temporal domain” and they distinguish between inclusive and exclusive cognitive domains. Inclusive cognitive domains include the deictic centre, characteristically anchored in S, as part of the time span of the cognitive world; such domains are labelled P-domains¹ and understood as “a primary, prevailing experiential past and future perspective” (Botne & Kershner 2008: 153). In exclusive cognitive domains, on the other hand, the deictic centre is dissociated from the cognitive world; such domains are labelled D-domains.² Figure 3 gives a schematic representation of the rather complex model of linguistic time developed by Botne & Kershner (2008).³

1. In the present context, P-domain is understood as shorthand for primary domain.
2. In the present context, D-domain is understood as shorthand for dissociated domain.
3. Cf. Botne & Kershner (2008: 149): “In order to reduce the number of schemas used in the paper and to facilitate comparison of formal marking in each construal, we combine the path and stream orientations illustrated in Figure 2 into one diagrammatic representation, as in Figure 3. Furthermore, we will, henceforth, for ease of exposition, refer to each line as a timeline, even though conceptually they represent alternative perspectives on one timeline.”

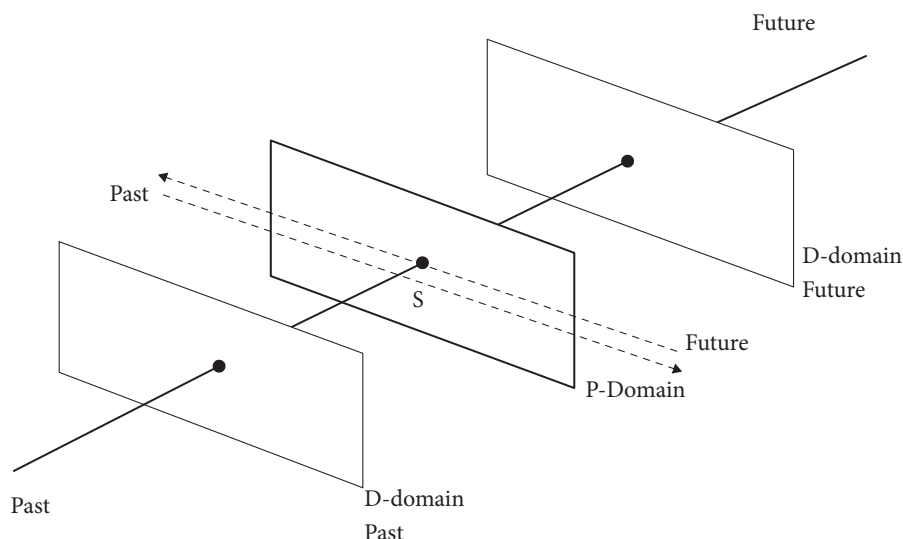


Figure 3. Correlations of cognitive worlds with three perspectives on time (after Botne & Kershner 2008: 153)

At this point, some remarks are in order.⁴ Attention should be paid to the fact that the stationary timeline is no longer associated with an arrow. This is motivated by the fact that it no longer represents a timeline along which the Ego moves in real time but rather a more markedly abstract timeline where voluntary movement in either direction is possible through imagination. In contrast, the moving timeline, where time is conceptualized as a stream, has a less abstract, more direct character, and represents the temporal dimension through which the Ego floats or over which the Ego contemplates. The two dimensions of time are associated with imagination and memory, respectively: While the P-domain and moving time are understood as the realm of personal experience and memory, the D-domain is the realm of imagination. This is a point where the previously introduced distinction between speech time and evaluation time proves useful, since D-domains may be understood in terms of evaluation times distinct from speech time.

This paper attempts to combine the insights incorporated in the neo-Reichenbachian framework outlined above and the multidimensional and multidirectional notion of time in Botne & Kershner's (2008) model. The distinction between inclusive and exclusive cognitive domains allows for reinterpreting current relevance, which is notoriously difficult to define in a one-dimensional model, in terms of speaker-oriented subjective proximity, a notion clearly belonging to the cognitively

4. The following remarks are heavily indebted to Peter-Arnold Mumm. I wish to express my gratitude to him for bringing a number of intriguing consequences into focus for me.

inclusive P-domain. On the other hand, narrative discourse contexts, which characteristically do not presuppose a relational interpretation with relevance for the situation at speech time, are, by definition, anchored in the cognitively dissociated D-domain. Another important advantage this combined framework has over the monodimensional framework, on which much of my previous work has been based, is that it allows for anchoring different evidentiality notions to the two domain types, in that the P-domain may be hypothesized to involve direct evidentiality and the D-domain indirect evidentiality.⁵ These proposals will be further elaborated and refined below.

2.2 Philological preliminaries

In the present context, ‘Vedic’ refers to the language of the so-called Vedas, the sacred textual corpus of Brahmanism, ‘Classical Sanskrit’ is the language codified by the indigenous Indian grammarian Pāṇini, ‘Avestan’ is understood as the language of the Avesta, the oldest attested Iranian collection of texts, forming an important part of the sacred texts of Zoroastrianism, while ‘Old Persian’ means the language of the inscriptions of the Achaemenids. Indo-Iranian or Proto-Indo-Iranian is understood as a hypothetical language reconstructed on the basis of Vedic, Avestan and Old Persian.

As the historical context of the Vedic primary sources remains largely opaque, any attempt at establishing an absolute chronology for these texts remains uncertain. According to one widespread view the earliest extant text, the *Rigveda*, had attained the form known to us somewhere around 1200 BCE. The latest Vedic texts are probably not much younger than 600 BCE. As regards Classical Sanskrit, it is difficult to establish an absolute chronology but a plausible date for Pāṇini’s comprehensive description of Sanskrit, the *Aṣṭādhyāyī*, lies somewhere around 600 BCE. Our absolute chronological framework thus covers about 6 centuries, from approximately 1200 to 600 BCE.

5. As pointed out by a reader, there may be a conceptual problem here. Specifically, the idea that current relevance is part of the P-domain, while indirect evidentiality is anchored in some D-domain, may be difficult to maintain, since indirect evidentiality is sometimes strongly associated with current relevance. A case in point would be a situation where someone infers from indirect evidence that a situation must have taken place, for instance at a crime scene with no eye-witnesses. While I have no fully satisfactory analysis to offer, one way of dealing with this apparent dilemma would be to link this pattern of use to the fact that indirect evidentials develop from a resultative meaning through an inferential implicature, where the speaker infers a past situation on the basis on a present state. On this assumption, the inferential reading of indirect evidentials would represent a kind of bridging context, where a reading firmly anchored in the P-domain (resultative) invites an inference connected with another, cognitively less immediate domain.

The extant corpus of Vedic texts is rather voluminous and it is possible to distinguish at least five distinct chronological stages of Vedic. Table 1 gives an overview of these stages and the most important primary sources that constitute the diachronic framework in this work (e.g. Witzel 1989, 1995).

Table 1. Chronological stages of Vedic

Early Vedic:	The language of the Rigveda (RV) ⁶
Early Middle Vedic:	The language of the mantra parts of the <i>Atharvaveda</i> (AVŚ, AVP), the <i>Yajurveda</i> (VSM, VSK, TS ^M , MS ^M , KS ^M) and the <i>Rigvedakhilāni</i> (RVK)
Middle Vedic:	The language of the oldest Vedic prose texts (e.g. TS ^P , MS ^P , KS ^P , AB I-V, TB I-III 9, TĀ III-VI, ŚBM VI-X 5)
Late Middle Vedic:	The language of the younger Vedic prose texts (e.g. AB VI-X, ŚBM I-V, TB III 10–12, JB, KB)
Late Vedic ≈ Classical Sanskrit	The language of the youngest Vedic prose texts (e.g. BĀU = ŚBM X 6.4–6.5.8, XIV 4.1–9.4)

Avestan and Old Persian represent the oldest attested stages of the Iranian branch of the Indo-Iranian languages. The Old Iranian corpora are considerably smaller than the Vedic corpus and, consequently, our knowledge of the linguistic characteristics of these languages is somewhat less precise. Like the Vedic sources, the Avestan texts contain virtually no historical references and it is therefore difficult, if not impossible, to establish an absolute chronology for this corpus. However, most scholars agree that it is possible to discern two stages of Avestan, Old and Young Avestan. Old Avestan is the language of the strophic stanzas known as the *Gāthās* and of the ritual prose text *Yasna Haptaṅhāiti*, which most likely may be ascribed to the religious reformer Zarathuštra, as well as three holy prayers. Since Old Avestan is the language used in the *Gāthās*, some scholars use the term Gatha Avestan instead. Young Avestan is the language found in the remaining parts of the Avestan corpus and in scattered citations in Middle Iranian, most notably Pahlavi religious texts (e.g. Hoffmann & Forssmann 2004: 33; Skjærvø 2009). The Old Persian sources, on the other hand, consist of inscriptions from the 6th to the 4th century BCE, which are datable with a high degree of confidence and appear

6. It should be noted that the *Rigveda* does not constitute a chronologically unitary corpus, as it partly contains very old material as well as relatively recent material. While I refrain from a discussion of its different chronological stages, I draw attention to the fact that it contains some hymns that for various reasons rather belong to Early Middle Vedic than to Early Vedic proper. See Kulikov (2013) for a different chronological framework.

to constitute a linguistically unitary corpus, reflecting a branch of Old Iranian that shows a number of intriguing differences vis-à-vis Avestan.⁷

Table 2. Chronological stages of Old Iranian

Old Avestan (Gatha Avestan)	The <i>Gāthās</i> of Zarathuštra (<i>Yasna</i> (Y) 28–34, 43–46, 47–50, 51 and 53) The <i>Yasna Haptaŋhāiti</i> (Y 35.2–41.6) Three holy prayers (Y 27.13, 27.14, and 54.1)
Young Avestan	The remaining parts of <i>Yasna</i> (Y 1–26, parts of Y 27 and Y 41, Y 42, Y 52, Y 54s.2–72) <i>Visperad</i> (Vr.) 1–24; <i>Nyāyišn</i> (Ny.) 1–5; <i>Gāh</i> (G.) 1–5; <i>Yašt</i> (Yt.) 1–21; <i>Sīrōza</i> (S.) 1–2; <i>Āfrinagān</i> (A.) 1–4; and <i>Vīdēvdād</i> (<i>Vendīdād</i> ; V) 1–22
Old Persian	The Inscriptions of the Achaemenids 6th to 4th Centuries BCE

The Vedic, Avestan and Old Persian sources pose serious challenges to any study of historical-comparative semantics, especially because the available texts rarely provide much contextual information. This raises the question of how one can delimit the semantic properties of grammatical categories in corpus languages and reconstructed languages based on textual evidence, which is in many cases not sufficiently clear or controversial. However, most of the distribution patterns discussed presently represent fairly well established tendencies in at least one of the Old Indo-Iranian languages and are in line with the comparative evidence provided by the others.

3. The synthetic perfect in Indo-Iranian

3.1 The Proto-Indo-Iranian situation

As noted above, there is general agreement that the PIE synthetic Perfect represented a resultative/stative construction, primarily serving as the stative present of instantaneous achievement predicates.⁸ Along similar lines, the Proto-Indo-Iranian (PII) synthetic Perfect has a strong tendency to carry present time reference and generally

7. Skjærvø (2009: 51) distinguishes between four branches of Old Iranian: Old Central Iranian, to which Avestan belongs, Old Southwest Iranian, which comprises Old Persian, Old Northwest Iranian and Old Northeast Iranian, the latter two of which are virtually unattested, apart from some names and loanwords found in other languages.

8. Note that a distinction is made by instantaneous achievements and achievements in this work. The difference between these two predicate classes is that instantaneous achievements (e.g. ‘explode’) are taken to be inherently punctual and telic, hence the distinct oddness of a sentence like **the bomb was exploding* * (but in the end it did not explode). Non-instantaneous achievements (e.g. ‘win’) are telic, but not inherently punctual, hence the acceptability of *he was winning the race* (but in the end he did not win) (cf. Dahl 2010: 38–40 for discussion).

does not attract atelic predicates (cf. Di Giovine 1990, 1996a, 1996b; Kümmel 2000; Dahl 2011b). The Vedic and Avestan evidence suggests that the Indo-Iranian Perfect Indicative had at least two distinct readings. First, Perfect forms of a number of achievement predicates characteristically show a present state reading without any clear reference to a previous change of state, a property inherited from PIE. Many verbs of this type do not have a regular Present Stem in the Indo-Iranian languages, the Perfect carrying functions typically associated with the PII Present (e.g. Kümmel 2000: 66–70; Dahl 2010: 126–128, 2011b).

- (1) *Rigveda* V 44.15a [Early Vedic]⁹
agnír jāgāra tám řcaḥ kāmāyante
 Agni:NOM awake:PRF.3SG he:ACC Rk-verses:NOM love:PRS.3PL
 “Agni is wakeful, him the Rk-verses love” (after Dahl 2010: 358)
- (2) *Nirangistān* 19 [Young Avestan]
aēšō ratu.friš yō jayāra
 this:NOM priest_pleaser:NOM who:NOM awake:PRF.3SG
 “He who is wakeful satisfies the priest”

Second, comparative evidence suggests that PII Perfect forms of non-instantaneous achievement and accomplishment predicates were typically associated with a ‘resultative’ meaning, expressing that a state resulting from the completion of a past event holds at speech time. The resultative reading differs from the present state reading in that the resultative reading involves indirect reference to a previous change of state, while the present state reading does not. Note that here and elsewhere temporal adverbs like *nūnām/nūnām*¹⁰ “now” and other *hic-et-nunc* deictic elements are taken to be strongly indicative of P-domain reference.

- (3) *Rigveda* VIII 4.11 [Early Vedic]
ādhvāryo drāvāyā tvám sómam índraḥ
 Adhvaryu:VOC let_flow:IMP.2SG you:NOM soma:ACC Indra:NOM
pipāsati / úpa nūnām yuyuje vřṣañā hārī á=ca
 be_thirsty:PRS.3SG unto now yoke:PRF.3SG horses:ACC bay:ACC to=and
jagāma vřtrahá //
 come:PRF.3SG Vřtrakiller:NOM

9. The examples and abbreviations follow the Leipzig Glossing Rules and/or are listed together with the list of abbreviations for the volume as a whole. For convenience, the following abbreviations are also given here: *t*_s: Speech Time, *t*_E: Event Time, *t*_v: Evaluation Time, *t*_r: Reference Time, P-domain: Primary Domain, D-domain: Dissociated Domain.

10. Here and in the following, I give both the citation form and the contextually determined variant of the same form when they are not identical, i.e. *nūnām* is the citation form and *nūnām* is a sandhi variant.

“Adhvaryu, you let the soma flow! Indra is thirsty. Now the Vṛtrakiller has yoked his two bay horses and has come hither” (after Dahl 2010: 355)

- (4) *Yasna* 29.1 [Old Avestan]

ā mā aēšəmō hazas=čā rəmō hišāiiā
at I:ACC wrath:NOM violence:NOM =and restraint:NOM bind:PRF.3SG

“Wrath and violence, restraint have bound me

(and now keep me bound)” (after Skjærvø 2009: 133)

Under this reading, the Perfect denotes an event that has reached completion prior to reference time/speech time, implying that the state resulting from completion of the event still holds at the time of the utterance.

We noted previously that the PII Perfect generally appears to avoid combining with atelic predicates. It should be emphasized, however, that there is one significant counterexample to this lexical restriction, namely the state verb **as-* “to be” (Vedic *as-*, Avestan *ah-*), which shows Perfect forms in both of the branches, as illustrated in (5) and (6).

- (5) *Rigveda* VIII 20.15 [Early Vedic]

subhāgaḥ sā va ūtīṣv āsa pūrvāsu
blessed:NOM he:NOM you:GEN protection:LOC be:PRF.3SG earlier:LOC
maruto vyūṣṭīṣu / yó vā nūnām utā ~ āsati //

Maruts:VOC daybreaks:LOC REL.NOM.SG PTCL now and be:PRS.SBJV.3SG
“O Maruts, blessed with your protection at earlier daybreaks has he been, who will also be (blessed) now”

- (6) *Yasna* 33.10 [Old Avestan]

vīspā stōi hujītaiiō yā zī ānharē yās ~ cā
all:NOM be:INF good_gains:NOM REL.NOM PTCL be:PRF.3PL REL.NOM and
həntī yās ~ cā mazdā +buuainīti 9bahmī
be:PRS.3PL REL.NOM and wise_one:VOC become:PRS.3PL your:LOC

hiš zaošē ābaxšō.huuā
they:ACC approval:LOC receive:PRS.IMP.2SG

“In order for all good gains to be available (to Thee), (namely) those which indeed have existed, and which exist, and which will exist, O Wise One, receive them into Thy approval” (after Humbach, Elfenbein and Skjærvø 1991: 138)¹¹

The forms *āsa* in (5) and *ānharē* in (6) clearly indicate that the PII verb **as-* “to be” had a (partial) active Perfect paradigm, and that such forms were primarily used

11. This translation takes the verb *ah-* “to be” to have an existential meaning in this passage, being rendered as ‘be available’, ‘have existed’ and ‘exist’. This example also illustrates that the verb *bauu-* “become” is sometimes used with a clear future meaning in Avestan, forming a suppletive paradigm with *ah-*.

with an existential meaning.¹² Table 3 gives the inventory of Perfect forms belonging to this verb in Vedic and Avestan.¹³

Table 3. Perfect forms of *as-* in Vedic and *ah-* in Avestan

	Vedic	Avestan
1st person singular	<i>āsa</i>	
2nd person singular	<i>āsitha</i>	
3rd person singular	<i>āsa</i>	<i>āṇha</i>
1st person dual		
2nd person dual	<i>āsáthur</i>	
3rd person dual	<i>āsátur</i>	
1st person plural	<i>āsimá</i>	
2nd person plural		
3rd person plural	<i>āsúḥ</i>	<i>āṇharā-</i>

Examples (5) and (6) illustrate that the Perfect forms of Vedic *as-* and Avestan *ah-* typically denote a situation or state which has occurred at least once prior to the time of the utterance. This is the reading labelled as ‘experiential’ or ‘existential’, characteristically associated with present anterior categories. These considerations suggest that the PII synthetic Perfect was not only innovative vis-à-vis its PIE ancestral construction in being marginally compatible with state predicates but that the resulting constellation tended to yield an existential meaning. We may therefore conclude that the PII synthetic Perfect had developed a present anterior aspectual semantics largely corresponding to the English Present Perfect (e.g. Kümmel 2000; Dahl 2011b). On the assumption that present anterior categories by definition are associated with the notion of current relevance, as discussed in §2.1 above, we may tentatively assume that the PII Perfect was restricted to the P-domain.

12. A reader points out that the Vedic example seems to be compatible with an extended now reading, while the Avestan example is not compatible with this kind of reading. However, I take the frame adverb *nūnám/nūnām* ‘now’ in the relative sentence to denote a time interval that includes speech time, forming a contrast to the clause with the Perfect form *āsa* ‘has been’, thus inviting an existential rather than a universal reading.

13. These data raise some rather intriguing issues. One possibility is that Vedic reflects the PII situation, and that the gaps in the paradigm reflect accidental gaps in the corpus. Although I have found no explicit claims to this effect in the literature, most scholars appear to accept this assumption tacitly. Another possibility is that Avestan reflects the PII situation, that is, that the third person forms was the point of entrance, as it were, of the Perfect into the verbal paradigm associated with the verb **as-*, and that the full-fledged paradigm reflected in Vedic represents a later innovation of this branch. Some readers may frown upon this somewhat speculative scenario, not least because the Avestan corpus is so limited that one may reasonably doubt whether it can serve as the base of an *argumentum ex silentio* along the proposed lines.

Judging from the comparative data, the PII verbal system had a complex inventory of tense/aspect categories (cf. Dahl 2011a, 2011b). Even though a full discussion of these matters is far beyond the scope of the present paper, it may be useful to consider the position of the Perfect within this system. PII had an opposition between perfective and neutral aspect in the past tense system,¹⁴ expressed by the so-called Aorist and Imperfect, and an opposition between the present anterior Perfect and the neutral Present in the present tense system. Drawing on the discussion in Dahl (2011a, 2011b), we may tentatively conclude that the PII Perfect and Present were restricted to the P-domain and that the Imperfect was restricted to past D-domains.¹⁵ Consider, by way of illustration, the examples from Early Vedic and Old Persian in (7) and (8).

- (7) *Rigveda* X 72.3ab [Early Vedic]
devānām yugé prathamé 'sataḥ sád ajāyata /
 Gods:GEN generation:LOC first:LOC not_being:ABL being:NOM be_born:IPRF.3SG
 “In the (time of the) first generation of gods, being was born from not-being”
 (after Dahl 2010: 187)
- (8) Darius, *Behistun* B [Old Persian]
iyam gaumāta haya magus adurujiya
 this:NOM Gaumāta:NOM the:NOM Magian:NOM lie:IPRF.3SG
avaθā aθanha
 thus say:IPRF.3SG
 “This (picture represents) Gaumāta the Magian; he lied (and) said thus”
 (after Skjærvø 2009: 129)

These examples illustrate that the Vedic and Old Persian Imperfect tended to be used in contexts referring to past times that do not involve any direct relation to the time of speech but rather appear to be cognitively distant, a feature characteristic of D-domains.

The PII Aorist, on the other hand, appears to have a more flexible distributional pattern. On the one hand, Aorist forms are found in past D-domains, in complementary distribution with the Imperfect (cf. Dahl 2011a: 276f.). On the other hand, Aorist forms in the source languages express that a situation has occurred

14. Along the lines of Dahl (2010 and elsewhere), the neutral aspect is taken to represent an underspecified aspectual category that is compatible with imperfective and perfective readings alike. In a time-relational framework like that outlined previously in this paper, the neutral aspect may be defined in terms of a general overlap relation between reference time and event time. I take the overlap relation to imply that two intervals minimally share one subinterval, thus giving rise to a broad range of lexically and contextually determined readings.

15. Here and in the following, I am primarily referring to the paradigmatic forms carrying inherent tense and neutral modal value, that is, the indicative forms of the tense/aspect stems.

immediately prior to speech time, as illustrated in (9) and (10).¹⁶ Such examples suggest that the PII Aorist was compatible with the P-domain as well.

- (9)

Rigveda I 113.11
asmābhir ū nū praticākṣiyā ~ abhūd
we:INS and now visible:NOM become:AOR.3SG
“And now she has come into existence to be seen in turn by us”
(after Klein 1978: 134)

[Early Vedic]
- (10)

Yasna 45.8
nū zīt cašma’nī vii.ā.darəsəm
now for eye:LOC catch_sight:AOR.1SG
“For I just now caught sight of it in (my) eye”
(after Skjærvø 2009: 130)

[Old Avestan]

Figure 4 gives a schematic representation of the distribution of tense/aspect forms in PII.¹⁷

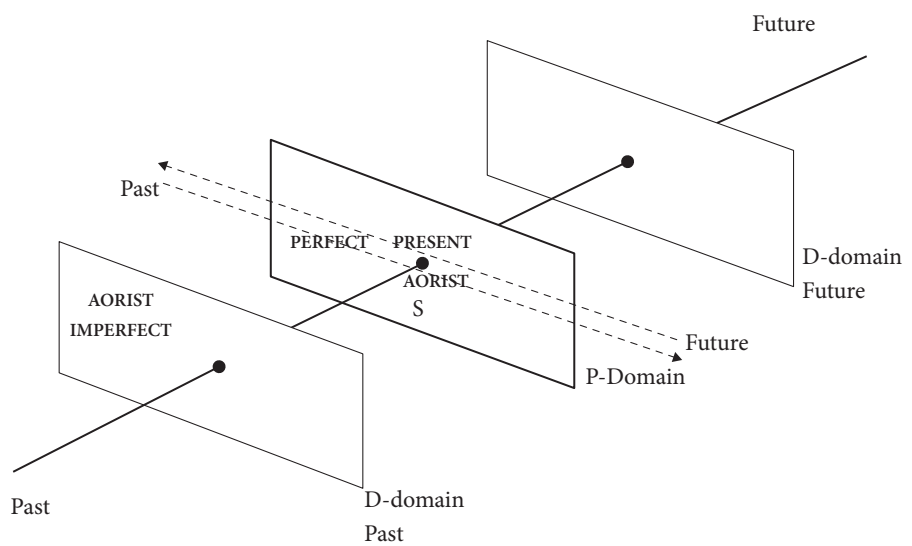


Figure 4. The distribution of the tense/aspect categories across the cognitive domains in PII

16. Another readily available interpretation, kindly suggested to me by the editors, is that the Aorist Indicative in such cases has a perfective present meaning, denoting an instantaneous event with no extension and already completed as it appears.

17. A reader points out that on the perfective present reading, the Aorist Indicative would represent a point in S, while the Present Indicative would denote an interval. Figure 4 does not fully capture this distinction, but still locates the Aorist Indicative in the immediate vicinity of the Present Indicative.

3.2 Outline of the development of the synthetic Perfect in Old Iranian

In his comprehensive monograph on the synthetic Perfect in Indo-Iranian, Kümmel (2000: 683) notes that the Avestan data are too scanty to allow for any firm conclusions as to the development of the Perfect. He observes, however, that there is no evidence of a narrative use of the Perfect in Avestan, suggesting that it represented a present anterior category in this stage of Iranian. This assumption is partly supported by data like those discussed in §3.1 and partly by the fact that the Avestan Perfect occasionally appears to have something like a universal reading, as illustrated in (11).

- (11) *Yasna* 1.1 [Young Avestan]
yō nō daḍa yō tataša yō
 REL.NOM we:ACC place:PRF.3SG REL.NOM form:PRF.3SG who:NOM
tuθruiē yō mainiiuš spəntōtamō
 nourish:PRF.3SG who:NOM spirit:NOM most_divine:NOM
 “(Ahura Mazda) who has set us in place, who has fashioned us, who has nourished us, the most divine spirit”
 (after Dahl 2011b: 285)

Here, the Perfect form *tuθruiē* appears to have a universal reading, denoting a situation that has extended through the past and still holds at the time of utterance. As noted previously, this reading is restricted to atelic predicates in Vedic. In contrast, the Perfect forms *daḍa* “has placed” and *tataša* “has fashioned” seem to have an existential reading here, reflecting the fact that they are based on underlying telic predicates.

In Old Persian, we find only one undisputed relic form of the synthetic Perfect, namely the Perfect Optative form *caxriyā* “might make” (Darius, *Behistun* I 50). Even though the Iranian evidence is quite limited, there seems to be reason to assume that the inherited synthetic Perfect represented a present anterior category in the earliest stages of Iranian, and that it maintained this character throughout historically attested Avestan. In Old Persian, on the other hand, the synthetic Perfect was fully replaced by the analytic Perfect of the *manā kərtam* type, illustrated in (12).

- (12) Darius, *Behistun* I 27–28 [Old Persian]
ima taya manā kərtam pasāva yaθā xšāyaθiya
 that:NOM which:NOM I:GEN do:PPP after when king:NOM
abavam
 become:IPRF.1SG
 “This (is) (that) which was done by me after (I) became king”
 (after Kent 1953: 117)

I refer to Haig (2008) and Jügel (this volume) for a more thorough discussion of the organization of the Old Persian past tense system and the development of the analytic Perfect construction in Iranian.

4. The synthetic Perfect in Old Indo-Aryan

4.1 The synthetic Perfect in Early Vedic

As suggested by the discussion in §3.1, the Early Vedic synthetic Perfect shows a number of readings that are characteristically associated with present anterior categories. In previous work (e.g. Dahl 2010), I have attempted to make a case for the claim that the Old Indo-Aryan Perfect is a present anterior category at the beginning of its attested history, thus essentially maintaining the semantic properties of its PII ancestor. Examples (13) through (16) illustrate that the Early Vedic Perfect is compatible with a universal reading (13), an existential reading (14), a resultative reading (15) and a present state reading (16).

- (13) *Rigveda* VIII 67.16 [Early Vedic]
śásvad dhí vaḥ sudānava ádityā ūtībhir
 continuously for you:GEN of_good_gifts:VOC Ādityas:VOC favours:INS
vayám purā nūnám bubhujmáhe
 we:NOM formerly now enjoy:PRF.1PL
 “For we have constantly been enjoying ourselves by your favours, o Ādityas of good gifts, formerly (and) now”
- (14) *Rigveda* IX 23.7 [Early Vedic]
asyá pítvā mādānām índro vṛtrāṇi
 it:GEN drink:ABS exhilarating_drinks:GEN Indra:NOM enemies:ACC
apratí jaghána jaghánac ca nú
 unopposable:ACC smite:PRF.3SG smite:PRF.SBJV.3SG and now
 “Having drunk of its exhilarating drinks Indra has smashed unopposable enemies and shall have them smashed now”
- (15) *Rigveda* IX 67.30 [Early Vedic]
alāyyasya paraśúr nanāśa tám á pavasva
 Alāyya:GEN axe:NOM disappear:PRF.3SG he:ACC hither purify:PRS.IMP.2SG
deva soma / ākhúm cid evá deva soma //
 god:VOC Soma:VOC mole:NOM like just god:VOC Soma:VOC
 “Alāyya’s axe has disappeared. O god Soma, bring it hither after purification, that which is (hidden) like a mole, god Soma!” (cf. also Dahl 2010: 355)

- (16) *Rigveda* IV 24.5 [Early Vedic]
ád id dha néma indriyám yajanta
 and_right_then PTCL some:NOM of_Indra:ACC sacrifice:PRS.3PL
ád it paktiḥ purolāśaṁ riricyāt /
 and_right_then cooked_food:NOM rice_cake:ACC leave:PRF.OPT.3SG
ád it sómo ví papṛcyād ásuṣvīn
 and_right_then Soma:NOM apart mix:PRF.OPT. 3SG non_pressers:ACC
ád ij jujoṣa vṛṣabhām yájadhyai //
 and_right_then become_pleased:PRF.3SG bull:ACC sacrifice:INF
 “And right then some are sacrificing to Indra’s (name), right then the cooked food may succeed the rice cake, right then soma may exclude the non-pressers, right then he is pleased with the bull for the sacrifice”

Under the assumption that the Early Vedic Perfect is a present anterior category, it is, by definition, associated with the aspectual relation ‘Event time precedes or overlaps with Reference time’ and the temporal relation ‘Evaluation time included in Reference time’. An immediate advantage of an analysis along such lines is that it allows for distinguishing between the three readings illustrated in (13) through (16) in a straightforward way.

First, the universal reading, which is limited to atelic predicates, illustrated in (13), expresses that a situation has been going on from some indefinite time in the past until the time of the utterance. It implies that event time is coextensive with reference time, which includes evaluation time as its last subinterval. This constellation is schematically illustrated in Figure 5.

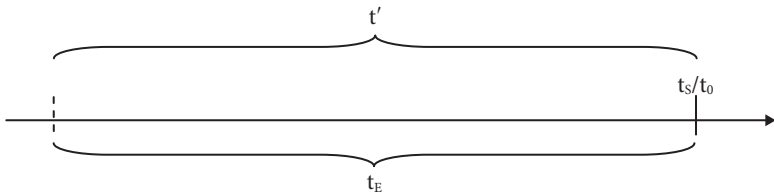


Figure 5. A time-relational representation of the universal reading of the Early Vedic Perfect

Second, the existential reading, illustrated in (14), expresses that one or more instantiations of the situation denoted by the predicate has been terminated prior to the time of the utterance, implying that event time precedes reference time which includes evaluation time, a constellation that may be schematically expressed as in Figure 6.

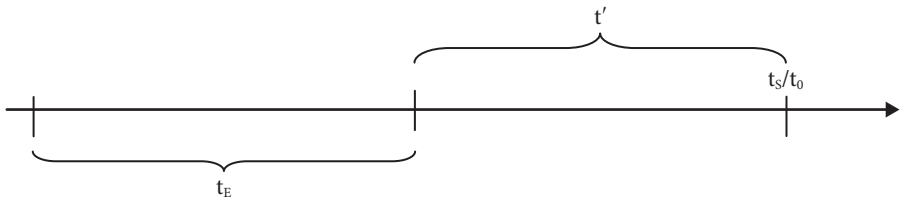


Figure 6. A time-relational representation of the existential reading of the Early Vedic Perfect

Third, the resultative reading, illustrated in (15), expresses that an event has been completed prior to the time of the utterance and that a state resulting from the completion of a single, specific instantiation of the event type denoted by the predicate holds at the time of the utterance. One way of analysing this reading is that it implies that event time immediately precedes reference time, which includes evaluation time, and is coextensive with the state resulting from the completion of the event (RS), as schematically expressed in Figure 7.

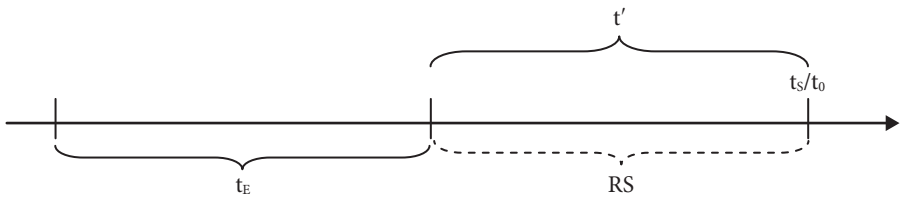


Figure 7. A time-relational representation of the resultative reading of the Early Vedic Perfect

On this analysis, the resultative reading of the Early Vedic Perfect is a semantically more specific variant of the existential reading. Example (16) illustrates that the Perfect has a stative present reading with instantaneous achievement predicates, which may be analysed as a lexically determined variant of the resultative reading. The stative present reading of the Early Vedic Perfect is schematically represented in Figure 8.

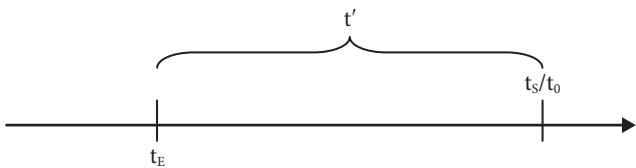


Figure 8. A time-relational representation of the stative present reading of the Early Vedic Perfect

The stative present reading of the Early Vedic Perfect is restricted to a limited group of instantaneous achievement predicates that remains relatively stable through the history of Vedic. Under the assumption that the anterior aspect may give rise to a reading according to which event time overlaps with reference time, the punctual character of instantaneous achievement predicates may be interpreted as the first subinterval of a state of the type implied by the verb, thus defocusing the change of state feature associated with predicates of this kind.

The assumption that the Early Vedic synthetic Perfect is a present anterior category runs into the difficulty that there is one example in the *Rigveda* of a Perfect Indicative form modified by the frame adverb *hyás/hyáh* “yesterday”, cited in (17).

- (17) *Rigveda* X 55.5d [Early Vedic (?)]
adyā mamāra sā hyáh sám āna //
 today die:PRE.3SG he:NOM yesterday PVB breathe:PRE.3.SG
 “Today (the moon) has died. Yesterday he (still) breathed”

The fact that the Perfect is compatible with frame adverbs denoting a specific past time interval is remarkable indeed. It constitutes a genuine counterexample to the analysis of the Early Vedic Perfect as a present anterior category, since categories of this kind tend to be odd or incompatible with such frame adverbs. However, the hymn from which Example (17) is extracted belongs to the tenth book of the *Rigveda* which is generally considered to constitute a relatively young part of this text corpus (e.g. Kulikov 2013 for discussion). It is therefore reasonable to conclude that the example in (17) reflects a later stage in the development of the Vedic Perfect, being suggestive of a development from anterior to perfective/simple past.

Along analogous lines, Dahl (2020) makes a case for the claim that the Early Vedic Perfect represents a transitional stage between the inherited present anterior semantics and its later general past semantics. This assumption reflects the observation that the Early Vedic Perfect sometimes occurs in contexts with a clear anchoring in the P-domain, as illustrated in (18) through (20), and in other cases occurs in contexts anchored in a past D-domain, examples of which are found in (21) and (22).

- (18) *Rigveda* IV 6.7cd [Early Vedic]
ādāhā mitró ná súdhitāh pāvako ḡnīr
 now contract:NOM like benevolent:NOM bright:NOM Agni:NOM
dīdāya mānuṣīṣu vikṣú //
 begin_to_shine:PRE.3SG of_men:LOC clans:LOC
 “Like a well-established contract does the pure Agni now shine among the human clans [P-Domain]”
 (after Klein 1985: 114)

- (19) *Rigveda* VI 34.1cd [Early Vedic]
purā nūnāṃ ca stutāya iṣīṇāṃ paspr̥dhṛá índre
 formerly now and praise:NOM sages:GEN compete:PRF.3PL Indra:LOC
ádhy ukthārkā //
 for verse_and_song:NOM
 “Previously and now the praises of the sages, their verses and songs have contended over Indra [P-Domain]”
- (20) *Rigveda* I 145.1a [Early Vedic]
tām pr̥cchatā sá jagāmā sá veda
 he:ACC ask:PRS.IMP.2PL he:NOM come:PRF.3SG he:NOM know:PRF.3SG
 “Ask him! He has come, he knows [P-domain]”
 (after Jamison & Brereton 2014: 322)
- (21) *Rigveda* I 32.2 [Early Vedic]
āhann āhiṃ párvate śísriyāṇāṃ tváṣṭā
 smite:IPRF.3SG dragon:ACC mountain:LOC lie:PRF.PTCP.ACC Tvaṣṭar:NOM
asmai vājraṁ svaryāṃ tataksa / vāśrā iva
 he:DAT mace:ACC resounding:ACC make:PRF.3SG bellowing:NOM like
dhenávaḥ syāndamānā āñjaḥ samudrām áva
 milkcow:NOM stream:PRS.PTCP.NOM straight sea:ACC to
jagmur āpaḥ //
 go:PRF.3PL waters:NOM
 “He smashed the serpent resting on the mountain – for him Tvaṣṭar had fashioned the resounding[/sunlike] mace[past D-domain]. Like bellowing milk-cows, streaming out, the waters went straight down to the sea”
 (after Jamison & Brereton 2014: 134f.)
- (22) *Rigveda* X 73.10 [Early Vedic]
áśvād iyāya ~ íti yád vādanty ójaso jātám utá
 horse:ABL go:PRF.3SG thus when speak:PRS.3PL power:ABL born:ACC then
manya enam / manyór iyāya harmyēṣu tasthau
 think:PRS.1SG he:ACC rage:ABL go:PRF.3SG safe_house:LOC stay:PRF.3SG
yátaḥ prajajñá índro asya veda //
 whence be_born:PRF.3SG Indra:NOM this:GEN know:PRF.3SG
 “When they say: ‘He came from a horse’, then I think that he is born from power. He came from (battle) fervour, he stayed in a safe house. Only Indra knows from whence he was born” [(inferential) past D-domain]¹⁸

18. It must be conceded, however, that the evidence for an inferential past reading of the Early Vedic Perfect provided by this example is perhaps not of the strongest possible kind. This is because the verse may also be interpreted as implying a P-domain-oriented rather than a D-domain oriented interpretation since it pertains to the origin of the now and always powerful Indra. In that case, the Perfect forms would have a more strictly existential reading, as kindly pointed out to me by Peter-Arnold Mumm.

These examples illustrate that the Early Vedic Perfect is compatible with both types of cognitive domains. Given what has been said above, it is tempting to analyse this as the result of an ongoing change in the behaviour of the Perfect, reflecting a change in its temporal semantics. We have already noted that the universal reading of the Perfect is virtually unattested after the Early Vedic period. Similar considerations apply to the stative present reading, which remains a lexically distributed archaism in later stages of Vedic but does not show any sign of productivity, since virtually no new Perfect forms yielding this reading are attested and some of the relevant inherited Perfect stems are formally assimilated to Present stems (cf. also Kümmel 2000). These considerations suggest that the behaviour of the Early Vedic Perfect Indicative reflects a transitional stage between a situation where it is more or less restricted to the P-domain, as was hypothesized to be the case in PII, and a situation where it is restricted to past D-domains. Figure 9 gives a representation of how two Perfect forms, *jagāma* (20) and *tataḥṣa* (21) are mapped onto the cognitive domains in Early Vedic.

Figure 10 gives a representation of the distribution of the tense/aspect categories across the cognitive domains in Early Vedic.

In previous work (e.g. Dahl 2010: 86, 371) I have suggested that the inferential reading often associated with old Perfects across languages may be analysed in terms of an implicit or explicit intensional operator. In the present context, such operators may be taken to have the effect of shifting the anchoring of a sentence to a cognitively more or less distant D-domain, typically outside the scope of the speaker's own sphere of experience. While the resultative reading characteristically

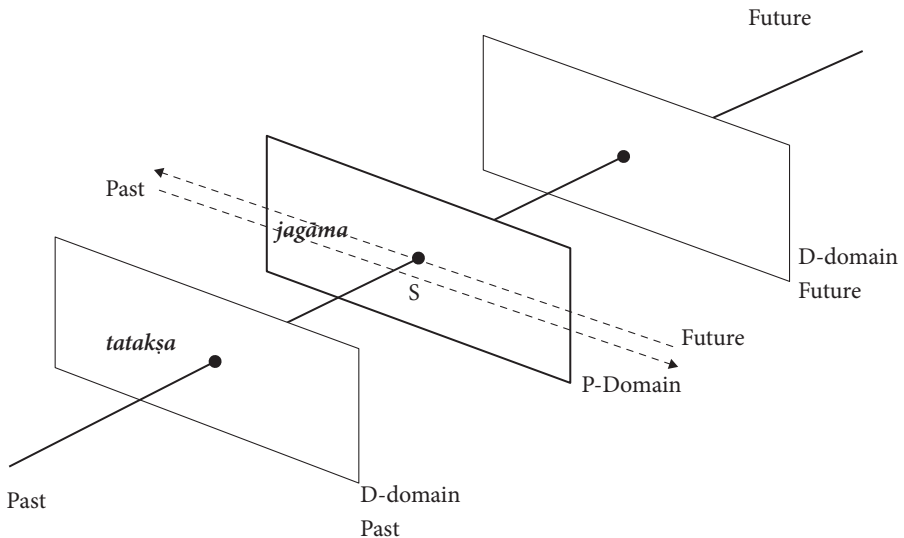


Figure 9. Perfect forms in different cognitive domains

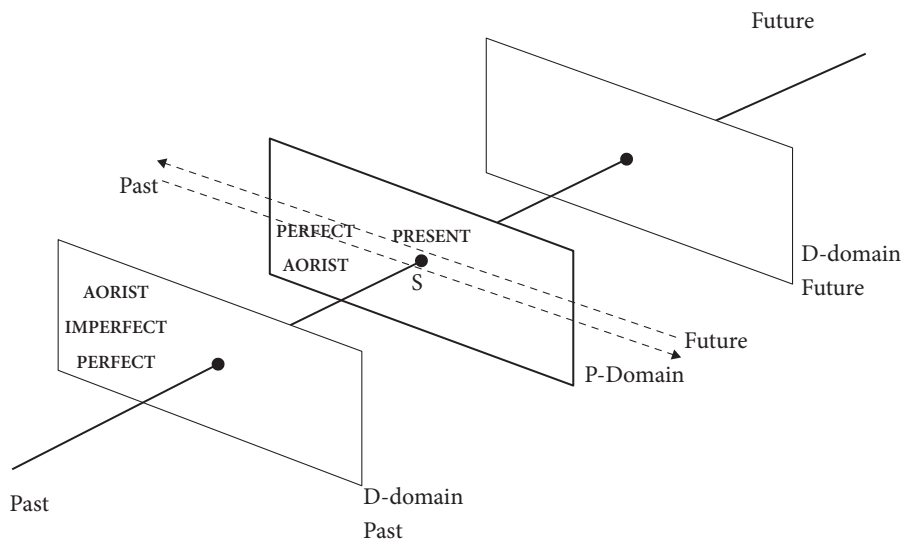


Figure 10. The distribution of the tense/aspect categories across the cognitive domains in Early Vedic

highlights a present state resulting from the completion of a past event, as in (20), repeated here for convenience, the inferential reading is taken to infer a past event from a present situation, as tentatively illustrated in (22), also repeated.

- (20) *Rigveda* I 145.1a [Early Vedic]
tām prcchatā sá jagāmā sá veda
 he:ACC ask:PRS.IMP.2PL he:NOM come:PRF.3SG he:NOM know:PRF.3SG
 “Ask him! He has come, he knows [P-domain]”
 (after Jamison & Brereton 2014: 322)

- (22) *Rigveda* X 73.10 [Early Vedic]
áśvād iyāya ~ iti yád vādanty ójaso jātām utá
 horse:ABL go:PRF.3SG thus when speak:PRS.3PL power:ABL born:ACC then
manya enam / manyór iyāya harmyēṣu tasthau
 think:PRS.1SG he:ACC rage:ABL go:PRF.3SG safe_house:LOC stay:PRF.3SG
yātaḥ prajajñá índro asya veda //
 whence be_born:PRF.3SG Indra:NOM this:GEN know:PRF.3SG
 “When they say: ‘He came from a horse’, then I think that he is born from power. He came from (battle) fervour, he stayed in a safe house. Only Indra knows from whence he was born”
 [(inferential) past D-domain]

While the idea that the inferential reading is a contextually determined variant of the resultative reading introduced by an intensional operator certainly is appealing, it is unclear exactly what function this operator has. One way of interpreting an

analysis along these lines within the multidimensional timeline approach is that intensional operators of the kind under discussion pick out D-domains that are outside the scope of the speaker's own experience. Given that the resultative reading is anchored in the P-domain, the inferential reading may be regarded as a kind of bridge context between the P-domain and cognitively dissociated D-domains. Some corollaries of an analysis along these lines will be explored in the following sections.

4.2 The synthetic Perfect in Middle Vedic

4.2.1 *The Early Middle Vedic Perfect*

In Early Middle Vedic, the Perfect shows a somewhat different range of readings from that associated with its Early Vedic predecessor, suggesting that its semantic properties have undergone a slight change. In (17) we encountered an example of a Perfect form modified by the adverb *hyás* “yesterday”, possibly a reflection of an ongoing semantic change. In Early Middle Vedic similar examples occur, as illustrated in (23), where the adverb *ágre* “in the beginning” modifies the Perfect form *suṣuve* from the verb SAV- “press, extract”, implying a remote past reading. It should be noted, however, that the pronoun *imám* “this here” implies a continuity with the present extraction of soma, reflecting a tension between P-domain and a D-domain orientation. This example may be regarded as a bridging context, where the inherited experiential reading of the Perfect is on the verge of developing into a general past reading.¹⁹

- (23) *Taittiriya-Saṃhitā* I 7.10.1 [Mantra, Early Middle Vedic]
vājasya imam prasavāḥ suṣuve ágre
 strength:GEN this:ACC impulse:NOM extract:PRF.3SG beginning:LOC
sómaṁ rājānam ōśadhiṣv apsú
 soma:ACC king:ACC herb:LOC water:LOC
 “In the beginning, the incentive of reward extracted this king soma from the
 herbs and waters”²⁰ [P-domain or D-domain]

Examples like those cited in (17) and (23) clearly show that the Early Middle Vedic Perfect is compatible with specific past reference times, suggesting that it represents a past tense category at this stage. This observation is corroborated by the fact that

19. Recall the above remark that the experiential reading of anteriors characteristically refers to some indefinite time in the past, and that categories of this kind tend not to be compatible with frame adverbs denoting a specific past time, such as *ágre* “in the beginning”. I am grateful to Peter-Arnold Mumm for bringing the ambiguous tension in this example into focus for me.

20. The present translation of *vājasya prasavāḥ* as “incentive of reward” *grosso modo* follows Amano (2009: 409f.) who gives the translation “Antrieb zum Sieg im Wettrennen”.

there appear to be very few examples of Perfect Indicative forms with a universal reading at this stage. A possible example is given in (24).

- (24) *Atharvaveda Paippalāda* VI 3.10 [Early Middle Vedic]²¹
yad dhāvanti punate tad āpo yat
 when run:PRS.3PL cleanse_one:PRS.3PL then waters:NOM when
tiṣṭhanti śuddhā it tad bhavanti / na asām
 stand:PRS.3PL clean:NOM indeed then become:PRS.3PL not they:GEN
avadyam avidaṃ na ripraṃ sanād eva madhunā
 imperfection:ACC find:AOR.1SG not impure:ACC old:ABL just.so sweetness:INS
saṃ paprcce
 PVB mix:PRF.3PL
 “When they stream, then the waters cleanse themselves; when they stand still,
 then they become pure. I have not found any imperfection or vice of theirs. From
 ancient times they have been mixed with sweetness (Soma)” [P-domain]

These considerations indicate that the Early Middle Vedic Perfect had an inventory of readings primarily associated with D-domains, examples like the one cited in (25) show that it possessed a resultative reading, which by hypothesis is anchored in the P-domain, as indicated by the pronoun *imām/imām* “this here”.

- (25) *Atharvaveda Śaunakīya* VII 20.5 [Early Middle Vedic]
ā imām yajñām anumatir jagāma
 to this:ACC sacrifice:ACC Anumati:NOM come:PRF.3SG
sukṣetrātāyai suvīratāyai sūjātam /
 possession_of_good_field:DAT possession_of_good_men:DAT excellent:ACC
bhadrá hy āsyāḥ prāmatir babhūva
 prosperous:NOM for she:GEN providence:NOM become:PRF.3SG
 “Anumati has come unto this excellent sacrifice to grant us abundance of fields
 and heroes. For her providence has become prosperous (before).” [P-domain]

Before concluding this section, note that Perfect forms of instantaneous achievement predicates have a stative present meaning in Early Middle Vedic, just like in Early Vedic. Examples (26) and (27) illustrate.

- (26) *Atharvaveda Śaunakīya* XI 4.25ab [Early Middle Vedic]
ūrdhvāḥ suptēṣu jāgāra nanú tiryān ní padyate
 upright:NOM sleeping:LOC awake:PRF.3SG never horizontally down fall:PRS.3SG
 “Upright is he awake among the sleeping ones; never does he fall down
 horizontal”

21. The text follows Griffiths (2009). Bhattacharya (1997) reads *saṃ paprcchre* “they have exchanged greetings”.

- (27) *Atharvaveda Śaunakīya* V 11.4cd [Early Middle Vedic]
tvām tá víśvā bhúvanāni vettha sá cin nú
 you:NOM the:ACC all:ACC being:ACC know:PRF.2SG the:NOM even now
tváj jáno māyí bibhāya
 you:ABL man:NOM cunning:NOM become_afraid:PRF.3SG
 “You know all these beings. Even the cunning man is now afraid of you”

In Early Middle Vedic, then, Perfect forms with past time reference anchored in a past D-domain become more frequent, although we find a number of examples of Perfect forms with P-domain anchoring.

The data considered in this section suggest that Early Middle Vedic Perfect shows a similar, though not identical behaviour to its Early Vedic predecessor. It has developed somewhat further in the direction of a general past tense with neutral aspectual semantics. However, the Perfect still occurs in contexts with a clear anchoring in the P-domain, but this pattern of use is primarily found with Perfect forms of instantaneous achievements with a stative present meaning.

4.2.2 *The Perfect in Middle Vedic Proper*

In the Middle Vedic sources, the synthetic Perfect shows three main uses. First, we have the now familiar Perfect forms of instantaneous achievement predicates with a stative present value, with a clear anchoring in the P-domain, illustrated in (28). Second, the Perfect occurs in contexts describing some actual, typically ritual practice, where it is used to highlight a past situation explaining the background of the practice under discussion, as illustrated in (29). This reading is of some interest, since it may be understood as an example either of current relevance, associated with the P-domain, or of simple past, associated with a D-domain; I return to this question shortly. Example (30) illustrates that Middle Vedic Perfect forms are compatible with adverbs denoting a specific past time, thus showing simple past tense semantics. Finally, Perfect forms are sometimes used to express that the speaker infers from a present state that a situation has occurred in the past, as illustrated in (31). Earlier in this paper, this reading was argued to represent a kind of bridging context between the P-domain and a cognitively more distant D-domain. In the present case, P-domain orientation is indicated by the presence of the adverb *iha* ‘here’, while the context suggests that the occurrence of a prior situation is inferred from a present situation.

- (28) *Taittirīya Saṃhitā* II 3.3.4 [Prose, Middle Vedic]
réto hí vā etásmād vājinam apakrámaty átha eṣá
 semen:NOM for PTCL he:ABL potent:NOM leave:PRS.3SG then he:NOM
kláibyaḍ bibhāya
 impotence:ABL become_afraid:PRF.3SG
 “For the potent semen leaves him; then he is afraid of impotence [P-domain]”

- (29) *Maitrayanī Saṃhitā* 3.1.3 [Prose, Middle Vedic]
yāt kāmāyeta pāpavasīyasām syād iti
 if wish:PRS.OPT.3SG pāpavasīyasa_sacrifice:NOM be:PRS.OPT.3SG QUOT
gardabhām pūrvam nayeyur āparam āśvam. vai
 ss:ACC first lead:PRS.OPT.3.PL later horse:ACC PTCL
vipūjanaḥ saurākiḥ pāpavasīyasām cakāra
 Vipūjana:NOM Saurāki:NOM pāpavasīyasa_sacrifice:ACC make:PRF.3SG
tāt pāpavasīyasām evā etēna karoti.
 the:ACC pāpavasīyasa_sacrifice:ACC PTCL this:INS make:PRS.3SG
 “If he wishes: ‘There shall be a pāpavasīyasa sacrifice’, one should first lead the donkey, later the horse. Vipūjana Saurāki made a pāpavasīyasa sacrifice. Therefore one makes the pāpavasīyasa sacrifice with this”
 [P-domain or D-domain?]
- (30) *Aitareyabrāhmaṇa* V 34 [Prose, Middle Vedic]
ardhabhāg gha vā eṣa itareṣām ṛtvijām
 sharer_of_half:NOM PTCL PTCL he:NOM other:GEN priests:NOM
agra āsa yad brahmārdham eva brahmaṇa
 beginning:LOC be:PRF.3SG REL:NOM brahman’s_half:NOM PTCL brahman:GEN
āsa ardhm itareṣām ṛtvijām
 be:PRF.3SG half:NOM other:GEN priests:NOM
 “In the beginning, the Brahman was a sharer of half with the other priests; a half (of the holy power) was the Brahman’s, a half the other priests” [D-domain]
 (Keith 1920: 258)
- (31) *Kāthaka-Saṃhitā* IX 3:106,11–107,2 [Prose, Middle Vedic]
ādityā vā itas sarveṇa eva saha amuṃ lokam
 Ādityas:NOM PTCL from.here everything:INS PTCL with that:ACC world:ACC
āyaṃs. te ’muṃ lokam gatvā vyatṛṣaṃs.
 go:IPRF.3PL they:NOM that:ACC world:ACC come:ABS get_thirsty:IPRF.3PL
te ’vidur: amutaḥ pradānād vā iha
 they:NOM know:IPRF.3PL from.there gift:ABL PTCL here
ājagāma iti
 come:PRF.3SG QUOT
 “The ādityas went out from here with everything to that world. When they had come to that world, they became thirsty. Then they knew: ‘it (the thirst) has come here from that gift from there’” [D-domain or P-domain?]

The use of the Perfect illustrated in (28) has already been accounted for. The reading illustrated in (29) is at first glance ambiguous, being in principle compatible with a current relevance type of reading or a simple past reading. Recall Bybee et al.’s (1994: 54) definition of anteriors, according to which categories of this kind are characterized by what we have loosely called current relevance, and may be

translated by the English Present Perfect and/or accompanied by relational adverbs like ‘already’, ‘just’ or similar expressions. While it is notoriously difficult to determine the exact semantic properties of grammatical categories in corpus languages, adverbs and particles occasionally provide important additional information that may contribute to clarifying muddy issues. In Example (29), the Perfect form *cakāra* from *kar-* “make” is preceded by the particle *vái*, which according to Kobayashi (2012) primarily serves to introduce new information in discourse, being associated with presentational focus. This pragmatic function seemingly involves something very similar to current relevance, and it is reasonable to draw the preliminary conclusion that the reading under discussion is related the current relevance reading of the Perfect shown in earlier stages of Vedic. On this assumption, the use of the Middle Vedic Perfect illustrated in (29) belongs to the P-domain. The example given in (30) illustrates that the Middle Vedic Perfect was compatible with frame adverbs denoting a specific past time, in this case *agre/agra* “in the beginning”, seemingly having a general past value. Finally, the example in (31) illustrates the inferential past reading of the Perfect.

In Middle Vedic, then, the Perfect is compatible with both types of cognitive domains, as suggested by the examples given. Figure 11 illustrates the distribution of the Perfect in Middle Vedic.

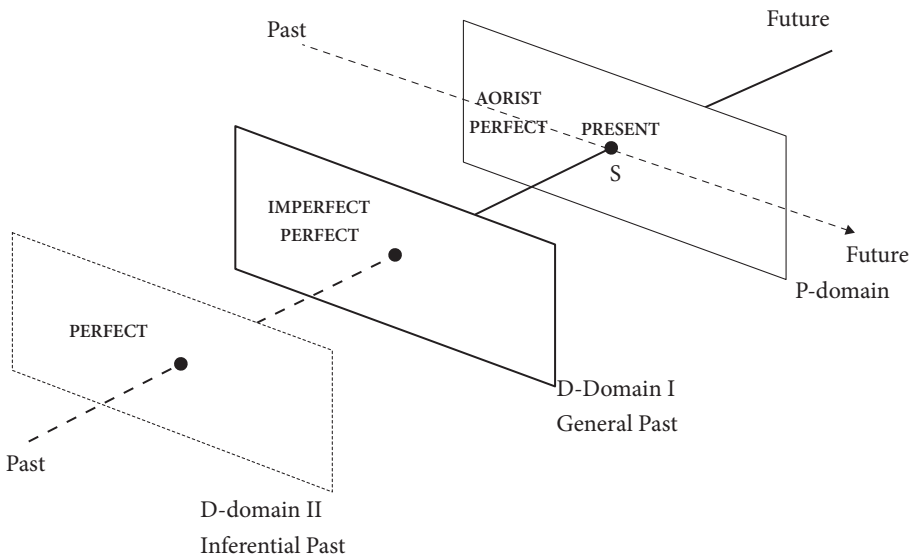


Figure 11. The distribution of the tense/aspect categories across the cognitive domains in Middle Vedic

Note that the graphic representation differs from the previous ones in that it contains a second past D-domain, labelled Inferential Past. This domain is represented by means of a rectangle with dotted lines in order to suggest that it has not reached fully grammaticalized status yet. The timeline leading to it is represented as a dotted line in order to suggest that the general past D-domain represents a limit between past times that may be within the realm of the speaker's own experience and past times that cannot be within this realm. It should be observed, however, that this does not necessarily imply that this cognitive domain is limited to past events witnessed by the speaker. Rather, both the Perfect and the Imperfect were compatible with both of these types of contexts in Middle Vedic, but the Perfect was also occasionally used with a marked inferential implicature, which seems not to have been available for the Imperfect.

4.3 The synthetic Perfect in Late Vedic

In Late Vedic, the Perfect is exclusively used in contexts referring to situations outside the speaker's own sphere of experience. As discussed in Dahl (2012), the frame story in the narrative parts of the older *Upaniṣads* is characteristically set in a legendary time in the past, located outside the narrator's own sphere of experience. In these texts, the Perfect is the only available category used in the frame story, while the Aorist and Imperfect exclusively occur in direct discourse referring to the recent and remote past, respectively. The original aspectual distinctions between the three past tense categories is lost at this stage. Consider the following examples:

- (32) *Śatapathabrāhmaṇa Madhyaṃdina XIV 6.9.19–20* [Late Vedic]
śākalya iti ha uvāca yājñavalkyaḥ tvām svid
 śākalya:VOC QUOT PTCL say:PRF.3SG Yājñavalkya:NOM you:ACC PTCL
imé brāhmaṇā aṅgārā vakṣāyaṇam akrata
 these.NOM Brahmins.NOM of_Aṅgāra.NOM eloquent.ACC make.AOR.3PL
iti yājñavalkya iti ha uvāca śākalyo yád
 QUOT Yājñavalkya:VOC QUOT PTCL say:PRF.3SG śākalya:NOM when
idám Kurupañcālānām brāhmaṇān atyāvādiḥ kim
 just_now Kurus_and_Pañcālas:GEN Brahmins:ACC out_talk:AOR.2SG what
brāhma vidvān iti
 truth:ACC know:PRF.PTCP.NOM.SG QUOT
 “Yājñavalkya said: ‘Śākalya, it is clear that the Brahmins from Aṅgāra have made you eloquent’. Śākalya said: ‘Tell me, Yājñavalkya, which truth did you know when you out-talked the Brahmins of Kuru and Pañcāla just now?’”

- (33) *Śatapathabrāhmaṇa Madhyamādina* XIV 6.3.1 [Late Vedic]
ātha ha enam bhujiyur lāhyāyaniḥ papracha
 and PTCL he:ACC Bhujyu:NOM Lāhyāyani:NOM question:PRF.3SG
yājñavalkya iti ha uvāca madreṣu carakāḥ
 Yājñavalkya:VOC QUOT then say:PRF.3SG Madras:LOC students:NOM
yājñavalkya pāryavrajāma té patāñcalasya
 Yājñavalkya:VOC travel_around:IPRF.1PL these:NOM Patāñcala:GEN
kāpyasya gṛhān aīma tāsyā āsīd duhitā
 Kāpya:GEN house:ACC go.to:IPRF.1PL he:GEN be:IPRF.3SG daughter:NOM
gandharvagrhitā tām aprchāma kò 'si iti
 gandharva.possessed:NOM he:ACC ask:IPRF.1PL who:NOM be:PRS.2SG QUOT
sò 'bravīt sudhanavā āṅgīrasa
 he:NOM say:IPRF.3SG Sudhanavan Āṅgīrasa:NOM
 “Then Bhujyu Lāhyāyani began to question him. ‘Yājñavalkya’ he said, ‘once, when we travelled around in the land of the Madras as itinerant students, we visited the home of Patañcala Kāpya’. He had a daughter possessed by a Gandharva. We asked him who he was and, and the Gandharva said that he was Sudhanavan Āṅgīrasa”
 (after Olivelle 1996)

These examples illustrate that Late Vedic Perfect Indicative forms such as *uvāca* “said”, *papracha* “asked” are characteristically used in the narrative frame story. Aorist Indicative forms like *akrata* “have made”, *atyāvādīḥ/atyāvādīḥ* “have outspoken” are used with a subjectively proximate or immediate past meaning, as indicated by the adverb *idām/idām* “just now”. Imperfect forms of the type *pāryavrajāma* “travelled around”, *aīma* “went to”, *āsīd* “was”, *aprchāma* “asked” and *(a)bravīt* “said” are used in remote past contexts within the speaker’s own experience. A tentative representation of the Late Vedic situation is given in Figure 12.

Figure 12 illustrates a situation where the distribution of the past tense categories Aorist, Imperfect and Perfect is determined by remoteness distinctions and evidentiality, suggesting an advanced grammatical development. In contrast, the Early Vedic system, illustrated in Figure 10, imposes very few restrictions on the distribution of the past tense categories, something which may be taken to suggest that the distinction between P-domain and D-domain is not strictly speaking grammatically relevant, being mainly dependent on contextual or pragmatic factors. In previous work (e.g. Dahl 2010) I have argued that the Early Vedic past tense categories have different aspectual properties, and that their distribution may largely be explained in terms of aspect distinctions. Later on, the aspectual distinctions are gradually lost, substituted as they are by a more complex system of temporal distinctions (e.g. Dahl 2013, 2014, 2015 for discussion).

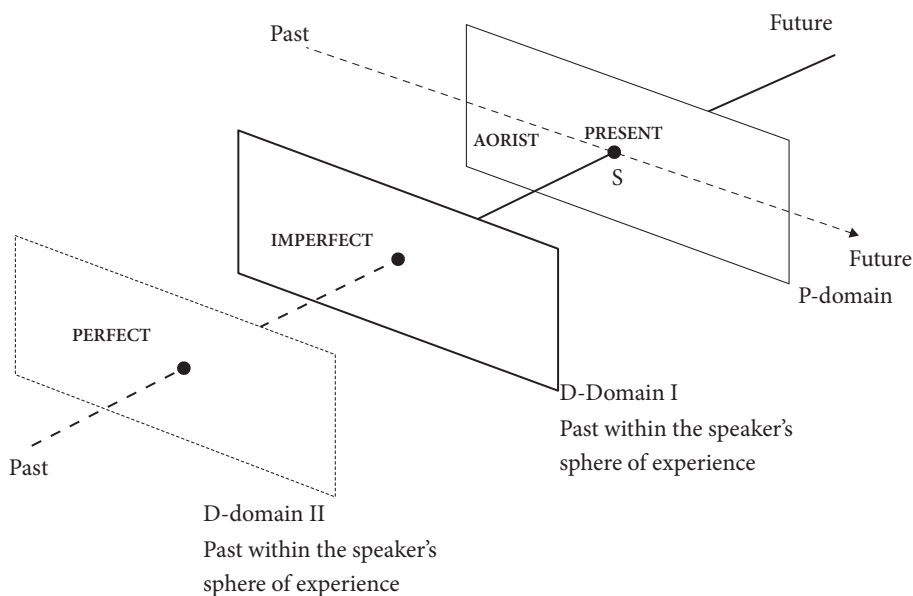


Figure 12. The distribution of the tense/aspect categories across the cognitive domains in Late Vedic

5. Conclusion

This paper has outlined the semantic development of the synthetic Perfect in the Old Indo-Iranian languages. The PII Perfect was hypothesized to represent a present anterior category, a property maintained in the Avestan branch of Old Iranian. In the Old Persian branch, however, the synthetic Perfect is more or less completely lost in the sources available to us. Due to the limited availability of data, the details of the changes undergone by the synthetic Perfect in Iranian remain unclear. In Old Indo-Aryan, the empirical evidence is somewhat richer, and consequently we have a better idea of the different stages in the development of the synthetic Perfect. At the beginning of the Old Indo-Aryan tradition, the Perfect appears to have maintained a present anterior character, but there is evidence that the Rigvedic hymns provide a window into its movement towards a general past tense. In later stages of Vedic, the Perfect gradually develops a direct evidential meaning, which can be accounted for within a multidimensional timeline approach along the lines of Botne & Kershner (2008). This framework elegantly models how Old Indo-Aryan gradually acquires new grammatical devices for distinguishing between semantic domains that are not grammatically relevant in the earlier stages of the language, nor in the prehistorical stages.

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CHAPTER 8

The perfect in Middle and New Iranian languages

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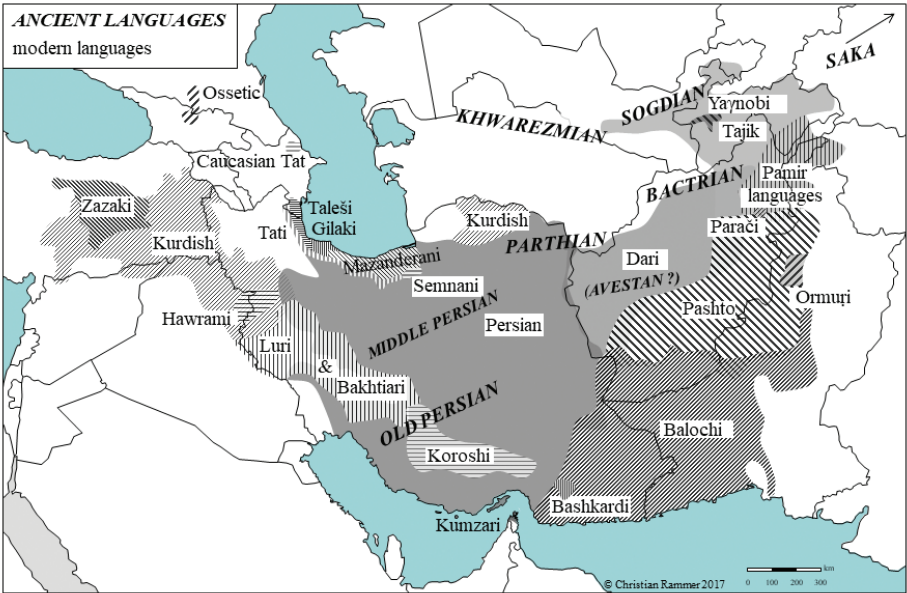
This paper is the first step towards a description of the category ‘perfect’ in Middle and New Iranian languages. It attempts a comprehensive overview of the various forms that developed in the course of the past 2000 years, arriving at a typological classification of the Iranian languages. The comparison of perfects with their paradigmatic counterparts helps delimit the functional range that the perfect covered or covers, which, owing to lack of information, is as much as can be achieved for the majority of the Iranian languages. The diachronic perspective provides insight into the functional development of the perfect, which began with a resultative construction, and which in turn developed via a perfect into a simple past or past perfective (in some cases more than once). The paper concludes with a brief overview of some special perfect constructions such as double perfects, evidentials and perfect continuous forms.

Keywords: Middle and New Iranian, perfect, diachronic path, tense, aspect

1. Introduction

The exact number of Iranian languages is unknown. There are two Old Iranian languages attested (Avestan and Old Persian), six Middle Iranian languages (West: Parthian, Persian; East: Bactrian, Sogdian, Khwarezmian, Saka), and numerous New Iranian languages. The following map gives an overview indicating those languages that are better defined. The Pamir languages contain the following: Bartangi, Iškašmi, Munji, Rošani, Sarikoli, Šuyni, Yazyulami, Yidiya. Others mentioned in this paper are identified by giving their geographical location.

The Middle Iranian (MIR.) period is characterised by the loss of Old Iranian (OIR.) verb forms and by the restoration of the verbal system until, in the New Iranian (NIR.) period, the verbal system is again enlarged to its original complexity in most Iranian languages. This development stretches over a time of approximately



Map 1. Position of ancient and modern Iranian languages (approximative)
(by Agnes Korn, adapted by T. Jügel)

2000 years. During this period, several formally different perfects appear which all seem to derive from a resultative or stative construction.

The attempt to outline the overall diachronic development comes at the expense of a fine-grained analysis of synchronic systems. Moreover, the descriptive research of Iranian languages mostly dwells on morphology with little information on function and semantics. There are still many languages which are as yet undescribed, and others await linguistic classification, a situation which makes it impossible to give a comprehensive overview.

This article is divided into three main sections: the first focuses on the morphological development of the verbal system and gives a typological overview (§2), which is exemplified in the second (§3). The third illustrates three peculiar uses of the perfect: the double perfect, the evidential perfect and the perfect continuous (§4). Due to lack of space, the focus is put on indicative forms only.

2. Historical and typological overview

The finite verb forms that were continued from Old Iranian (cf. E. Dahl, this volume) are those built on the so-called present stem and the verbal adjective in *-ta* (also called ‘perfect participle’). In late Old Iranian, aorist and perfect were already on the brink of oblivion. Reclassification of aorist stems as present stems is attested for Young Avestan (Kellens 1984: 376), and Old Persian displays petrified aorist forms and one single perfect form (Jügel 2015: 68, 73ff., E. Dahl, this volume). If not reanalysed,¹ these forms are lost in the later stages of Iranian languages. The form used instead is a formation using the verbal adjective (or *PRF.P*)² together with the copula whose 3SG.PRS.IND is usually omitted (henceforth ‘*PRF.P* construction’). In origin a resultative construction, it acquired dynamic reading and became the only expression used to denote a completed action.³

Another development shared by many Iranian languages is the extension of the *PRF.P* by the OIr. **-ka* suffix.⁴ In combination with the OIr. stem auslaut, it is reanalysed as a new and productive suffix in MIr., e.g. Old Persian **brta-ka-* > Middle Persian *burda-g* → *burd-ag* (henceforth ‘extended *PRF.P*’). Initially a verbal adjective, it would become the new past participle of many Iranian languages. It first appears as an adjective (cf. Durkin-Meisterernst 2014: 253). When used as a predicative nominal, the construction adopts resultative reading. This parallels the development of the *PRF.P* construction in Old Iranian.

The historical development of this *PRF.P* construction is exemplified by Persian in Figure 1. Stage I corresponds to Proto-Old-Iranian, stage II to Old Persian, stage III to inscriptional Middle Persian, stage IV to late Middle Persian, and stage V to Modern New Persian (omitting the progressive). All verb forms are 1SG of $\sqrt{\text{kar}}$ ‘to do’. Since those that are built with the *PRF.P* exhibit ergative alignment, the subject is not indexed by an agreement marker but by an enclitic pronoun (e.g. =*mai*).

1. In New Iranian, e.g., Wakhi present stem *car-* ‘to do’ possibly derives from OIr. aorist stem *čar-*.

2. The Old Iranian verbal adjective developed into a past or perfect participle (uniformly referred to as *PRF.P* throughout this paper), which eventually became the past stem in many NIr. languages.

3. See Jügel (2015) for discussion and an investigation of ergativity that arose in the wake of this reanalysis. The differences in subject encoding of transitive and intransitive verbs are not relevant for the semantics of tense forms.

4. On this suffix see Ciancaglini (2012).

I	imperfect <i>*a-kṛnaŭ-am</i> PST-IPFV-1SG	perfective <i>*(a-)čar-am</i> (PST-)PFV-1SG	perfect <i>*čakar-a</i> PRF-1SG	verbal adjective <i>*kṛta-</i>
II	preterite <i>a-kunaŭ-am</i> PST-IPFV-1SG		perfect <i>=mai karta-</i> =PC.1SG PREP	PREP / verbal adjective <i>karta-</i>
III	imperfective <i>kun-(V)m</i> IPFV-1SG	perfective <i>=m kird</i> =PC.1SG PST	PREP <i>kird</i>	verbal adjective <i>kirdag</i>
IV	imperfect <i>=m hamē kard</i> =PC.1SG IPFV PST	perfective <i>=m kard</i> =PC.1SG PST	perfect <i>=m kard ēst-ēd</i> =PC.1SG PST stay.PRS-3SG	PREP / verbal adjective <i>kardag</i>
V	imperfect <i>mī-kard-am</i> IPFV-PST-1SG	perfective <i>kard-am</i> PST-1SG	perfect <i>karde=am</i> PREP=COP.1SG	PREP / verbal adjective <i>karde</i>

Figure 1. The development of tense and aspect in Persian (cf. Jügel 2015: 164)⁵

The PREP construction developed via a perfect (stage II) to a perfective (stage III). It kept aspectual semantics, but also became the base for the new imperfect formation (stage IV-V), where an adverb meaning ‘continuously’ was grammaticalized as the imperfective marker (*hamē* > *mī-*). When the PREP construction had become a perfective, a new perfect emerged with the auxiliary STAY (stage IV). In New Persian, the Middle Persian perfect is substituted by a combination of the new extended PREP and the auxiliary BE, i.e. the copula (stage V).

We will see in §3.4 that the Middle Persian perfect type is continued in a number of New Iranian languages and that another perfect formation with the auxiliary EXIST appeared in Early New Persian which, although lost in Modern New Persian, is preserved in some dialects (§3.6). It is unclear whether these three perfect formations represent dialectal or chronological differences (or both).

Besides the Persian type, we find different kinds of perfect formations in historical stages as well as in modern Iranian languages. Figure 2 gives an overview of the typological relation with respect to the development of the perfect. Languages that are attributed to the various types represent examples and the relation between types is not intended to indicate a genetic relationship (although this is sometimes the case).

5. See Jügel (2015: 163) for the respective figure for Yavynobi.

All Iranian languages seem to have passed through the stage of type 1: the PRF.P construction (PRF °*ta-*) is used as a resultative perfect as well as a past perfective. This is represented by Old Persian. In all Iranian languages except Yāynobi and possibly Ossetic, the PRF.P construction ultimately developed into a (past) perfective (PRF °*ta-* > PFV). In Yāynobi, the PRF.P construction remains restricted to the perfect. It may exhibit an extended PRF.P (type 2). Ossetic defies clear classification (type 3). For details on Ossetic see §3.2.

A later innovation that affected all Iranian languages (except maybe for Yāynobi) is the emergence of a new perfect. The first attested formations are the STAY perfect of inscriptional Middle Persian (type 4), the HAVE/BE perfect of Sogdian (type 5),⁶ and the BE perfect with the extended PRF.P in Bactrian (type 6). The extended PRF.P with the suffix *-ka* (henceforth AK perfect) appeared in most Iranian languages including Sogdian that shows such new perfect formations with BE and rarely with HAVE at a later stage (type 5'). The auxiliary EXIST is attested for Early New Persian (type 7). The development of a newly formed perfect to a past perfective is attested in Ormuri, where the AK perfect became the general past and a new perfect was derived from it (type 8). Type 9 displays the merging of the past perfective and the perfect in one single form. These types will be discussed in the following section in more detail.

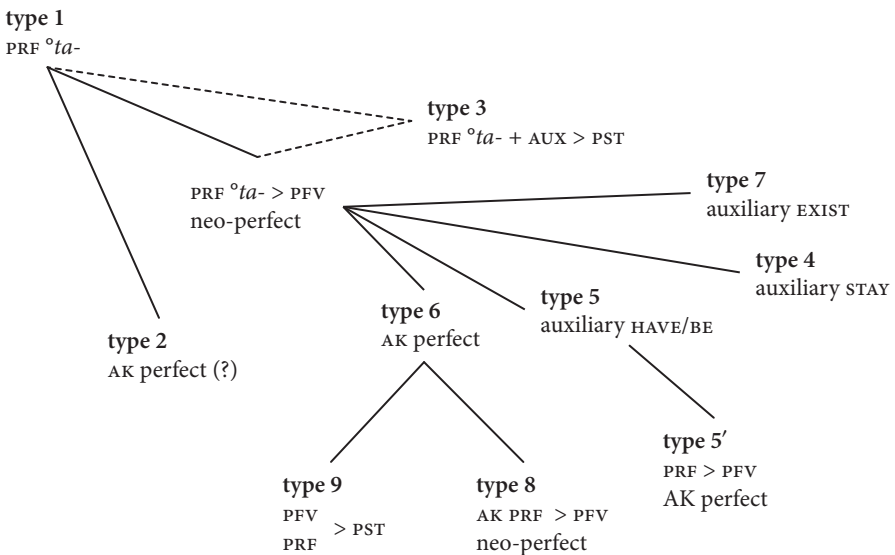


Figure 2. Typology of Iranian perfects

6. Khwarezmian is attested at a stage that corresponds to later Sogdian where the original PRF.P construction had disappeared. It is not clear whether the old imperfect took over perfective functions (as with Yāynobi) or whether this was done by the new perfect (as with Sogdian).

3. Perfect formations in Iranian languages

3.1 Type 1 – the PRE.P construction

The OIr. PRE.P construction is clearly attested in Avestan (1). It started as a resultative construction, but already by this time, this PRE.P construction had adopted a verbal interpretation, which is suggested by the use of the verbal negative particle *nōiṭ* (2) instead of the nominal privative prefix *a-*, i.e. **afrasnāta-* “unwashed”.

- (1)

Yasna Y 48.12d

(Old Avestan, ca. 1000 BCE, TITUS text database)
- tōi=zī*

dātā

hamaēstārō
- DEM.NOM.PL.M=PTCL

give.PRE.P.NOM.PL

adversary.NOM.SG.M
- +aēšəmahiī*
- wrath.GEN.SG.M
- “because they **are created** as an adversary of Wrath”
- (2)

Widēwdād Vd 8.40b-d

(Young Avestan, ca. 600 BCE, TITUS text database)
- zasta=hē*

paoirīm frasnādaiiēn,

āaṭ
- hand.ACC.DU.M=PC.3SG.GEN

first

wash.PRS.OPT.3PL.A

so
- yaṭ=hē*

zasta

nōiṭ

frasnāta,

āaṭ
- if=PC.3SG.GEN

hand.NOM.DU.M

not

wash.PRE.P.NOM.DU.M

so
- vīspqm*

huuqm

tanūm

aiiaoždāta kərənaoiti
- all.ACC.SG.F

own.ACC.SG.F

body.ACC.SG.F

unpurified do.PRS.3SG.IND.A
- “(They) shall first wash his hands! For, if his hands **are not washed**, then (he) contaminates his whole body.”

In Jügel (2015), I suggested that the resultative construction was integrated into the verbal system as a resultative perfect that set the result in relation to the logical object. This would yield a symmetrical system, because the inherited synthetic perfect sets the result in relation to the logical subject (cf. Kümmel, this volume, §2.1).

Table 1. The verbal paradigm of Avestan⁷ (Jügel 2015: 67)

Time	Aspect		Perfect with	
	Imperfective	Perfective	subject reference	object reference
Now	indicative present <i>kərənaoiti</i>	–	perfect <i>tatašā</i>	PRE.P construction <i>dəratəm ahi</i>
Past	injunctive present <i>kərənaoṭ</i>	Aorist <i>čōrəṭ</i>	pluperfect <i>urūraost</i>	PRE.P construction <i>dāta as</i>

7. The verb forms given are attested as follows: *kərənaoiti* e. g. in Yasna Y 10.13, *kərənaoṭ* in Yasna Y 9.4, *čōrəṭ* in Yasna Y 44.7, *tatašā* in Yasna Y 29.6, *urūraost* in Yasna Y 51.12, *dəratəm ahi* in Widēwdād Vd 21.5, *dāta as* in the Pahlavi version of the Widēwdād VdPZ 2.20 (TITUS text database).

With an active interpretation, the resultative construction competes with the inherited perfect.

(3) Widēwdād Vd 3.21a-b

(several times repeated, Young Avestan, ca. 600 BCE, TITUS text database)

yezi=ča=hē *aniia* *aya* *šiiiaoθna*
 if=and=PC.3SG.GEN other.NOM.PL.N evil.NOM.PL.N deed.NOM.PL.N
frauuaršta, *paitita* =*hē*
 commit.PRF.P.NOM.PL.N cancel.PRF.P.NOM.SG.F =PC.3SG.GEN
čiθa *āaʔ* *yezi=šē* *aniia* *aya*
 atonement.NOM.SG.F so if=PC.3SG.GEN other.NOM.PL.N evil.NOM.PL.N
šiiiaoθna *nōiʔ* *frauuaršta,*
 deed.NOM.PL.N not commit.PRF.P.NOM.PL.N
 “And if he **has committed** other evil deeds, then the atonement is cancelled for him. But if he **has not committed** other evil deeds, ...”

Old Persian employs the PRF.P construction as a past perfective and as a resultative perfect.

(4) Xerxes Persepolis XPb 23–7

(Old Persian, ca. 486–465 BCE, Schmitt 2009: 156)

taya *manā* *kārtam* *idā utā*
 REL.NOM.SG.N PRON.1SG.GEN do.PRF.P.NOM.SG.N here and
taya =*mai* *apataaram kārtam,* *awa*
 REL.NOM.SG.N =PC.1SG.GEN far do.PRF.P.NOM.SG.N that.NOM.SG.N
wisam *wašnā* *auramazdāha akunawam*
 all.NOM.SG.N will.INS.SG.M PN.GEN.SG do.IPRF.1SG.IND.A
 “What I **have done** here and what I **have done** far away, (I) was doing all that according to the will of Auramazdā.”

In (4), Darius assures his readers that everything he did was done according to the will of Auramazdā. Referring to all deeds nearby and all those far away, he uses the PRF.P construction, that is, when adopting a holistic view. The imperfect in the main clause (*akunawam*) highlights the durative validity of the adverbial phrase during the course of his action. This contrast can be understood as an aspectual one: the PRF.P construction as a perfective vs. the imperfect as an imperfective.

The oldest MIr. texts that permit an analysis of tense-aspect forms are the Middle Persian inscriptions with Parthian versions, the Middle Persian and Parthian Manichaean texts that can be attributed to Mani and his immediate followers (like the *Šābuhragān*), and the oldest Bactrian texts (all 3rd c. CE).⁸ The OIr.

8. Older texts are the Parthian Nisa documents, but they represent bills and administrative records, which may or may not contain finite verb forms.

PREF.P construction continues into MIr. and is often considered a simple past (e.g. Skjærvø 2009), but there is evidence for aspectual functions as well.⁹ Its aspectual value is apparent if used as a performative in a case of coincidence.

- (5) Middle Persian (no date, text HLS 92, Durkin-Meisterernst 2006: 13)
niwist grīwzīndagī
 begin.PST.3SG [hymns] concerning the Living Soul
 “(Herewith) **begin** the [hymns] concerning the Living Soul.”

Such expressions frequently preface texts such as Manichaean Persian and Parthian hymns (a corresponding expression for the end exists as well). The verb form can hardly be understood as a perfect, simply because the text has explicitly NOT begun when one is reading this sentence. Such expressions function as a marker of the beginning and the end of texts (similar to titles in European traditions). That is, in the act of reading these words the beginning has been completed, a function typically conveyed by present perfectives.¹⁰

3.2 Types 2 and 3 – two isolated cases

Yaynobi is the only language which preserved the PREF.P construction as a perfect and shows no sign that it ever developed into a past perfective (type 2). The Old Iranian PREF.P was probably extended by the *-ka-* suffix, which is a development that Yaynobi shares with many other Iranian languages.

The equivalent of the perfective past (the ‘aorist’ in OIr. terms) is the Yaynobi form *akun*, which formally continues the OIr. imperfect. The Yaynobi imperfect requires special marking by the suffix *-išt*, which also appears with the present indicative. From a structural perspective, therefore, the Yaynobi system mirrors the Persian or Tajik one, although the morphological means of expression differ. While in Persian and Tajik the PREF.P developed to be a past stem, and the OIr. imperfective stem to be a present stem, the Yaynobi PREF.P remained a PREF.P and the imperfective stem lost aspectual marking and did not adopt tense marking, cf. the following comparison of Tajik and Yaynobi forms in Table 2.

For Ossetic, it is not clear whether the PREF.P construction remained a perfect, as with Yaynobi, and then developed to be a past, or whether it first turned into a past perfective. The imperfective stem became the non-past stem and the PREF.P construction developed to be the past stem (cf. Abaev 1964: 35ff.). The alternations of the past stem suggest that another element played a role in this development,

9. For the continuation of aspectual semantics in New Persian see Jahani (2017: 268).

10. Cf. de Wit (2017: 45f.). For more examples see Jügel (2015: 82–90).

Table 2. Yaynobi (Khromov 1972) vs. Tajik (Rzehak 1999)

1SG “to do”	PRS.SBJV	PRS.IND	PST.PFV	PST.IPFV
Tajik	<i>kun-am</i> do.PRS-1SG	<i>mē-kun-am</i> IPFV-do.PRS-1SG	<i>kard-am</i> do.PST-1SG	<i>mē-kard-am</i> IPFV-do.PST-1SG
Yaynobi	<i>kun-om</i> do-1SG.PRS	<i>kun-om-išt</i> do-1SG.PRS-IPFV	<i>a-kun-im</i> PST-do-1SG.PST	<i>a-kun-im-išt</i> PST-do-1SG.PST-IPFV

probably an auxiliary that was amalgamated with the PRF.P of transitive verbs (cf. Christol 1990: 43f.). Aspect is mainly expressed by means of spatial prefixes,¹¹ which mostly have lexical input as well. In the present tense they only form *aktionsarten*. Preverbs that render a form perfective can be turned imperfective by attaching *-cæy* to them (cf. Table 3). Despite its typological similarity to Russian, the Ossetic aspect system developed independently, since Russian influence in the region is fairly recent (18th-19th c., cf. Thordarson 2009: 67).

Table 3. Ossetic (Iron dialect, Abaev 1964: 45f.)

Present stem	atelic	<i>cæwin</i> “to be going”
	telic	<i>ra-cæwin</i> “to go out”
Past stem	atelic (imperfective)	<i>cidi</i> “(s)he was going”
	perfective	<i>ra-cidi</i> “(s)he went out”
	secondary imperfective	<i>ra-cæy-cidi</i> “(s)he was going out”

Sjögren (1844: 116, 128ff.) mentions a special perfect formation with the auxiliary ‘to complete’, which would form ‘states of completion’ (“vollendete[r] Zustand”) for present, past, and future, e.g. *æz fust fædæn* “I have written”, i.e. the writing is now completed and thus completely over (p. 289). However, since there is no trace of this perfect in later grammatical descriptions and Kozyreva (1963: 275) mentions the verb *fæwin* “to complete” as a means of lexical derivation, Sjögren possibly received a paraphrase as an answer when searching for the Ossetic equivalents of West European perfects that are marked for completion.

3.3 Type 6 – the AK perfect

The inherited PRF.P, common to all Iranian languages, is extended by a suffix *-ka-* (cf. §2) in most Mlr. languages. In origin, it was an adjective (Durkin-Meisterernst 2014: 253; Paul 2013: 131f.) and in combination with ‘be’ (the 3SG usually being omitted), it formed a resultative construction just like the original PRF.P in Old

11. Few examples of suppletive verbs are attested, cf. Abaev (1964: 45).

Iranian. And just like the OIr. resultative construction, the Mlr. one developed to be a resultative perfect as well. There are very few Parthian examples and they all allow for an adjectival interpretation. In Middle Persian, this perfect type is very late. Only Middle Persian texts from the New Persian period seem to contain clear examples of AK perfects, although a thorough investigation is a desideratum. However, in Bactrian it is the only way to express a perfect.

- (6) Manichaean Parthian (no date, text FH 1152, Reck 2004: 176)

istāwādag ast hō šahr

praise.PRF.P COP.PRS.3SG that land

“[In that higher realm, the perfect ones are noble.] That land **is praised**, [there is nothing shameful for the souls]”

- (7) Middle Persian

(end of 9th c. CE, text WZ 29 §8, Gignoux & Tafazzoli 1993: 96)

ud ān ī ka tan xuftag ruwān bēronihēd

and when body sleep.PRF.P soul go_out.PRS.3SG

“and when the body **has fallen/is asleep**, the soul departs”

Several late Middle Persian texts show an increase in such forms and it is not clear whether they represent a stage of development where this resultative construction developed into a resultative perfect, or whether they calque the New Persian system.¹²

I have identified 13 forms with verbal use for Bactrian, nine with ‘to write’.¹³ This is of course due to the text corpus, but the expression ‘to be written’ appears frequently as a clear stative construction, e.g.:

- (8) Bactrian (4th c. CE, text C20, Sims-Williams 2012: 34f.)

σαγωνδο αβο μασκο ναβιχτογο

cayōnd av mask navixtag

as to herein written.PRF.P

“[And may (this) document ... be (considered) good and valid] as (it) **is written** herein”

This construction also appears with a past auxiliary as with the following example where the past copula together with the extended PRF.P expresses a past stative:

12. The latter explanation is possible, because Middle Persian was continued as the literary languages of the Zoroastrians in New Persian times.

13. For examples see Jügel (2015: 91–94).

- (9) Bactrian (early 7th c. CE, text M 4–5, Sims-Williams 2012: 66f.)
 ασιδ=ασο μωιανο παρο κηρδδ-ιγο ασταδδ-ινδο
acid=as mōyan pār kirdig astād-ind
 which=by PN loan DO.PRF.P be.PST-3PL
 “[the three dirhams ...] which **had been loaned** by Moyan”

This clause appears on a receipt where Naneband confirms that Mus has paid back money ‘which had been loaned by Moyan’. When the loan is described, it was important to mention that it is qualified by a past event. It is not so much that the result of the past event has any consequences, nor is it relevant that the event is accomplished (perfective so-to-say). The money is qualified by its former state of having been a loan taken by Moyan. Thus, the construction would not be a pluperfect or past anterior, but a past stative.

One of the few active readings with an extended PRF.P is attested in the late document V, which contains a sale contract. Here, a stative interpretation is possible as well.

- (10) Bactrian (8th c. CE, text V 14, Sims-Williams 2012: 118f.)
 ασιδο χοδδηοο βαραδδικανο ρωβο-χαρο λαδδινδ
acid xadēw baradikān rōv-xar lādīg-ind
 which lord Baradikān khar of Rob give.PRF.P-3PL
 “which the *khar* of Rob **has given** to the lord of (the estate) Baradikan”

A property is described by naming the adjacent properties, one of which is the property which someone has given to somebody else. This action lies prior to the current situation where the property is described, although the exact temporal distance is totally unclear and irrelevant. The past event is presented as a timeless attribute. The expression would not become unintelligible if a temporal adverb, such as ‘last year’, were inserted. However, what we do not know is whether this would have caused a change of verbal form (as with English).

A resultative interpretation is possible in the following example:

- (11) Bactrian (7th c. CE, text Nn’ 2–3, Sims-Williams 2012: 74f.)
 ακιδδ=ηιο ναμο οδο οαρσοχοανδανο αβο ναρογο ζ(α)μιγο
akid=ē nām ud warcəxwandan av harug zamīg
 which=PC.3SG famous and miraculous to all earth
 βοοαδογ-ινδο
vuwādag-ind
 become.PRF.P-3PL
 “whose renown and miraculous ability **have reached** the whole earth”

Thus there is only one feature of the extended PRF.P construction in Bactrian that we can clearly identify and that is the attribution of a preceding event to the situation under observation (be it present or past). The event is perfective in the sense both that its inner time span is irrelevant and that it is always completed.

Sogdian and Khwarezmian show a few perfect formations of the extended PRF.P and the auxiliary HAVE. In Sogdian, this formation seems to be of younger age than the simple PRF.P + HAVE. It is possible that the older formation began as a perfect and developed into a perfective in the course of which a new perfect was built upon the extended PRF.P.

Among Nlr. languages the AK perfect is the most common one. Frequent variants of this suffix include *-ak*, *-ag* and *-e < *^oa-ka-*. In Central Kurdish we find *-û*, which may derive from **^oũ-ka-*, the North Kurdish 3SG could reflect **^oĩ-ka-* (e.g. PRF.P of “come” *hât-û-wa* vs. *hât-ĩ-ya*). The definition given by Lazard (1992: 152f.) for the semantics of the perfect in New Persian seems to work for most Nlr. languages where grammars provide more than morphological descriptions:

“The perfect expresses an action achieved in the past, while implying a reference to the present, whether the result of this action persists in the present, or whether the achievement of this action be situated in a completed time. [...] (1) it expresses the present result of an action completed in the past (perfect proper): [...] *âmade-ast* [...] ‘he has come, he arrived, he is there,’ [...] (2) it indicates an action accomplished in an epoch considered as closed (completed past);”

The second use is exemplified in the following example:

- (12) New Persian (text Qazvini, Lazard 1992: 153)
- ebtedâ=e zohur=e zabân=e torkî dar âzarbâyjân dar*
 beginning=EZ appearance=EZ language=EZ Turkish in Azerbaijan in
zamân=e salâjeqe [...] šorū^s šode ast va sepaš [...]
 time=EZ Seljuks begin.PRFP be.PRS.3SG and then
šoyu^s=e torkî dar âzarbâyjân rafte rafte qovvat
 spreading=EZ Turkish in Azerbaijan gradually strength
gerefte [ast]
 take.PRFP be.PRS.3SG
 “the first appearance of the Turkish language in Azerbaijan was in the Seljuk period [...], then, [...], the use of Turkish in Azerbaijan gradually increased [*lit. took strength*]”

A more conservative group is found among East Iranian languages, notably Wakhi and most of the Pamir languages: Bartangi, Iškašmi, Rošani, Sarikoli, Šuyni, Yazgylami.¹⁴ These languages display three basic forms, e.g. Iškašmi ‘to go’ present

14. On the genetic affiliation of the Pamir group see Wendtland (2009).

tac-, past *tūyd-* and perfect *tūyd-ūk-* (Pakhalina 1959: 52–55). The AK perfect of Pamir languages is often not described as a tense but, for instance for Wakhi, as a form that “indicate[s] resultativity, stativity, or inferentiality” (Bashir 2009: 837),¹⁵ cf. the following example from Yazyulami with future tense reference.

- (13) Yazyulami (New EIr., Èdel'man 1966: 55)
kaš na-mədə́ ki bad-šm
 hot not-become.PRF.P that go.PRS-1PL
 “It **will not have yet become** [PRF] hot by the time we get [PRS] there.”

Èdel'man's (1966) description of the Yazyulami verb system seems to orient itself on the basis of morphological analysis. The verb forms of the Pamir languages correspond to the Persian present, simple past and perfect forms, and their usage resembles the Persian use to a certain extent. This is probably why she explicitly says that the category of aspect does not exist in Yazyulami and that aspectual meaning is conveyed by the context (1966: 50). However, she also makes some important observations that support an aspectual analysis. For instance, the form of the present can function as an imperfective if it appears together with past tense forms (1966: 52). The simultaneity of the events is expressed by the background information appearing in the so-called ‘present tense’, while the main line of narration appears in the past tense.

- (14) Yazyulami (New EIr., Èdel'man 1966: 52)
šʰkər-án=da du peθ lūs=an=at yačág fūd
 search.PRS-3PL=IND there bullet naked=COP.3PL=and girl descend.PST
na varág du čer varág ifi payčák=ay kavd=a xūd
 from horse that four horse their.PROX foot=PC.3PL cut.PST=and self
sʰwer mād=at šod
 bestride.PST.3SG=and go.PST.3SG
 “[While] they **were searching** [PRS] for a bullet there and **were** [PRS] naked, [lit. and] the girl dismounted [PST] from her horse, slit [PST] the legs of their horses, and herself, she mounted [PST] (her own horse) and left [PST].”

Past tense forms can express future events that are accomplished before the second event starts (cf. 15).

- (15) Yazyulami (New EIr., Èdel'man 1966: 54)
ž=im=at na-ayéd=a bu zay-ay?
 OBJ=PRON.3SG.OBL=PC.2SG not-bring.PST=and then come.PRS-2SG
 “**Would you not take** [PST] her (there) and then come [PRS] (back)?” or “Would you not come (back), (after) you **have taken** her (there)?”

15. For the discourse function of verb forms in Wakhi see Obrtelová (2017).

This suggests that the so-called ‘present’ and ‘past’ tenses are not pure tenses, but have retained their aspectual values at least to some extent. Inasmuch as descriptions of other Pamir languages mention functions besides present, past and resultative for the forms of the present, past and perfect, they seem to concur with the Yazylami system.¹⁶

3.4 Type 4 – the ‘STAY perfect’

When Mlr. languages appear, the OIr. PRF.P construction had already shifted to a perfective with a mostly past tense reading. Parthian and Middle Persian show the genesis of a STAY perfect. In Parthian, however, this construction is still at the resultative stage.¹⁷ The earliest Parthian and Middle Persian examples contain only the verb ‘write’, as in ‘stands written’, which entails that something exists in written form. All our examples are from the early inscriptions. In these expressions, the previous action of writing is not relevant, cf. the only Parthian example in the inscriptions (16).

- (16) Inscriptional Parthian (early 3rd c. CE, text ŠKZ 22, Huyse 1999: 53, §40)
ud ēd nibišt awištēnd kē abar pābag šāh xwadāyif
 and this written.PRF.P stay.PRS.3PL who over PN king reign
būd ahēnd
 be.PRF.P be.PRS.3PL
 [lit.] “and here **stand written** (those) who were (living) under the reign of the king Pābag: (list of names)”

The remaining 12 Parthian examples of type 4 contain various verbs, but all are either intransitive (e.g. ‘sit down’) or transitive passive (e.g. ‘be mixed’). Furthermore, all permit a stative reading. Literal constructions are still attested in Manichaean Parthian (17), but some are grammaticalized as resultative perfects (18).

- (17) Manichaean Parthian
 (no date, text HLS 404–407, Durkin-Meisterernst 2006: 39)
tō wasnād nāwāz nēw [...] padrāst ištēd
 you.SG for herdsman good prepare.PRF.P stand.PRS.3SG
kū=t pār pāzā
 that=PC.2SG bring_across.PRS.SBJV.3SG
 “For you the good herdsman [...] **stands ready** to bring you across to the other side”

16. The East Middle Iranian language Saka exhibits three forms as well: present, past and perfect (PRF.P + auxiliary BE), but the functional difference between past and perfect have not yet been identified (Emmerick 2009: 396).

17. In the oldest Parthian texts, the Nisa documents from the 1st c. BCE, no instances are attested (Djakonov & Livshits 2001), which may well be due to the genre of receipts and accountancy.

- (18) Manichaean Parthian (no date, text SeSe 79, Sundermann 1997: 80)
bid mānhāg ahēnd ō iskand kē ō any kēj rāh abar
 further similar be.PRS.3PL to palsied who to other someone way over
nimāyēd ud niḡfārēd ud wxad nišast ištēd
 show.PRS.3SG and hurry.PRS.3SG and self sit_down.PRF.P stay.PRS.3SG
ud čamādan nē šāhēd
 and go.INF not can.PRS.3SG
 “Moreover (they) are similar to a palsied one who shows the way to others and
 hurries (them) along and (he) himself **remains seated** and cannot go.”

The construction *nišast ištēd* has been described as “*perfectum praesens*” (Henning 1933: 246) or “*parfait statique*” (Ghilain 1939: 119) and Sundermann (1997: 112) follows Henning in defining the perfect as an “expression of the persistence in a state achieved with the completion of an action” (own translation).

Still, the Parthian perfect remains very close to the original meaning of a stative expression. In the following example, events that took place before topic time are expressed by the past perfective. The perfect is used in the subclause to express a continuous result (‘to be adorned with garments’ i.e. ‘to wear garments’).

- (19) Manichaean Parthian (no date, text MkI 1940–1941, Sundermann 1981: 119)
ud winōh dārāw gyān frēstagān āwāst ud parwān man awištānād
 and lo! PN soul angel.PL bring.PST and before I put.PST
kaḡ wirāšt ištēd pad šahrdārān brahm aβḡēn
 when adorn.PRF.P stay.PRS.3SG by ruler.PL appearance habit
 “And, lo!, angels brought the soul of Dārāw and placed (it) in front of me,
adorned with garments of lords”

Middle Persian exhibits the same use of STAY perfects in the early texts (20). In contrast to Parthian however, Middle Persian uses the STAY perfect for past tense reference as well (21).

- (20) Inscriptional Middle Persian (3rd c. CE, text KI 1 §14, Jügel 2010)
ōy ēd ōwōn abar nibišt ēstēd kū kirdir ī ēhrbed
 that this such on write.PRF.P stay.PRS.3SG that PN EZ PN
 “this is **written** on them as such, namely Kirdir, the Ēhrbed” (cf. German *steht geschrieben*)
- (21) Inscriptional Middle Persian (3rd c. CE, text KI 3 §13, Jügel 2010)
u=m was xwēš nām [...] abar gid [...] nibišt
 and=PC.1SG often own name ... on certificate ... write.PRF.P
ēstēd
 stay.PRS.3SG
 “And I **have** often **written** my name on certificates ...”

The high priest Kirdīr lists signs of his glory, among others the fact that his name appears on many certificates. He is not referring to the many events of writing that happened in the past, but to the current state which results from his activities. The proper event is defocalised with respect to the consequent situation.

Present resultative readings are still attested in later stages of Middle Persian, cf. (22) where the preceding events are irrelevant and only their consequent situation matters.

- (22) Middle Persian (beginning of 7th c. CE, text ŠNŠ 3 §2, Tavadia 1930: 73)
ka šādurwān=ē wistard ēstēd u=š bōb=ē ud bālišn
 if carpet=1 stretch.PRF.P stay.PRS.3SG and=PC.3SG pad=1 and cushion
dō abar nihād ēstēd zan=ē abar nišinēd ud
 two above put.PRF.P stay.PRS.3SG woman=1 above sit.PRS.3SG and
daštān be bawēd
 menstruation PTCL become.PRS.3SG
 “If a carpet is **stretched out** and a pad and two cushions **are put** upon it, a woman is sitting on (top) and begins to menstruate [if she puts a foot from the cushions onto the pad and from the pad onto the carpet, then pad and carpet both are contaminated.]”

The pluperfect is formed with the past perfective of the auxiliary (23). This form is diagnostic for distinguishing NIr. STAY perfects from EXIST perfects (cf. §3.6).

- (23) Middle Persian (beginning of 7th c. CE, text KN 4 §22, Čunakova 1987: 45)
warrag=ē [...] abāg=iš pad asp nišast ēstād
 ram=1 with=PC.3SG on horse sit.PRF.P stay.PST.3SG
 “a [...] ram **was sitting** with him on the horse [*lit.* had sat down]”

This perfect is continued in several NIr. languages in Southern Iran where the auxiliary became a suffix forming a ‘perfect stem’, e.g. Dašti (Fārs province) 1SG past perfective *and-om* < **āmad-am*, perfect *and-es-om* < **āmad-ēst-am*, pluperfect *and-esad-om* < **āmad-ēstād-am* (data from Salami 2011).

The NIr. language Parači has two pluperfects. The past variant of the present perfect uses the auxiliary BE in the past perfective, e.g., *suwār nhaštō bōn* “he had mounted a horse”. The other type exhibits the auxiliary STAY in the past perfective and focuses on the new situation achieved by the preceding event, e.g., *nhašta hastam* “I was sitting” (both examples by Morgenstierne 1929: 100).

STAY auxiliaries also appear in progressive formations (e.g. in Tajik), but these formations are of younger origin and cannot be linked to the Middle Persian STAY perfects.

3.5 Types 5 and 5' – the 'HAVE perfect'

This type is a typological parallel to the perfect in Romance, Germanic, or Hittite. The auxiliary selection was triggered by transitivity (V.TR + HAVE, V.INTR + BE), but it is possible to observe a spread of HAVE according to the semantics of the verb: so-called 'unergative verbs' adopt HAVE (cf. Wendtland 2011). It only appears in Sogdian and Khwarezmian.¹⁸

In the Sogdian Ancient Letter V, the scribe reports past events using the past perfective. The HAVE perfect appears when he reports an interaction.

- (24) Sogdian (early 4th c. CE, Ancient Letter V, 22, Grenet et al. 1998: 93)
- | | | | | |
|-------------|----------------|--------------|---------|------------|
| AḤRZY=m | δβrtw | δʹrt | ZKw | n(?)krtkw |
| arti=m | θβartu | ḍārt | awu | nākərtaku |
| and=PC.1SG | give.PRF.P.ACC | hold.PRS.3SG | DEM.ACC | silver.ACC |
| AḤ[R](Z)Y=m | ptmʹt | | | |
| arti=m | pətmāt | | | |
| and=PC.1SG | weigh.PST | | | |
- "and he gave [PRF] me the silver and I weighed [PST] (it)"

This usage of the perfect is also found in Pamir languages where an event that is a prerequisite for the progress of another appears in the perfect (cf. 15). In order to reflect this relation, one could also translate: "After he gave me the silver, I weighed (it)."

In this text, the *verba dicendi* first appear in the past perfective as part of the story line (l. 22 *rəšt(?)* "he declared", l. 23 *pətfəəršt* "I asked"), but when the addressee gives the explanation as to why the amount of silver was less than promised, the scribe uses the perfect: *wəytu ḍārt* "he has said". This is reminiscent of the discourse functions of the perfect identified by Levinsohn (this volume, §2), viz. highlighting the result of the speech concerned.

In later texts, the HAVE perfect is used like a past perfective (cf. Benveniste 1929: 51) and an extended PRF.P appears (as with Persian). The latter forms a perfect with the auxiliaries BE and (perhaps) HAVE (Gershevitch 1954: 126), probably filling the gap left by the old HAVE perfect.

The semantic shift of the HAVE perfect to a past perfective goes together with phonetic erosion of the auxiliary, which merges with the participle. In addition to paradigmatic levelling (the auxiliary attaches to the present stem), contraction occurs, e.g. "to do" *ək(ər)tu ḍār- > kəār-* (Yoshida 2009: 301). The Sogdian type does not seem to have any continuation in modern Iranian languages,¹⁹ which clearly distinguishes Yāynobi – sometimes called New Sogdian – from Sogdian.

18. In Khwarezmian, only three perfects are attested, two transitive and one intransitive verb that all appear as the extended PRF.P with the auxiliary HAVE (Durkin-Meisterernst 2009: 354).

19. For Ossetic see §3.2.

3.6 Type 7 – the ‘EXIST perfect’

This type of perfect is most prominently represented by Early New Persian. This construction is similar to the Old Iranian resultative construction. It consists of the PRF.P (not the PRF.P extended by **-ka-!*) and the existential verb as auxiliary, which is usually derived from the 3SG of the copula (e.g. Persian 3SG *ast* → 1SG existential verb (*h*)*ast-am*).²⁰

(25) Early New Persian

(ca. 1000 CE, text Šāhnāme, Luhrāsp, 12 l.637, Ferdousi 2001)

ze hišvī qeyšar bipursad suxan nō=st īn
 from PN PN ask.SBJV.3SG speech new=COP.3SG this
na-gāšt-ast bārī kuhan
 NEG-turn.PST-PRF.3SG once old

“Caesar shall ask Hišvi (for) an answer – this (matter) is new, (it) **has not turned** old yet”

Its exact reading and function is disputed for Early New Persian, partly due to the limited number of instances (cf. Lenepveu-Hotz 2014: 165ff.). Paul (2013) defines its usage as a resultative perfect, but mentions arbitrary alternation with the past perfective. His example (cf. 26), however, matches the use of perfects in Pamir languages for events that are completed before another event takes place (cf. exx. 13, 15).

(26) Early Judeo-Persian

(text Lr.4, Paul 2013: 132)

šud hest īn daniel [...] u=kand [...] šiš juft durr
 go.PRF.P exist.3SG this PN and=dig.PST six pair pearl

“Daniel **went** [PRF] [...] and took [PST] six pairs of pearls”

In Early Judeo-Persian, persons other than 3SG²¹ are marked between the PRF.P and the auxiliary (27).²²

20. Instead of the existential verb, one could assume ‘stay’ as the auxiliary (as with Middle Persian). However, the writing of the 3SG is conclusive: *gštst* can only represent *gašt-ast* and not *gaštestad* (which would be written *gštstd*) < *gašt* + auxiliary “stay” *ēstad* (cf. Lazard 1963: 340f.).

21. The form *ast* is historically the 3SG but was reinterpreted as the stem of the existential verb. As such, one could postulate a Ø-ending for the 3SG: *ast-Ø*, which is supported by New Persian tendencies to substitute Ø-endings by *eš*, cf. *hast* or *hasteš* (see Jügel 2015: 462f.).

22. Similarities to perfect formations in languages of today could be accidental. While some Southern Kurdish dialects seem to correspond to Early Judeo-Persian, e.g. *na-xwārd-im-as* “I have not eaten”, others display the remnant of an extended PRF.P, e.g. *na-xwārd-iğ-m-a* (both forms in dialects of Mähkšāy etc., Fattah 2000: 381).

- (27) Early Judeo-Persian (text Ez 208.22, Paul 2013: 132)
xušk būd-end hest
 dry become.PST-3PL exist.3SG
 “(They) **have become** dry.”

The usage of this form in rhymed texts may well be due to metrical concerns (cf. 28), because in the same chapter all other stories that begin with ‘I have heard’ show the past perfective *šenīdam* instead. However, (29) expresses a stative and (30) a resultative.

- (28) Early New Persian (Būstān=e Saʿdī Chapter 4 tale 65, Šarīʿat 2005: 151)
šenīd-ast-am az ravīān=e kalām ke dar ʿahd=e ʿisā
 hear.PST-PRF-1SG from narrator.PL=EZ speech that in age=EZ Jesus
ʿaleyhe=s=salām yek=i zendegānī talaf karde būd
 peace on him one=INDF all the life waste.PRF.P be.PST.3SG
 “I **have heard** from the storytellers that in the age of Jesus – peace on him – someone had wasted all (his) life”
- (29) Early New Persian (Būstān=e Saʿdī Chapter 4 tale 65, Šarīʿat 2005: 151)
kas az man siyahnāme-tar dīde nīst
 someone from I ill_fame-COMPAR see.PRF.P not_be.PRS.3SG
 “None’s **to be seen** with a record blacker than mine”
 (translated by Wickens, see Saʿdī 2004: 1247)

- (30) Early New Persian (ca. 1000 CE, Šāhnāme, part 10: Manučīhr, Šarīʿat 2005: 151)
be ranjī resīd-ast-am az xwīštan ke bar man bigurīd
 to pain arrive.PST-PRF-1SG from self that on I yell.PST.3SG
hame anjuman
 all assembly
 “I **have arrived** at suffering by myself so that the whole assembly yelled at me”

Some modern Iranian languages seem to continue the EXIST perfect like the dialect of Māšarm (Fārs province). While the 1SG could be analysed as a continuation of a STAY perfect as well: *and-es-am* < **āmad-ēst-am* or *āmad-ast-am*, the 3SG and the pluperfect suggest the latter: 3SG *ande* < **āmad-ast* and 1SG pluperfect *anda boḍ-am* with the past stem of the copula *boḍ-* (cf. Salami 2004: 181).²³ Languages that show a morpheme *-n* in the perfect (e.g. dialects of Fārs or Mināb) could be continuing the imperfect of the copula, cf. Middle Persian 3SG *anād* (Jügel 2015: 132ff.).

23. In principle, *ande* could also derive from *āmadag (ast)*, but *ag* seems to be continued as *a*, not *e*. The 3SG pluperfect seems to continue an analogically formed past of *ast-*: *andasā* < **āmad-ast-ād* (cf. Bactrian *astād*).

3.7 Types 8, 9 and further subtypes

Types 8 and 9 both derive from the AK perfect (type 6). Type 8 is represented by the East Iranian language Ormuṛi, which has generalised the extended perfect participle as the past stem (e.g. *būk-* PST of ‘be’ < **būta-ka-*, cf. Morgenstierne 1929: 359). After the perfect had become a past perfective, a new perfect is formed by adding the accentuated enclitic =*e* to the finite verb, e.g. *alcók-om* ‘I went’ → *alcók-om=e* ‘I have gone’ (Kieffer 2003: 175). Morgenstierne proposes the 3SG.PRS.IND of the copula as the origin of this perfect marker (l.c.).

Type 9 comprises languages that show a (partial) coalescence of the past perfective and the perfect (e.g. Gileki, Sangesari [Semnan]). Colloquial New Persian shows a similar tendency where some person forms are only distinguished by accent, e.g. 1SG: perfect *kardám* < *karde=ám* vs. past perfective *kárdam* (cf. Lazard 1992: 152).

Besides, there are a number of languages that belong to one of the described perfect types, but do not employ the Old Iranian PRE.P for the formation of the past imperfective. In this regard, they are subtypes as well.

Hawrami in Southern Kurdistan continues the principle of aspectually marked stems. It preserves the OIr. imperfective stem for the present and the imperfect (e.g. *us-* vs. *wit-*, cf. Table 4). Some verbs display a modal marker in the present, which probably derives from the imperfective marker (prefix *m-* < **ham-ayu-* ‘same time’ (?), cf. Bartholomae 1920: 26f.), and the verbal endings mark tense beside person and number.²⁴

Table 4. Hawrami (cf. MacKenzie 1966)

Stem	Affix	‘do’	‘sleep’
Imperfective	Present	<i>kar-u</i>	<i>m-us-u</i>
		do.IPFV-PRS.1SG	IND-sleep.IPFV-PRS.1SG
	Imperfect	<i>kar-ene</i>	<i>us-ene</i>
		do.IPFV-PST.1SG	sleep.IPFV-PST.1SG
Perfective	Past	<i>kard-ā(ne)</i>	<i>wit-ā(ne)</i>
		do.PFV-PFV.1SG	sleep.PFV-PFV.1SG
	Perfect	<i>kard-anā</i>	<i>wit-anā</i>
		do.PFV-PRE.1SG	sleep.PFV-PRE.1SG

24. Yidya and Munji preserved the OIr. imperfective stem for the formation of present and imperfect as well (Morgenstierne 1938: 150–152 and 163).

Pashto also reanalysed the perfective form as the past stem, but it displays an aspect system with the prefix *wə-* marking perfectivity. In the present and the perfect, the perfective formation is used as a subjunctive.²⁵ It is an open question whether this modal use should be described in aspectual terms or whether one can compare this system to WIr. languages which use the prefix *be-* (cognate of *wə-*) in the subjunctive (as with Persian) and for perfective forms.²⁶ An important difference is that the unmarked form in the past is the imperfect (cf. Table 5). This means that the OIr. PRF.P construction developed (probably via a past perfective) to be a simple past and was reinterpreted as an imperfective past once the perfective prefix was established.

Table 5. Comparison of the Pashto and New Persian verb formation

	Pashto (cf. David 2014)		New Persian (cf. Lazard 1992)	
	'arrive' 2SG		'arrive' 2SG	
Present	perfective (SUBJ)	<i>wə-ras-eg-e</i>	<i>be-res-i</i>	present subjunctive
	imperfective	<i>ras-eg-e</i>	cf. <i>mi-res-i</i>	present indicative
Past	perfective	<i>wə-ras-ed(-əl)-e</i>	<i>res-id-i</i>	simple past
	imperfective	<i>ras-ed(-əl)-e</i>	<i>mi-res-id-i</i>	imperfect
Perfect	imperfective	<i>ras-ed-əl-ay ye</i>	<i>res-id-e=i</i>	perfect indicative

There are a number of NIr. languages where the imperfect (and present) were substituted by progressive formations that contain verbal nouns. These analytic imperfective formations usually consist of present participle + auxiliary (e.g. East Iranian Parači, cf. Morgenstierne 1929: 87–98) and infinitive + locative + auxiliary (e.g. West Iranian Taleši, cf. Schulze 2000: 23, Gileki, cf. Rastorgueva et al. 2012: 154–155, and similarly Caucasian Tat, cf. Authier 2012: 194). The infinitive formation has equivalents in Turkic languages (e.g. Turkish *gel-mek-te-yim* come-INF-LOC-COP.1SG ‘I am coming’)²⁷ and the participle formation in Aramaic (cf. Khan, this volume).

25. The perfect subjunctive and indicative only differ in the 3sg, e.g. ‘go’ subjunctive *tləlay-yi/wi* vs. indicative *tləlay-day*.

26. Cf. for instance David (2014: 274). There are a number of languages that use the marker *be-* (and variants) for all past tense forms except for the imperfect (cf. Jügel 2013).

27. In colloquial Modern Turkish, this form is relatively rare (cf. Ersen-Rasch 2012: 211), while Kißling (1960: 159) describes its use as frequent for the contemporary ‘Ottoman’ Turkish of his time.

4. Semantics of Iranian perfects²⁸

The survey shows that Iranian perfects usually express a situation at reference time, which is the result of a preceding completed event, or events which have a consequence for a subsequent event. This has an effect on the *aktionsart* interpretation. It is often the case that ingressive and durative *aktionsart* are not lexically distinguished (cf. for Armenian Kölligan, this volume, §4.3.2), e.g. verbs like ‘sit down’ are interpreted as ‘be sitting’ in the perfect. The following elicited examples show the correlation of *aktionsart* and verb forms as well as the difference of past tense expressions in New Persian.

(31) New Persian

man az in sag {form of *tarsidan*}

I from this dog be afraid/frightened

‘I {form of *be afraid/frightened*} this dog’

- a. past perfective: *tarsid-am* (be afraid.PST-1SG) ‘I was frightened by this dog.’ [Some time in the past or just now, but I am not generally afraid of this dog.]
- b. imperfect: *mī-tarsid-am* (IPFV-be afraid.PST-1SG) ‘I was afraid of this dog.’ [I was afraid of this dog for a longer period of time, which is presumably over, cf. variant d.]
- c. perfect: *tarside=am* (be afraid.PRF.P=COP.1SG) ‘I have been frightened by this dog.’ [I have been frightened by this dog (in the past) and I am still afraid of it.]
- d. present: *mī-tars-am* (IPFV-be afraid.PRS-1SG) ‘I am afraid of this dog.’ [tenseless proposition]

If the present/past progressive is used instead of the present or imperfect, the proposition is expressly valid for reference time, e.g. *man dāram az in sag mītarsam* ‘I am afraid of this dog (right now).’

The completion of the event makes the perfect of durative verbs incompatible with so-called existential perfects, because the event denoted by the verb cannot be continued into the time of reference. The following example from Mukri Kurdish shows how the use of the perfect and imperfect change the interpretation

(32) ‘I {form of *live*} in Tehran since 2010.’

(Mukri Kurdish)

mīn la sāl=ī 2010 la tārān žyān {form of *kirdin*}

I in year=EZ 2010 in Tehran life do

- a. present: *žyān da-ka-m* (life IPFV-do.PRS-1SG) ‘I have lived’ [including today]

²⁸ I am grateful to Saloumeh Gholami and Hiwa Asadpour for discussions on Persian and Mukri Kurdish.

- b. perfect: *žyān=im kirduwa* (life=PC.1SG do.PRF.P) “I was living” [excluding today, speaker could now be back in Tehran]
- c. imperfect: *žyān=im da-kird* (life=PC.1SG IPFV-do.PST) “I was living” [excluding today, speaker cannot be back in Tehran]

The perfect expresses the continuation of the result of a previous event or, as Mahmoodi Bakhtiari (2002: 91) puts it, “it refers to a past action which has kept its validity”, which is why it can have purely past tense reference when quoting historical figures (like ‘the great poet Ḥāfeẓ said [PRF]’). This is a feature that is already attested for Middle Persian (e.g. *guft ēstēd* in Dēnkard Book VI Chapter 6). This usage might be the link to the expression of ‘remote past’ by the perfect and more commonly by the pluperfect, which is attested in a number of languages like Khwarezmian (Durkin-Meisterernst 2009: 354), Šuyni (Edelman & Dodykhudoeva 2009: 806) or Caucasian Tat (Authier 2012: 191).

4.1 Double perfects or supercomposed perfects

The combination of the PRF.P with the perfect of the auxiliary is often mentioned in the description of Iranian languages. It may be rare in colloquial or modern use²⁹ and one reason could be that their function is seldom required in everyday communication.

According to Lazard (1992: 156) the double perfect in New Persian fulfils the same function as the pluperfect, viz. to indicate “an action [that] was found already completed at a certain moment in the past” if the past events are expressed in the perfect (33). If they are expressed in the past perfective, the pluperfect is used. This usage seems to be attested for Tajik as well (Perry 2005: 232).

- (33) New Persian (Lazard 1992: 156)
dar ān vaqthā yaʿnī devist sāl qabl az ferdowsī hanūz zabān=e
 in that time.PL thus 200 year before PN yet language=EZ
ʿarabī inqadr tārāǰ bar zabān=e fārsī na-karde būde va
 Arabic such pillage on language=EZ Persian NEG-do.PRF.P be.PRF.P and
ʿanāšer=e ʿarabī dar ʿebārāt=e fārsi lābodd be yāyat andak būde
 elements=EZ Arabic in phrases=EZ Persian extremely few be.PRF.P
 “in those times, that is, two hundred years before Ferdowsi, the Arabic language **had not yet invaded** the Persian language, and the Arabic elements in Persian expressions were extremely few”

29. According to Mahmoodi Bakhtiari (2002: 48) double perfects “are not at all used in contemporary Persian”.

An early attestation of the double perfect (or pluperfect) is the following Middle Persian example with the past tense of the auxiliaries *stay* and *be*. The double perfect describes a situation resulting from an event prior to the thread of narration.

- (34) Middle Persian (text AW 89 §4, Jügel 2015: 819)
u=šān ... mardōm ī=š andar sālārīh mad ēstād
 and=PC.3PL people REL=PC.3SG in rulership come.PST stay.PST
būd gursag ud tišna ud abējāmag dāšt
 be.PST hungry and thirsty and unclothed hold.PST
 “And they held ... people who **had come** under their rule hungry and thirsty and unclothed.”

Kieffer (2003: 181) seems to describe the same function for Ormuṛi as Lazard does for New Persian when he speaks of a ‘bygone preterite of a perfect’ (“passé révolu du parfait”). For a modal interpretation of the double perfect see the following section.

4.2 Perfect and evidentiality

The use of perfects to express indirect evidentiality³⁰ is often attributed to the influence of Turkic languages on Iranian languages. Turkic-Iranian language contact has been very close for centuries and Turkic languages may well have affected Iranian languages in the development of evidential forms (cf. Johanson & Utas 2000).

However, the earliest datable evidence for indirective use of a perfect in Iranian languages is found in Old Persian. The *PRE.P* construction fulfils perfect functions and if in contrast to the imperfect it can also express perfectivity. However, when giving the dates of the battles that were fought against the many foes of Darius I, the perfect seems to be an arbitrary variant of the imperfect. Neither tense nor aspect nor style account for its usage instead of the imperfect. The only observable difference is the person of the subject. When Darius participated in the battle, he uses the 1PL imperfect. When one of his generals fought the battle for him, i.e. when he did not personally witness the event, he uses the 3PL perfect.³¹

Thus it is possible that perfects – notably those that express results of past events – have a predisposition to be used as indirectives as well. The defocalisation, as aptly put by Khan (this volume), can be understood as a reference to an event without statements of truth value by the speaker. Just as one can focus on

30. Evidentiality in the sense of Aikhenvald (2004: 3 and passim) as “a linguistic category whose primary meaning is source of information”.

31. For a discussion and exceptions see Jügel (2015: 79f.).

the consequence of an event, viz. its result, one can identify a state as a result and deduce the event that caused the result. The temporal inference can turn into an evidential inference.

The indirective use of perfects will be exemplified by Tajik examples: mirative or gnomic statements by the perfect (35), inferential habituality by the perfect continuous (36), inferential past by the double perfect (37), inferential progressive past by the past perfect continuous (38).

- (35) Tajik (Perry 2005: 228)
odam=e xub buda=ast
 man=EZ good be.PRF.P=COP.3SG
 “He is a good man (as it turns out).”
- (36) Tajik (Perry 2005: 229)
hozir dar kadam kolxoz dehqonī me-karda=ast
 now in which kolkhoz peasant-ship IPFV-do.PRF.P-COP.3SG
 “Now (I gather) he is **working** as a peasant on some collective farm.”
- (37) Tajik (Perry 2005: 232)
loyiha=i on peš az ʃang tayyor šuda buda=ast
 project=EZ that before war prepared become.PRF.P be.PRF.P=COP.3SG
 “the project was (evidently) ready [lit. **had become** prepared] before the war”
- (38) Tajik (Perry 2005: 233)
vay kitob xonda istoda buda=ast ki man dar=ro
 he book read.PRF.P stay.PRF.P be.PRF.P=COP.3SG that I door=OBJ
taqtaq kard-am
 knock do.PST-1SG
 “he **was** (evidently) **reading** a book when I knocked at the door”

The inferential use of the perfect has been noted for many Pamir languages, e.g. (39). A special presuppositional construction is attested in Sarikoli (40).

- (39) Iškašmi (Pakhalina 1959: 55)
úškáz fbrýrs-u p̄ q̄lf=darun, íčči na-šú, alba weron
 key turn.PRS-3SG in lock=inside any not-go.PRS.3SG surely broken
svd-úk
 burn.PST-PRF.3SG
 “The key is turning in the (door)lock, but nothing is moving. It is surely broken.”
- (40) Sarikoli (Pakhalina 1966: 50)
woð xálg-xéyl m̄yʃ v̄w-in
 those people-PL die.PRF.P become.PRS-3PL
 “Those people (must) **have died**.”

Compare the exact German parallel ‘werden gestorben sein’. Although such formations look formally like pluperfects or future perfects, the auxiliary is better described as a presuppositional mood marker, because the tense of the Sarikoli example does not differ from perfect formations with the copula.

4.3 Perfect continuous forms

The clear semantic value of morphemes permits combinations that have no predecessor in Old Iranian. For instance, the imperfective prefix can be combined with the perfect and pluperfect to emphasize the duration of the result or iterativity (cf. the following examples from Mukri, Hiwa Asadpour p.c.).³²

(41) Mukri Kurdish

rēbaŕ-akān=i kurd qadīm lasar aw kēw=a

chieftain-PL=EZ Kurdish formerly on that mountain=deictic PTCL

{form of *dānīštīn*}

sit down

“formerly the Kurdish chieftains {form of *sit/sit down* in the sense of ‘to gather’} on that mountain”

- a. pluperfect: *dā=nīštū-n* (down=sit.PPRF-3PL) ‘they were sitting’ [At a specific point in time, they sat down and were sitting there.]
- b. imperfect: *dā=da-nīšt-in* (down=IPFV-sit.PST-3PL) ‘they were sitting.’ [During a longer period of time, they were often gathering there and they might still do so.]
- c. past perfect continuous: *dā=da-nīštū-n* (down=IPFV-sit.PPRF-3PL) ‘they would sit’ [During a longer period of time in the remote past they used to gather there.]

On the evidential use of this form, see §4.2.

5. Summary

The common semantic feature of perfects in Mlr. and Nlr. languages is resultativity indicating a past event whose result is relevant for, or extending into, the time of reference. To name but a few: Baloči (Axenov 2006: 193ff. for Turkmenistan Balochi), Caucasian Tat (Authier 2012: 189), Iškašmi (Pakhalina 1959: 55), Kurmanji Kurdish (Blau & Barak 1999: 72), Munji (Grjunberg 1972: 446), Ormuṛi

32. Mahmoodi Bakhtiari (2002: 57) claims that such forms would be “never-used [*sic!*] in Persian”.

(Kieffer 2003: 176), Parači (Morgenstierne 1929: 99), Pashto (Lorimer 1915: 122), Persian (Lazard 1992: 152), Sarikoli (Pakhalina 1966: 48), Southern Kurdish (Fattah 2000: 381), Šuyni (Karamšoev 1963: 161), Taleši (Miller 1953: 171), Wakhi (Bashir 2009: 837, 839), Yagnobi (Khromov 1972: 36), Yazyulami (Ėdel'man 1966: 55), Zazaki (Paul 1998: 91).

This high degree of convergence among Iranian languages of the past and present speaks in favour of long-lasting contact that prevented special developments. In fact, the only language that diverged from the rest is Ossetic, which was isolated from Iranian languages for centuries.³³

It is striking that all Iranian languages lost the inherited past perfective and the perfect with subject reference (cf. Table 1 and Kümmel, this volume, §2.1.2) to end up with basically two stems: imperfective/present and perfective/past. New perfects developed and at this stage we can observe a diversification of Iranian languages into various types, which are defined by the way the past imperfective is expressed (aspect or tense stem) and by the way the new perfects are formed (auxiliaries and affixes).

The history of Iranian languages evidences a pattern of drift whereby resultative constructions become resultative perfects and then past perfectives, and progressives become imperfectives. Following the Mlr. evidence, the perfect shift seems to have started earlier (cf. the Middle Persian inscriptions of the 3rd c. CE), while the imperfective shift occurred later (late Middle Persian texts). The morphological analysis of modern languages suggests that such shifts can recur, e.g., Ormuṛi and Ossetic with past stems that derive from new perfects; Caucasian Tat and Taleši with imperfective expressions that derive from new progressives.

Another noteworthy point is that the Iranian languages did not only develop in parallel (give or take one or two hundred years), but that they also arrive at a more or less similar system of tense-aspect forms to the one from which they started (despite the differences in morphological expression).

An investigation as to whether these similarities are due merely to long lasting contact, or whether the described drifts are inherent in the system and that in their wake the system pulls new forms into emerging gaps, is a desideratum. Moreover, the developmental delay that we can observe in historical data (e.g. comparing Persian with Parthian and Sogdian) gives support to the notion of linguistic epicentres where the development started and then spread over the whole territory, possibly even including non-Iranian languages like North-eastern Neo-Aramaic (cf. Khan, this volume).

33. Mlr. Saka at the Northern periphery of the Iranian language area does exhibit distinct perfect forms, but their semantics cannot yet be established (Emmerick 2009: 396).

In general, we can note (a) that Iranian languages show aspectual differentiation in the present and past, but usually not in the perfect; (b) formal similarities of past perfectives and perfects (as well as of perfects and passives and resultatives); (c) tense differentiation in the perfect and imperfective, but not in the perfective. As a perusal of the language descriptions in this volume will show, all three may commonly be found in the verb systems of Indo-European languages.

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CHAPTER 9

The perfect in North-Eastern Neo-Aramaic

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This paper describes the form and function of the perfect in the North-Eastern Neo-Aramaic (NENA) dialects, a highly diverse subgroup of Neo-Aramaic originally spoken east of the Tigris river. After a short description of the expression of the perfective in § 1, a detailed classification of the various forms of the perfect is presented in § 2. Many of these forms have developed under the influence of the verbal system of Iranian languages of the area (§ 3). The perfect in NENA has a wide range of functions, some of them not commonly documented elsewhere, such as the use of the perfect to express the remote past and its use in presuppositional contexts (§ 4). Some of these functions have parallels in the function of the perfect in Iranian languages in contact with NENA (§ 5). Finally, an analysis is given of the NENA perfect within a Reichenbachian framework (§ 6). The common denominator of the diverse functions of the NENA perfect is the fact that the event is viewed from an indirect reference point and as a result the event is defocalized. The separation between the event and the reference point ($e < r$), which is the hallmark of the perfect, need not be temporal distance, but may be cognitive distance from the focus of attention due to the presuppositional information status of the event.

Keywords: Aramaic, Semitic, Iranian, Kurdish, ergative, defocalization, contact

Spoken vernacular dialects of Aramaic, generally known as Neo-Aramaic dialects, have survived down to modern times in four subgroups:

1. Central Neo-Aramaic (spoken by Christian communities in south-eastern Turkey in the region of ʿAbdīn) (Jastrow 2011).
2. North-Eastern Neo-Aramaic (a highly diverse subgroup of over 150 dialects spoken by Christians and Jews originating from towns and villages east of the Tigris river in northern Iraq, south-eastern Turkey and western Iran) (Khan 2011).
3. Neo-Mandaic (spoken by Mandaean in south-western Iran) (Häberl 2011).
4. Western Neo-Aramaic (spoken by Christians and Muslims in three mountain villages in the Anti-Lebanon of Syria north of Damascus) (Arnold 2011).

This paper is concerned with the North-Eastern Neo-Aramaic (henceforth NENA) dialects. As remarked, these dialects exhibit considerable diversity. A notable feature of the subgroup is the phenomenon of communal split, whereby dialects spoken by Christians differ from those spoken by Jews, even in cases where these communities live in the same location.¹ The historical development of these dialects has been deeply influenced by contact with Indo-European languages with which they have been in contact for many centuries. The western Iranian languages have had the greatest impact on the NENA subgroup, especially Northern Kurdish (Kurmanji), Central Kurdish (Sorani), but also Gorani. The NENA verbal system has undergone radical restructuring by a process of convergence with these languages. Standard Persian has had a superficial influence on the NENA dialects spoken in Iran, mainly in the lexicon. Some linguistic developments can be attributed to contact with Armenian. The non-Indo-European contact languages include Arabic, especially the so-called *qeltu* Arabic dialects (Jastrow 1978), and various Turkic languages of the region, especially Azeri Turkish spoken in Iran (Dehghani 2000).

1. Expression of the perfective

In NENA the most common constructions for expressing the past perfective consist of a past stem which is historically a resultative participle (*q̄tīl*). The complete replacement of originally finite past perfective verbal forms (*q̄tal*) by constructions with a participle is likely to have been induced by contact with Iranian languages. Although the functional domain of participles was gradually extended in all branches of earlier Aramaic (see, e.g., Kutty 2008), their complete replacement of the finite verbal forms is found only in the Neo-Aramaic dialects that have had a sustained contact with Iranian.

The exponent of the subject of the construction with the past stem is a pronominal suffix. The suffix belongs to one of two series:

D-suffixes (direct suffixes), which are historically gender/number markers and, in the 1st and 2nd persons, clitic nominative pronouns.²

L-suffixes (oblique suffixes), which derive historically from cliticized prepositional phrases consisting of a dative preposition *l-* with a pronominal complement.

1. In what follows, Christian and Jewish dialects of a particular location are distinguished by the abbreviations C. and J. respectively.

2. In earlier publications I have referred to these as S-suffixes, since the most frequently express the grammatical Subject. Due to the fact that they are not exclusively used for Subjects, I have decided to use a label that is neutral with regard to grammatical relation.

A cluster of Jewish dialects on the south-eastern periphery of the NENA area use both D-suffixes and L-suffixes in the inflection of the past stem. In this dialect cluster the distribution of the two sets of suffixes correlate with the semantic profile of the subject argument. Unaccusative subjects of intransitive clauses are expressed by D-suffixes. In unergative intransitive clauses with instigator subjects or in transitive clauses the subject is expressed by oblique L-suffixes.

The series of D-suffixes and L-suffixes in the Jewish dialect of Sanandaj (western Iran) are as follows (Khan 2009). It can be seen that the D-suffixes are overall morphologically lighter than the L-suffixes and include a zero exponent of the 3SG.M. They should be regarded, therefore, as the morphologically unmarked series of suffixes:

(1) J. Sanandaj

	Nominative D-suffixes	Oblique L-suffixes
3SG.M	-Ø	-le
3SG.F	-a	-la
3PL	-i	-lu
2SG.M	-et	-lox
2SG.F	-at	-lax
2PL	-etun	-lāxun
1SG.M	-na	-li
1SG.F	-an	-li
1PL	-ex	-lan

Examples are given in (2) of past perfective forms in an intransitive clause with an unaccusative subject (S) (a), a transitive clause with an agentive subject (A) and object (O) (b), and an intransitive clause with an instigator unergative subject (S_A) (c). The verbal suffixes cross-reference the subject noun at the front of the clause. D-suffixes are glossed as DIR and L-suffixes as OBL:

(2) J. Sanandaj, western Iran

(Khan 2009)

- a. *brat-i smix-a.*
daughter-my stand.PST-DIR.3SG.F
“My daughter (S) stood up.”
- b. *baruxāwal-i brat-i gərš-a-lu.*
friends-my daughter-my pull.PST-DIR.3SG.F-OBL.3PL
“My friends (A) pulled my daughter (O).”
- c. *kalba nwəx-le*
dog bark.PST-OBL.3SG.M
“The dog (S_A) barked.”

As can be seen, the D-suffixes in (2b) are used also to agree with the object argument of transitive verbs, at least when it is definite, so O is aligned with S. On account of the use of oblique L-suffixes in unergative clauses such as (c), however, the typology of the alignment of clauses with the past perfective in J. Sanandaj should be identified as Split-S, according to the terminology of Dixon (1994: 71), or semantic alignment, rather than canonical ergativity.

In the majority of NENA dialects, on the other hand, the oblique L-suffixes are used in clauses with all types of subjects, including unaccusative subjects in intransitive clauses, e.g.:

- (3) C. Barwar, northern Iraq (Khan 2008b)
- a. *xawr-āwaθ-i griš-a-la* *brat-i*
friend-PL-my pull.PST-DIR.3SG.F-OBL.3PL daughter-my
“My friends pulled my daughter.”

b. *brat-i qim-la*
daughter-my rise.PST-OBL.3SG.F
“My daughter rose.”

c. *kalba nwix-le*
dog bark.PST-OBL.3SG.M
“The dog barked.”

These will be termed extended ergative dialects (following Doron & Khan 2012). In many dialects of this kind a D-suffix on the past stem agrees with the object argument of transitive clauses, at least when it is definite, as in (3a) above.

2. Classification of perfect forms

In addition to the past perfective, most dialects have distinct constructions that express the perfect. Various types of constructions are attested across the NENA dialects, which may be classified as follows.

2.1 Type 1: Copula placed before the perfective form

In some extended ergative dialects, the perfect is distinguished from the past perfective by placing a particle that is derived historically from the copula before the perfective form. In most dialects where such a construction is used, the element that is historically derived from the copula is of an invariable form and the person inflection is expressed by the verbal suffixes alone. The verbal suffix that is used in the perfect construction in such dialects is the same as is used in the perfective construction, i.e. oblique L-suffixes, e.g.:

- (4) J. Arbel (Khan 1999)
grəš-le
 pull.PST-OBL.3SG.M
 “He pulled” (perfective)
lā-grəš-le
 PTCL-pull.PST-OBL.3SG.M
 “He has pulled” (perfect)
- (5) C. Sanandaj
grəš-le
 pull.PST-OBL.3SG.M
 “He pulled” (perfective)
gi-grəš-le
 PTCL-pull.PST-OBL.3SG.M
 “He has pulled” (perfect)

The particle *lā* in (4) is derived historically from *ʾila* (3SG.F copula) and the particle *gi-* in (5) is derived from *g* (indicative marker) + *i* (uninflected copula).

2.2 Type 2: Past stem inflected with D-suffixes

In some extended ergative dialects in which there is regular use of oblique L-suffixes as subject agreement markers on the past stem to express the past perfective irrespective of the semantic profile of the subject, the present perfect is distinguished from the perfective by inflecting the past stem with D-suffixes. In some dialects in which this category of construction is attested, it is used only when the verb is intransitive with an unaccusative subject, e.g.:

- (6) Hertevin (south-eastern Turkey) (Jastrow 1988: 46–59)
- | | Perfective | Perfect |
|----------------|---|---|
| Transitive: | <i>greš-le</i> “He pulled”
pull.PST-OBL.3SG.M
<i>greš-la</i> “She pulled”
pull.PST-OBL.3SG.F | – |
| Intransitive: | <i>qem-le</i> “He stood up”
rise.PST-OBL.3SG.M | <i>qem-ø</i> “He has risen”
rise.PST-DIR.3SG.M |
| (unaccusative) | <i>qem-la</i> “She stood up”
rise.PRS-OBL.3SG.F | <i>qim-a</i> “She has risen” ³
rise.PST-DIR.3SG.F |

3. In this dialect the long high vowel /i/ is lowered to /e/ in closed syllables, so in these paradigms /i/ and /e/ are morphophonemic alternants.

In dialects spoken in the region of Bohtan the D-suffix inflection of the perfect is generalized to all verbs:

(7) Bohtan (south-eastern Turkey)		(Fox 2009)
	Perfective	Perfect
Transitive:	<i>grəš-le</i> ‘He pulled’	<i>griš-ø</i> ‘He has pulled’
	pull.PST-OBL.3SG.M	pull.PST-DIR.3SG.M
	<i>grəš-la</i> ‘She pulled’	<i>griš-a</i> ‘She has pulled’
	pull.PST-OBL.3SG.F	pull.PST-DIR.3SG.F
Intransitive:	<i>qəm-le</i> ‘He stood up’	<i>qim-ø</i> ‘He has stood up’
	rise.PST-OBL.3SG.M	rise.PST-DIR.3SG.M
(unaccusative)	<i>qəm-la</i> ‘She stood up’	<i>qim-a</i> ‘She has stood up’
	rise.PST-OBL.3SG.F	rise.PST-DIR.3SG.F

2.3 Type 3: Resultative participle and copula

In many dialects the perfect is expressed by combining a resultative participle (*qtila*) with a copula. The morphological form of the resultative participle in the NENA dialects (*qtila*) is historically related to the past stem (*qtil*), which also is derived historically from a resultative participle. The difference is that the resultative participle *qtila* has the nominal inflectional ending *-a*, which, in the synchronic state of the NENA dialects, is an obligatory feature of nouns and adjectives. The construction consisting of the combination of *qtila* and a copula, therefore, is that of a predicative adjective. In an earlier stage of development of Aramaic, a predicative adjective was expressed by using a form without the nominal inflectional ending *-a*, i.e. *qtil*, without the requirement of a copula. The inflectional ending *-a* is historically a definite article. The past perfective verbal stem *qtil* developed historically, therefore, from a predicative adjective construction which is equivalent syntactically to the perfect construction consisting of the resultative participle and copula in the modern dialects. This modern perfect construction is, indeed, essentially a recycling of the process that gave rise to the past perfective construction.

To be more precise, in constructions expressing the perfective, in most dialects the past stem may be inflected with D-suffixes that agree with a definite object in transitive clauses. In many dialects, including C. Barwar, this agreement inflection is only possible when the object is third person. This, in effect, means that the stem agrees with the gender and number of a definite object. The 3rd person D-suffixes of the past stem derive historically from the gender and number inflections of the resultative participle without a definite article. The resultative participle in the synchronic state of the modern dialects, which derives from the form with a definite article suffix, has different gender and number inflections. The two sets of forms are given below for the C. Barwar dialect:

(8) C. Barwar

	Past stem	Resultative participle
3SG.M	<i>q̄til</i>	<i>q̄til-a</i>
3SG.F	<i>q̄til-a</i>	<i>q̄til-ta</i>
3PL	<i>q̄til-i</i>	<i>q̄til-e</i>

The copula that is combined with the resultative participle to express the perfect may be an enclitic attached to the end of the participle or a prosodically independent word standing before the participle. In some dialects the enclitic is the norm, e.g.:

(9) C. Urmi

(Khan 2016)

xišəla (= *xiša+ilə* go.PTCP.SG.M + COP.3SG.M)
 “He has gone”

In other dialects the preposed copula is the usual construction, e.g.

(10) J. Betanure

(Mutzafi 2008)

’ile *’əsyə*
 COP.3SG.M come.PTCP.SG.M
 “He has come”

(11) C. Qaraqosh

(Khan 2002a)

kilə *zila*
 COP.3SG.M go.PTCP.SG.M
 “He has gone”

In such dialects the enclitic copula is often used in interrogative clauses, e.g.

(12) C. Qaraqosh

zilelə? (= *zila+ilə* go.PTCP.SG.M + COP.3SG.M)
 “Has he gone?”

In the examples presented above the copula is present indicative, which is its default form. It may be replaced by copulas in other tenses and moods. Space does not permit going into details here. Some examples will be given of perfects with a past copula and an irrealis copula in various places below.

Despite the parallels between the historical background of the past perfective and the perfect, there are syntactic differences between the two constructions with regard to the exponent representing the subject in transitive clauses. As we have seen, in most dialects the subject of the past perfective is regularly expressed by an oblique L-suffix, even when it is unaccusative. The object argument, moreover, is often expressed by a D-suffix on the verbal stem when the object is definite, reflecting the agreement of the stem with the object. A large proportion of these dialects form perfects with the resultative participle + copula construction. In the vast majority of such dialects the resultative participle agrees with the subject, including

in transitive clauses with an object. The copula also always agrees with the subject. In transitive clauses it does not agree with the object, e.g.:

- (13) C. Barwar (Khan 2008b)
- a. *baxt-i griš-i-la guniyaθa*
 wife-my pull.PST-DIR.3PL-OBL.3SG.F sacks
 “My wife pulled the sacks”
- b. *baxt-i grišta-ila-le guniyaθa*
 wife-my pull.PTCP.3SG.F-COP.3SG.F-ACC.3PL sacks
 “My wife has pulled the sacks”

As can be seen in (13b) the object of the perfect construction is cross-referenced by an accusative object suffix when it is definite. In some dialects the object is cross-referenced by a genitive suffix that is placed directly on the resultative participle, e.g.:

- (14) C. Urmi (Khan 2016)
- baxt-i grašt-e-ila jvala*
 wife-my pull.PTCP.3SG.F-PC.GEN.3PL-COP.3SG.F sacks
 “My wife has pulled the sacks”

Some dialects make the object noun the direct genitive complement of the participle, e.g.:

- (15) C. Qaraqosh (Khan 2002a: 367)
- xila-d xabuša-la?*
 eat.PTCP.SG.M-of apples-COP.3SG.M
 “Has he eaten the apples?”

The differences between the dialects with regard to the expression of the direct object of the resultative participle reflect different degrees of verbalization of the perfect. Constructions such as (15) (C. Qaraqosh), in which the object nominal is expressed as a genitive complement of the participle, exhibit the least degree of verbalization. Such constructions can be clearly seen to be predicative constructions in which an adjectival property term is attributed to the subject. Constructions (14) (C. Urmi) and (13) (C. Barwar) reflected incrementally greater degrees of verbalization. In (14) a full nominal object is placed outside the verbal complex and the copula is moved closer to the participle, but the object agreement element on the participle is a genitive suffix, which is characteristic of nominals. In (13b) the object is marked by an accusative pronominal suffix and the copula is placed adjacent to the participle. The most advanced case of verbalization of the construction is found in the J. Urmi dialect, in which the copula is not only fully bonded to the participle but it is contracted and as a result comes to resemble closely the paradigm of D-suffixes (Khan 2008a: 80), e.g.:

- (16) J. Urmi
baxt-i talise grəšt-a-lu
 wife-my sacks pull.PTCP.3SG.F-COP.3SG.F-ACC.3PL
 “My wife has pulled the sacks”

As remarked, in most dialects the resultative participle and the copula agree with the subject in transitive clauses. Some Jewish dialects on the south-eastern periphery of the NENA area exhibit different alignment patterns, e.g.:

- (17) J. Sanandaj (Khan 2009)
- a. *baxt-äke qimta-ya*
 woman-the rise.PTCP.SG.F-COP.3SG.F
 “The woman has risen”
 - b. *’o-gora baxt-äke grəšta-ya*
 that-man woman-the pull.PTCP.SG.F-COP.3SG.F
 “The man has pulled the woman”
 - c. *baxt-äke grəšta-ya*
 woman-the pull.PTCP.SG.F-COP.3SG.F
 “He/she/they has/have pulled the woman”

In the transitive clause with an object constituent in (17b), the participle agrees with the object. In Example (17c) there is no explicit constituent expressing the agent, but the construction is active and not passive.

In J. Sanandaj in transitive clauses the perfect construction with a copula is available only when the subject is 3rd person. By contrast, the perfect with a copula is available for subjects of all persons in unaccusative clauses, the unaccusative S argument agreeing with the participle and copula:

- (18) J. Sanandaj
- 3SG.M *zila-y* “He has gone”
 - 3SG.F *zilta-ya* “She has gone”
 - 2SG.M *zila-yet* “You (SG.M) have gone”
 - 2SG.F *zilta-yat* “You (SG.F) have gone”
 - 1SG.M *zila-yena* “I (SG.M) have gone”
 - 1SG.F *zilta-yan* “I (SG.F) have gone”

If the object in a perfect construction with a copula is indefinite, the participle and the copula do not agree with the object but remain in the default masculine singular form and do not agree with any constituent in the clause. This is clear in (19b) below, in which the subject is plural and the object is feminine singular but the participle and copula are masculine singular:

(19) J. Sanandaj

- a. *'o-gora baxta gərša-y*
that-man woman pull.PTCP.SG.M-COP.3SG.M
“The man has pulled a woman”
- b. *'o-naše baxta gərša-y*
those-people woman pull.PTCP.SG.M-COP.3SG.M
“Those people have pulled a woman”

When the verb is unergative, and is treated as transitive (see (2c) above), the copula and the participle are likewise in the default masculine singular form and do not agree with any constituent in the clause:

(20) J. Sanandaj

- a. *tat-i šəhla-ye*
father-my cough.PTCP.SG.M-COP.3SG.M
“My father has coughed”
- b. *baxt-i šəhla-ye*
wife-my cough.PTCP.SG.M-COP.3SG.M
“My wife has coughed”
- c. *'o-naše šəhla-ye*
those-people cough.PTCP.SG.M-COP.3SG.M
“Those people have coughed”

In the J. Sanandaj dialect an irrealis perfect may be formed by replacing the copula by the paradigm of the irrealis form of the verb *h-w-y* “to be”. The verb *h-w-y* is suppletive to the copula in the irrealis and future. In the irrealis perfect construction in transitive clauses the participle and copula agree with the object, as in the indicative perfect, but, unlike in the indicative perfect, the subject is marked by an ergative L-suffix. Since there is explicit subject marking, the construction can be used with subjects of all persons (Khan 2009: 92–94):

(21) J. Sanandaj

- a. *'o-gora baxt-āke grəšta-hawya-le*
that-man woman-the pull.PTCP.SG.F-be.IRR.3SG.F-OBL.3SG.M
“That man may have pulled the woman”
- b. *'āt baxt-āke grəšta-hawya-lox*
you (s.) woman-the pull.PTCP.SG.F-be.IRR.3SG.F-OBL.2SG.M
“You (SG.M) may have pulled the woman”
- c. *'ana baxt-āke grəšta-hawya-li*
I woman-the pull.PTCP.SG.F-be.IRR.3SG.F-OBL.1SG
“I may have pulled the woman”

One apparent anomaly of J. Sanandaj and related Split-S dialects is that the past copula, predicating a permanent or contingent state in the past, is inflected with ergative L-suffixes:

- (22) J. Sanandaj
 3SG.M *ye-le* “he was”
 3SG.F *ye-la* “she was”
 3PL *ye-lu* “they were”

The omission of L-suffixes in the indicative perfect may have arisen due to the fact that the placement of L-suffixes after the copula would have resulted in forms that are identical or close in form with those of the past copula (Khan 2017: 889–890). There does not seem to be a prosodic constraint in perfect constructions against the sequence of clitic auxiliary + L-suffix, since this is found in the irrealis perfect.

J. Sulemaniyya and the related dialect J. Ḥalabja (north-eastern Iraq), which belong to the split-S group of dialects, have a form of transitive perfect that is intermediate in profile between the type found in the majority of NENA dialects, exemplified in (13)–(16) above, and the type that is found in J. Sanandaj, in that the participle agrees with a definite object but the copula agrees with the subject (Khan 2004: 137–138). Since there is subject agreement, there is no restriction on the person of the subject:

- (23) J. Sulemaniyya
 a. *’o-gora baxtāke grāšta-aw-ye*
 that-man woman.the pull.PTCP.SG.F-PC.GEN.3SG.F-COP.3SG.M
 “The man has pulled the woman”
 b. *’ana baxtāke grāšta-aw-yena*
 I woman.the pull.PTCP.SG.F-PC.GEN.3SG.F-COP.1SG.M
 “I (m.) have pulled the woman”

It should be noted, however, that in J. Sulemaniyya the participle always has the feminine singular form when the subject is feminine singular. Agreement with a feminine singular subject, therefore, overrides agreement with the pronominal object:

- (24) J. Sulemaniyya
baxt-āke ’o-gora grāšt-ew-ya
 woman-the that-man pull.PTCP.SG.F-PC.GEN.3SG.M-COP.3SG.F
 “The woman has pulled that man”

As in J. Sanandaj, the participle can only agree with a 3rd person object. When the object is indefinite, or when the verb is unergative and there is no object, the participle does not agree with the object, but rather is in the default masculine singular form, and it has no pronominal agreement suffix:

- (25) J. Sulemaniyya
- 'o-gora baxta gərša-y

that-man woman pull.PTCP.SG.M-COP.3SG.M

“The man has pulled a woman”

Note that in the J. Sulemaniyya perfect a participle that agrees with the object has an obligatory pronominal suffix referring to the object. This corresponds in position and agreement with the copula in the perfect construction of J. Sanandaj:

(26)

	A argument	O argument	Participle	O agreement	A agreement
J. Sanandaj	'o-gora	baxt-āke (definite)	grəšta	ya	∅
	'o-gora	baxta (indefinite)	gərša	ye	∅
J. Sulemaniyya	'o-gora	baxt-āke (definite)	grəšta	aw	ye
	'o-gora	baxta (indefinite)	gərša	∅	ye

We may summarize the different types of subject and object agreement in perfect constructions of type 3 as follows (where = should be read as ‘agrees with’):

- participle + copula=subject (e.g. C. Barwar)
- participle=subject/object, copula= subject (e.g. J. Sulemaniyya)
- participle + copula=object (e.g. J. Sanandaj)

2.4 Perfects with addition of invariable copula

A further type of perfect structure that is attested in NENA has a particle that is an invariable form of a historical copula, as in type 1, but this is combined with a type 2 or type 3 perfect construction, e.g.:

Type 2 perfect (past stem + D-suffix) + invariable *lā* (historical copula)

- (27) J. Rustaqa (north-eastern Iraq) (Khan 2002b)
- Perfective

Perfect

qim-le “He rose”

lā qim-∅ “He has risen”

qim-la “She rose”

lā qim-a “She has risen”

qim-li “I rose”

lā qim-na “I (M) have risen”

Type 3 (participle + inflected copula) + invariable *lā* (historical copula)

(28) C. Bedyel (north-eastern Iraq)

Perfective	Perfect
<i>qəm-li</i> “I rose”	<i>lā qime-wən</i> “I (M) have risen”
<i>qəm-lux</i> “you (SG.M) rose”	<i>lā qime-wət</i> “You (SG.M) have risen”

In this dialect the inflected copula is omitted in the 3rd person perfect, with gender and number distinctions only expressed by the inflection of the participle:

(29) C. Bedyel (north-eastern Iraq)

<i>qəm-le</i> “He rose”	<i>lā qima</i> “He has risen”
<i>qəm-la</i> “She rose”	<i>lā qəmta</i> “She has risen”
<i>qəm-lun</i> “They arose”	<i>lā qime</i> “They have risen”

2.5 Asymmetries

As we have seen above, the perfect constructions in some NENA dialects are restricted to certain categories of verbs, such as intransitives (e.g. Hertevin) or 3rd person (e.g. transitive verbs in J. Sanandaj). In some such cases the perfective forms with L-suffixes function also as perfects in the complementary categories of verb (e.g. transitive verbs in Hertevin, 1st and 2nd person transitive verbs in J. Sanandaj):

(30) Hertevin (south-eastern Turkey) (Jastrow 1988: 46–59)

Transitive:	Perfective/Perfect	
	<i>greš-le</i> “He pulled, he has pulled”	
	<i>greš-la</i> “She pulled, she has pulled”	
Intransitive:	Perfective	Perfect
(unaccusative)	<i>qem-le</i> “He stood up”	<i>qem-ø</i> “He has stood up”
	<i>qem-la</i> “She stood up”	<i>qim-a</i> “She has stood up”

(31) J. Sanandaj

	Perfective	Perfect
Transitive 3rd pers.	<i>grəšle</i> “he pulled”	<i>gərša-y</i> “he has pulled”
Transitive 1st/2nd pers.	Perfective/Perfect	
	<i>grəšli</i> “I pulled, I have pulled”	
	<i>grəšlox</i> “You pulled, you have pulled”	

3. Historical development and language contact

Here some brief remarks will be made concerning the historical development of the perfect constructions of NENA.⁴

Transitive past perfective forms consisting of historically passive participles and oblique agentive L-suffixes were at some stage of their historical development passive constructions with a resultative or perfect function. The oblique marking with a historically dative L-suffix appears to have developed from an original benefactive or experiential function:

- (32) *griš-i-le*
 pull.PTCP-3PL-OBL.3SG.M
 “They have been pulled by him”

The construction of a participle inflected with oblique L-suffixes was extended to intransitive verbs:

- (33) *qim-le*
 rise.PTCP-OBL.3SG.M
 “He has risen”

This may have resulted in the intransitive constructions being construed as internal passives (‘it was risen by him’) in conformity with the passive voice of the transitive constructions (Goldenberg 1992). The passive construction developed into an active construction. In transitive constructions what was originally the grammatical subject of the passive participle became reanalysed as the syntactic object and the oblique agent became the ergative subject. This is reflected by a number of syntactic phenomena.⁵ This process resulted in the L-suffixes being reanalysed as ergative markers of the subject and the agreement of the participle being reanalysed as object agreement. This is likely to have been facilitated by the correspondence between the agreement of the historically passive participle with the agreement of the active participle in imperfective constructions (e.g. passive *griš-i* PTCP-3PL, active *garš-i* PTCP-3PL).

The *grišle* and *qimle* forms subsequently acquired a perfective function expressing past actions within an interval that extends up to the present:

- (34) *grišle* “he pulled (just now)”
qimle “he rose (just now)”

4. For a detailed treatment of the historical background of ergativity in perfective and perfect forms see the excellent study by Coghill (2016). This includes some slightly different views regarding historical development from those in this paper.

5. For details see Doron & Khan (2012), Khan (2017) and Coghill (2016).

These forms, however, retain even today their perfect meaning in some cases in some dialects (see the asymmetries above), and it is likely that there was a stage of transition in which they in general could express either perfect or perfective.

Innovative perfect forms developed, which took over the perfect meaning of the constructions consisting of a past base and L-suffix (*grišle/qimle*) and the latter came to be used only as perfectives. The stimulus for this is likely to have been the existence of perfect forms that were distinct from the perfective in languages in contact with NENA, especially in Kurdish dialects. The existence of such perfect forms distinct from the perfective in Western Iranian languages was, indeed, an innovative development that was an exact parallel to the development in NENA.⁶

The Kurdish dialects have perfect constructions that are distinct from perfective constructions consisting of participles combined with predicative copula elements. These copula elements are enclitics that are attached to the participle and inflected for person, e.g. Sorani Sulemaniyya (Thackston 2006: 40, 53–54):

Type 1 Kurdish perfect

(35) Sorani Sulemaniyya

Perfect	Past Perfective
<i>hātū-m</i>	<i>hāt-im</i>
come.PTCP-COP.1SG	come.PST-1SG
“I have come”	“I came”
<i>hātū-īt</i> ⁷	<i>hāt-īt</i>
come.PTCP-COP.2SG	come.PST-2SG
“You (sing.) have come”	“You (sing.) came”
<i>hātū-a</i>	<i>hāt-Ø</i>
come.PTCP-COP.3SG	come.PST-3SG
“He has come”	“He came”
<i>hātū-în</i>	<i>hāt-în</i>
come.PTCP-COP.1PL	come.PST-1PL
“We have come”	“We came”
<i>hātū-n</i>	<i>hāt-in</i>
come.PTCP-COP.2PL	come.PST-2PL
“You (pl.) have come”	“You (pl.) came”
<i>hātū-n</i>	<i>hāt-in</i>
come.PTCP-COP.3PL	come.PST-3PL
“They have come”	“They came”

6. For details see Jügel (this volume).

7. Forms of the perfect that have inflectional suffixes beginning with a glide are pronounced with a glide between the stem and the suffix, i.e. *hātū-w-īt*. This glide has been omitted here and elsewhere in the paradigms of Kurdish verbal forms.

In some dialects the perfect is formed by combining a type 1 perfect construction with an invariable 3rd person singular form of the copula (referred to below as type 2), e.g. Sorani Mukri (north-western Iran):⁸

Type 2 Kurdish perfect

(36) Sorani Mukri	
Perfect	Past Perfective
<i>hātū-m-a</i>	<i>hāt-im</i>
come.PTCP-COP.1SG-COP.3SG	come.PST-1SG
“I have come”	“I came”

In Kurmanji dialects an invariable 3SG copula element is also found,⁹ but the participle and inflected copula have undergone contraction in all forms except the 3SG, with the result that most of the paradigm is distinguished from the past perfective only by the additional 3SG copula element (Thackston 2006: 46, 53):

Type 3 Kurdish perfect

(37) Standard Kurmanji	
Perfect	Past Perfective
<i>hāt-im-a</i>	<i>hāt-im</i>
come.PST-1SG-COP.3SG	come.PST-1SG
“I have come”	“I came”
<i>hāt-î-a</i>	<i>hāt-î</i>
come.PST-2SG-COP.3SG	come.PST-2SG
“You (sing.) have come”	“You (sing.) came”
<i>hātî-a</i>	<i>hāt-ø</i>
come.PTCP?-COP.3SG	come.PST-3SG
“He has come”	“He came”
<i>hāt-in-a</i>	<i>hāt-in</i>
come.PST-3PL-COP.3SG	come.PST-3PL
“They have come”	“They came”

In the Bahdini dialects of Kurmanji (northern Iraq/south-eastern Turkey) the type 1 perfect construction is combined with an additional *ezafe* copula before the participle, which agrees in gender and number with the subject (MacKenzie 1961: 210–211; Haig 2011). The enclitic copula is omitted in the 3SG.

8. I am grateful to Hiwa Asadpour for supplying the data on the Mukri dialects here and elsewhere in this article.

9. The final *-a* vowel in Mukri and Kurmanji has been identified by some Iranists as a postposed directional particle, which is homophonous with the 3SG copula (Geoffrey Haig p.c.).

Type 4 Kurdish perfect

(38) Bahdini

yē hātī

EZ.SG.M come.PTCP

“he has come”

yā hātī

EZ.SG.F come.PTCP

“she has come”

yēt hātī-n

EZ.PL come.PTCP-COP.3PL

“they have come”

yē hātī-m

EZ.SG.M come.PTCP-COP.1SG

“I (m.) have come”

yā hātī-m

EZ.SG.F come.PTCP-COP.1SG

“I (f.) have come”

The *qəltu* Arabic dialects that are in contact with NENA may also have had an impact on the development of NENA copula constructions. In the *qəltu* Arabic dialects perfects are formed by combining an invariable prefixed particle derived historically from a copula with the perfective past form of the verb (Jastrow 1978: I.307, 1990: 66–67), e.g.:

(39) Jewish Arbel

Perfect

Perfective

*kū-šəṛəb**šəṛəb*

PTCL-drink.PST.3SG.M

drink.PST.3SG.M

“He has drunk”

“He drank”

(40) Mardin

Perfect

Perfective

*kəl-mātət**mātət*

PTCL-die.PST.3SG.F

die.PST.3SG.F

“She has died”

“She died”

The NENA perfect type 3 consisting of a resultative participle and copula corresponds directly to the type 1 Kurdish perfect:

(41) C. Urmi (NENA)

Kurdish (Sorani Sulemaniyya)

*tiyy-əvən**hātu-m*

come.PTCP-COP.1SG.M

come.PTCP-COP.1SG

“I have come”

A direct parallel to the type 4 Bahdini Kurdish perfect can be identified in type 4 NENA perfects, e.g.:

(42)	C. Bedyel		Bahdini
	<i>lā</i>	<i>’əčč-ewən</i>	<i>yē</i> <i>hatī-m</i>
	COP.3SG	come.PTCP-COP.1SG.M	EZ.SG.M come.PTCP-COP.1SG
	“I have come”		

The position of the preposed copula element *lā* of the NENA C. Bedyel construction corresponds to the position of the copula *ezafe* element of the Bahdini construction.

The same combination of a participle + inflected copula + invariable copula is found in Kurdish type 2 (Mukri Sorani), but the invariable copula is an enclitic rather than a preposed element as in the NENA and Bahdini constructions:

(43)	C. Bedyel		Mukri
	<i>lā</i>	<i>’əčč-ewən</i>	<i>hatū-m-e</i>
	COP.3SG	come.PTCP-COP.1SG.M	come.PTCP-COP.1SG-COP.3SG
	“I have come”		

The type 1 NENA perfect consisting of a preposed particle derived from a copula and a perfective past form has its closest parallel in the perfect constructions of *qəltu* Arabic dialects, e.g.:

(44)	J. Arbel NENA		J. Arbel Arabic
	<i>lā</i>	<i>šte-le</i>	<i>kū</i> <i>šəṛəb</i>
	PTCL	drink.PST-OBL.3SG.M	PTCL drink.PST.3SG.M
	“He has drunk”		

One may compare also the J. Arbel type of construction with the Kurmanji type of perfect in which most of the paradigm has the appearance of a past perfective with an invariable copula enclitic (*hatim-a* “I have come”, *hatim* “I came”).

In Kurdish transitive clauses the copula in principle agrees with the object rather than the subject. As we have seen, this is a feature of the Jewish NENA dialects on the south-eastern periphery, such as J. Sanandaj. In the majority of NENA dialects, however, the participle and copula of the type 3 NENA perfect agree with the subject. There is, therefore, only partial convergence of NENA and Kurdish in this construction. In such NENA dialects there is replication of the morphological pattern of the Kurdish perfect but not the pattern of its syntactic alignment and argument structure. This may perhaps indicate that the construction developed in NENA after the perfective had been reanalysed as active. There is a replication of the Kurdish syntactic alignment only in Jewish dialects on the south-eastern periphery of NENA such as J. Sanandaj.

The development of the NENA perfect construction of type 2 with a past stem inflected with nominative D-suffixes (§2.2.) rather than oblique L-suffixes may have been influenced by the existence of a structural distinction between perfective and perfect in Kurdish and the general predicative schema of the Kurdish perfects, although it does not correspond directly in structure to any of the Kurdish types of perfect described above. It is likely to have developed when the originally passive construction of the verbal forms with L-suffixes (*grišle* and *qimle*) was reanalysed as active. In transitive constructions the oblique agentive L-suffixes became reanalysed as agentive ergative suffixes. When unaccusative intransitive verbs became active (assuming they were originally internal passives, e.g. *qimle* “it was risen by him” > “he rose”), the agentive L-suffix became incompatible with the construction and there was, therefore, greater internal pressure to replace it with a direct predicative D-suffix than in the transitive construction. An internal model may have been the use of active nominative D-suffixes in the inflection of the present stem of the verb, e.g.:

- (45) J. Urmi (Khan 2008a)
- | | |
|--------------------|--------------------|
| <i>garəš-ø</i> | <i>qem-ø</i> |
| pull.PRS-DIR.3SG.M | rise.PRS-DIR.3SG.M |
| “He pulls” | “He rises” |
| <i>garš-a</i> | <i>qem-a</i> |
| pull.PRS-DIR.3SG.F | rise.PRS-DIR.3SG.F |
| “She pulls” | “She rises” |
| <i>garš-i</i> | <i>qem-i</i> |
| pull.PRS-DIR.3PL | rise.PRS-DIR.3PL |
| “They pull” | “They rise” |

The emergence of perfect forms with D-suffixes on the past stem (*qim ø*, *qim-a*, *qim-i*) would most likely have taken place at a stage of development when the *grišle* and *qimle* forms were transitioning from perfective to perfect and could have either function. The replacement of L-suffixes by D-suffixes in intransitive unaccusative verbs may be reconstructed as taking place initially in contexts in which agentive L-suffixes were maximally incompatible, i.e. verb forms that were maximally stative in both lexical and grammatical aspect. One such verb was *p-y-š* “to remain”. In some dialects D-suffixes on past stems are only attested in this verb and only when it has a perfect function, which is more stative than the perfective. One such dialect is J. Arbel, e.g.:

- (46) *či-hula’e la piš-i* *gaw*
 NEG-Jews NEG remain.PST-DIR.3PL inside
 “No Jews have remained in it” (Khan 1999: 284–285)

It is worth noting that in J. Arbel this construction is only attested in the 3rd person forms. This also may be significant, since 3rd person is lower on the hierarchy of prototypical agents than 1st and 2nd person.

In the type 4 NENA perfect attested in J. Rustaqa an invariable copula is combined with a perfect expressed by D-suffixes:

- (47) J. Rustaqa (Khan 2002b)
- lā ʾədyə-na
- COP come.PST-DIR.1SG
- “I have come”

The J. Rustaqa construction is best interpreted as the result of convergence of a internally developed NENA perfect construction (i.e. past stem + D-suffixes) with the external model of Arabic *kū šarḥ* (copula + drink.PST.3SG.M) “I have drunk”.

The construction with D-suffixes to express the perfect was extended in various dialects across the category of all unaccusative verbs, and in some dialects, e.g. Bohtan, across all categories of verb, including transitive verbs.

The other predicative perfect constructions that contain the copula correspond more directly to the Kurdish models. In several dialects these were initially in competition with predicative perfects with D-suffixes. Both copula and D-suffix types of perfect construction are attested, for example, in certain dialects. This is the case in some of the early written records of NENA dialects datable to the 17th century.¹⁰ In most cases where there is such competition, there is one of three consequences: (i) the distribution of the perfect constructions with D-suffixes remains restricted to the intransitive, (ii) its development as a perfect within intransitive verbs is restricted to certain verbs, or (iii) it is eliminated as a perfect construction.

An example of consequence (i) is J. Urmi, where the transitive perfect is expressed by a construction consisting of a participle and copula:

- (48) J. Urmi
- | | Perfective | Perfect |
|---------------|--------------------|--------------------|
| Intransitive: | <i>qəm-le</i> | <i>qim-ø</i> |
| | rise.PST-OBL.3SG.M | rise.PST-DIR.3SG.M |
| | “He rose” | “He has risen” |
| | <i>qəm-lu</i> | <i>qim-i</i> |
| | rise.PST-OBL.3PL | rise.PST-DIR.3PL |
| | “They rose” | “They have risen” |

10. Cf. the language of the early Neo-Aramaic texts published by Sabar (1984) and Mengozzi (2002). The verbal forms in these texts are described by Goldenberg (1992).

Transitive:	<i>griš-le</i>	<i>griš-e</i>
	pull.PST-OBL.3SG.M	pull.PTCP-COP.3SG.M
	“He pulled”	“He has pulled”
	<i>griš-lu</i>	<i>griš-u</i>
	pull.PST-OBL.3PL	pull.PTCP-COP.3PL
	“They pulled”	“They have pulled”

An example of consequence (ii) is the aforementioned case of J. Arbel, in which, as remarked, the perfect construction with D-suffixes has not developed beyond the maximally stative verb *p-y-š* “to remain” (see 46). Other documented cases include J. Koy Sanjaq, in which the perfect with D-suffixes is only marginally used whereas the construction with a participle and copula is far more frequent (Mutzafi 2004: 105).

The elimination of the D-suffix perfect construction and its replacement with constructions with the copula can be identified in the modern descendants of the dialects recorded in the 17th century texts (e.g. J. Nerwa and C. Alqosh), in which the D-suffix constructions have almost completely disappeared. Another case is found in the Jewish dialects of the south-eastern periphery of NENA in which the construction consisting of a past stem and D-suffix, which originally expressed a perfect in intransitive verbs, has been pushed into the function of a perfective and the perfect is now expressed by a construction with participle and copula in closer conformity with the Kurdish model, e.g.:

(49) J. Sanandaj

	Perfective	Perfect
Intransitive:	<i>qim-Ø</i>	<i>qima-y</i>
	rise.PST-DIR.3SG.M	rise.PTCP-COP.3SG.M
	“He rose”	“He has risen”
Transitive:	<i>grəš-le</i>	<i>grəša-y</i>
	pull.PST-OBL.3SG.M	pull.PTCP-COP.3SG.M
	“He pulled”	“He has pulled”

The fact that the past stems of intransitive verbs in these Jewish dialects of the south-eastern periphery such as J. Sanandaj were originally inflected with L-suffixes is demonstrated by the survival of L-suffixes in the past form of the verb ‘to be’, viz. *ye-le* “he was”, *ye-la* “she was”, etc. (Khan 2017: 889, 898).

These developments exhibit various degrees of dominance of the Kurdish model. Convergence with the Kurdish model is greatest in Jewish dialects of the south-eastern periphery. In this cluster of dialects, the original intransitive perfective forms with L-suffixes have been replaced by a chain effect whereby the development of Kurdish-style perfects with a copula have pushed the intransitive perfect with D-suffixes into the position of intransitive perfective. As a result, the

verbal system now corresponds very closely to that of Kurdish, in which there is a distinction in perfective forms between the direct nominative inflection of unaccusative intransitive verbs and the oblique ergative inflection of transitive verbs.

4. Function of the perfect

Perfect forms in NENA have a variety of functions. In what follows I shall present examples of these mainly from the C. Urmi dialect, in which the perfect is expressed by a participle and copula. Other dialects will be referred to where appropriate. A common denominator of all these functions is that the event associated with the situation expressed by the perfect is in some way cognitively defocalized.

Prosody, which is often relevant to the function of the constructions, is marked in the examples. The symbol ^l marks an intonation group boundary. A grave accent (̀) marks the nuclear stress of the intonation group. An acute accent (́) marks a non-nuclear stress in an intonation group.¹¹

4.1 Resultative state

The perfect may be used to express a resultant state. Strictly this applies only to telic verbs whose participles express a durable changed configurational stative property of the subject referent of the clause, e.g.:

- (50) C. Urmi
 mit-əla.^l
 die.PTCP-COP.3SG.M
 ‘He has died/ he is dead’

With such lexical verbs one may, in fact, distinguish between usages in which the perfect is resultative and those in which it is stative (Nedyalkov & Jaxontov 1988). In resultative uses there is an assertion of a state that is the result of a prior event (‘he has died’) whereas in stative uses there is only an implication of a prior event (‘he is dead’). In resultative uses of the perfect the prior event that results in the state is specific but indefinite, i.e. the assertion of the construction does not bind it to a specified event time. In such constructions, the event itself is not directly asserted but is an implicature, in the case of statives, or defocalized, in the case of non-stative resultatives.

11. Other symbols used in the transcription that require explanation include *k̤* (unvoiced, unaspirated post-velar stop), and *t̤* (unvoiced, unaspirated alveolar stop), *c* (palatal stop). Words marked with a prefixed superscript ⁺ are pronounced with suprasegmental pharyngealization.

4.2 Anterior

If the participle of a verb does not express a durable changed property of the subject, the perfect does not strictly express a resultant state of the subject but rather a resulting situation in a wider sense. This may be termed an ‘anterior’ function, in that it implies the occurrence of an event in the past relative to the reference point in the present, e.g.:

- (51) C. Urmi
*Yösəp plixə-lə kəšya.*¹
 Yösəp work.PTCP-COP.3SG.M hard
 “Yösəp has worked hard.”

Such a construction asserts that the current situation holds as a result of a prior specific event in the past, but the event time is indefinite in that it is unspecified and is not necessarily known to the speaker. The event is separated from the speech time by an interval of time. For these reasons the event is cognitively defocalized. The presence of the referent who is the topic of the resultant situation at speech time, however, would typically imply that the event was not in the very distant past.

If the speaker witnessed Yösəp enter the house, as he sees him enter he would use the perfective form when speaking to an interlocutor:

- (52) C. Urmi
*tí-lə Yösəp.*¹
 come.PST-OBL.3SG.M Yösəp
 “Yösəp has come.”

Here the interval of the event time is contiguous with speech time. Such a use of the perfective is, therefore, ‘extended now’ (McCoard 1978). It is an event that is directly witnessed by the speaker at the time of speech or shortly before. The perfective form *tílə* “he has come”, therefore, expresses an event with cognitive prominence due to it being directly witnessed, due to its temporal location being known, and due to it being in the current consciousness of the speaker and interlocutors. The perfect, by contrast, always has an intervening interval between the speech time and the event. The English present perfect is used in both these contexts, the English perfect equivalent to the NENA perfective *tílə* “he has come” being known as the ‘perfect of recent past’ or ‘hot news’ perfect (Comrie 1976: 60–61; Dahl 1985: 132).

The perfective may also be used to refer to an event that occurred further in the past but crucially does not entail that there is a resultant situation in the present, e.g.:

- (53) C. Urmi
m-ḵám xa-⁺sá'at ⁺tli-lə 'ína 'adíyya
 from-before one-hour sleep.PST-OBL.3SG.M but now
⁺riš-əla.^l
 wake.PTCP-COP.3SG.M
 "He **went to sleep** (perfective) an hour ago, but he is now awake."

The perfect may be used to refer to the occurrence of an event at the same temporal distance from the present as the perfective in (53) and also one that has a specified event time. Unlike (53), such a construction with a perfect asserts that the situation resulting from the event still holds in the present, e.g.:

- (54) C. Urmi
m-ḵám xa-⁺sá'at ⁺təly-əla.^l
 from-before one-hour sleep.PTCP-COP.3SG.M
 "He **went to sleep** (perfect) an hour ago (and is still asleep)."

As with anterior perfects such as (51), however, there must be a separation of the event from speech time by an interval of time, so in an example such as (55) the perfective is more acceptable:

- (55) C. Urmi
m-ḵám xa-dáyḵa ⁺tli-lə.^l
 from-before one-minute sleep.PST-OBL.3SG.M
 "He **went to sleep** (perfective) a minute ago."

4.3 Existential

The perfect may be used with an existential function (Dahl 1985: 139–144; Kiparsky 2002: 116; Portner 2003: 464) in contexts such as the following:

- (56) C. Urmi
'ána ⁺xil-əvən ⁺šürva.^l
 I eat.PTCP-COP.1SG.M stew
 "I **have eaten** stew (on one or more unspecified occasion in an interval in the past extending to the recent past)"

Here the speaker does not assert the existence of a current situation that is the result of a specific event in the past. Rather what is asserted is the attribution of a more diffuse experiential property to the subject of the clause with the implicature that this was the result of at least one unspecified event of eating stew at an unspecified time in the past. There may have been more than one such event. Here the event is defocalized since it is both temporally indefinite and non-specific.

This type of usage of a perfect is also referred to in the literature as an ‘experiential perfect’.

Although the construction does not imply a specific event at a specific event time, the present copula of the construction specifies a property of the interval of time in which such an event occurred, namely that such an event has occurred on one or more occasion in an interval in the past extending to a point in the recent past. As with anterior constructions, the end of this interval of potential event time is separated by an interval of time from the present. If the speaker wishes to specify that the interval finished in the further past with a greater intervening interval before the present, the past copula is used, e.g.:

- (57) C. Urmi
Dávid tíyy-əva láxxa m-ḵám +dāna, | ‘u-múmcun
 David come.PTCP-COP.PST.3SG.M here from-before time and-possible
mədrə ‘átə-Ø. |
 again come.PRS-DIR.3SG.M
 “David **has come** here before (on one or more unspecified occasion in an interval in the past that finished in the past) and will probably come again”

The difference between existential constructions with the present and past copulas is shown in (58):

- (58) C. Urmi
 a. *tálja b-‘ánnə +danátə +xaráyə +riyy-ələ láxxa. |*
 snow in-these times last snow.PTCP-COP.3SG.M here
 “It has snowed here in recent times.”
 b. *tálja m-ḵám +dāna +ríyy-əva láxxa. |*
 snow from-before time snow.PTCP-COP.PST.3SG.M here
 “It has snowed here before (a long time ago).”

In such contexts English uses the present perfect. If there is no possibility of such an event occurring again, the simple past would be used in English. NENA, however, uses the past perfect (participle + past copula) in such past existential constructions, e.g.:

- (59) C. Urmi
savún-i síḵ-əva +‘al-‘áha +tùyra. |
 grandfather-my climb.PTCP-COP.PST.3SG.M on-this mountain
 “My grandfather (who is now dead) **climbed** this mountain (on one or more unspecified occasion in an interval in the past that finished in the past).”

The NENA perfect is also used in durative existential constructions with atelic verbs such as the following:

- (60) C. Urmi
Yósəp *rxít-ələ* *ka-xa-⁺sà'at.*¹
Yosəp run.PTCP-COP.3SG.M for-one-hour
“Yosəp **has run** for an hour.”
- (61) C. Urmi
Yósəp *xíyy-ələ* *láxxa ka-tré šənnə.*¹
Yosəp live.PTCP-COP.3SG.M here for-two-years
“Yosəp **has lived** here for two years.”

These imply that the event has taken place up until now but not that it still holds at speech time. In order to assert continuation in the present a progressive verb must be used, e.g.:

- (62) C. Urmi
Yósəp *bəxxáy-ələ* *láxxa ka-tré šənnə.*¹
Yosəp live.PROG-COP.3SG.M here for-two-years
“Yosəp **has lived** here for two years (and is still living here).”

When the situation is bound to a universal adverbial quantification (‘always, all his life’) the perfect must be used. This is because such a quantification is incompatible with a progressive present:

- (63) C. Urmi
Yósəp *hammáša xíyy-ələ* *làxxa.*¹
Yosəp always live.PTCP-COP.3SG.M here
“Yosəp **has always lived** here.”

4.4 Evidential

A perfect may be used with an evidential function (Aikhenvald 2004) to express an event that the speaker has not directly witnessed, but acquires knowledge of only by indirect evidence such as a report, or inference. In such cases the perfect presents the event with perfective aspect, with a specific event time, which may be expressed by a temporal adverbial that is a component of a received report or inference. The event, however, is cognitively defocalized in the mind of the speaker due to this lack of direct witnessing. I shall refer to such perfective uses of the perfect as indirect perfectives, which contrast with regular direct perfectives,¹² e.g.:

12. The term ‘indirect perfective’ is inspired by Johanson (1996, 2000, 2003), who uses the term ‘indirective’ for such constructions in Turkic languages.

Report:

(64) C. Urmi

- a. ⁺*xór-i* ⁺*mṭí-lə* *kám xámša dāyḵə*¹
 friend-my arrive.PST-OBL.3SG.M (perfective) before five minutes
 “My friend **arrived** five minutes ago.”
- b. *mār-əla* *kat-⁺xór-u* ⁺*māty-əla*
 say.PROG-COP.3SG.M that-friend-his arrive.PTCP-COP.3SG.M (perfect)
*ḵam-xámša dāyḵə*¹ *ʾaxči ana lēn* *xāzy-u*¹
 before-five minutes but I COP.NEG.1SG.M see.PTCP-GEN.3SG.M
 “He says that his friend **arrived** five minutes ago, but I have not seen him
 (i.e. I have not witnessed the arrival of his friend).”

In (64a) the speaker witnessed the event of the arrival of the friend and uses the direct perfective form. In (64b) the speaker has only heard a report about this event and the indirect perfective (perfect) is used.

Inference:

(65) C. Urmi

- lá b-⁺xábr-ət*¹³ *diyyan*¹ *xāš-la* ⁺*al-mēša*¹
 not with-word-CST of.me go.PST-OBL.3SG.F (perfective) to-forest
⁺*tāma*¹ *ʾu-díva* ⁺*xil-o-lə*
 there and-wolf eat.PTCP-GEN.3SG.F-COP.3SG.M (perfect)
 “She **went** to the forest without my permission and there a wolf **ate her**.”
 (Khan 2016, vol. 4, A 1:17)

In (65) the speaker reports the death of a woman. The act of her going to the forest is expressed in the direct perfective form (*xāšla*), since he witnessed this. The act of the wolf eating her, however, is expressed by the indirect perfective (perfect) form (⁺*xilolə*), since he did not witness this event, nor did he witness the direct result. In the story he is shown the bloody garment of the woman. From this he infers that a wolf ate her. Both verbs express a specific event with perfective aspect, bound to a specific event time.

The direct witnessing of the event that conditions the use of the direct perfective may be by auditory perception rather than visual perception. If, for example, somebody is waiting at home for a friend to arrive and he hears the noise of a car arriving without seeing it, he would use a perfective form *tilə* “he has come” when speaking to an interlocutor who is next to him rather than a perfect form.

The direct perfective is also used by a speaker to report an event he has directly witnessed, visually or auditorily, when the hearer has not directly witnessed the

13. CST =construct, i.e. a suffix that marks an item as being the head of a genitive construction.

event. If, for example, Yosəp walks through the door of the house of the speaker and at the moment of his entering the speaker phones his friend to report this, he would use the perfective form *tilə* “he has come”.

4.5 Presuppositional

A perfect may be used as an indirect perfective to express a specific event with a specific event time when the event is cognitively defocalized on the information structure level due to its being in a presuppositional component of the clause.

An example of this is the following. Speaker A is expecting the arrival of his friend Yosəp at the airport. Speaker B goes to the airport to meet Yosəp. When Yosəp arrives, speaker B immediately phones speaker A and reports the arrival with a direct perfective form:

- (66) C. Urmi
⁺*m̥i-lə* *Yosəp.*^l
 arrive.PST-OBL.3SG.M (perfective) Yosəp
 “Yosəp has arrived.”

Speaker A may then ask using an indirect perfective (perfect):

- (67) C. Urmi
^l*iman* ⁺*m̥ty-ələ?*^l
 when arrive.PTCP-COP.3SG.M (perfect)
 “When did he arrive?”

In (67) the event of Yosəp arriving at a particular time is part of the presuppositional common ground between the interlocutors and the focus is on the question word, which requests information about the specific time of arrival. Speaker B may then reply using an indirect perfective (perfect):

- (68) C. Urmi
⁺*m̥ty-ələ* *b-⁺sa’ätt-ət xàmšə.*^l
 arrive.PTCP-COP.3SG.M (perfect) at-hour-CST five
 “He arrived at 5 o’clock.”

In (68) the arrival at a particular time continues to be the presuppositional common ground between the two interlocutors. The focus is on the temporal adverbial, which supplies the requested information.

In such a dialogue the main factor that conditions the use of the indirect perfective (perfect) is the defocalization of the event due to its being part of the presupposition of the message.

Similarly, the indirect perfective (perfect) may be used in a context such as (69b), in which the verb is in a presuppositional component of a clause that contains a contrastive focus. (69a) asserts a specific event bound to a specific time with a direct perfective form:

(69) C. Urmi

- a. *Yosəp tî-lə* *b-+sa'ətt-ət +əsrə.*
 Yosəp come.PST-OBL.3SG.M (perfective) at-hour-CST ten
 "Yosəp **came** at 10 o'clock."
- b. *lā, | b-+sa'əttət +əççə* *tíyy-əla.*
 no at-hour-CST nine come.PTCP-COP.3SG.M (perfect)
 "No, he **came** AT NINE O'CLOCK."

If, however, the time adverbial in contrastive focus coincides with the speech time ('just now'), the direct perfective would normally be preferred, since the perfective contains an event time that coincides with speech time and so is part of the focus:

(70) C. Urmi

- a. *Yosəp tî-lə* *b-+sa'ətt-ət +əsrə.*
 Yosəp come.PST-OBL.3SG.M (perfective) at-hour-CST ten
 "Yosəp **came** at 10 o'clock."
- b. *lā, | 'adīyya tî-lə*
 no now come.PST-OBL.3SG.M (perfective)
 "No, he **has come** JUST NOW."

The use of the perfect in a defocalized presuppositional component of a clause is also found in mirative constructions such as the following. A speaker is sitting in a room with friends and they are expecting David to arrive. When he sees David come through the door, he would say:

(71) C. Urmi

- tî-lə* *Dávid.*
 come.PST-OBL.3SG.M (perfective) David
 "David **HAS COME**."

Here the subject 'David' is presuppositional since his role as subject is in the shared common ground of the interlocutors. Note that the nuclear stress is on the verb rather than the subject, represented in the English translation by upper case. The speaker presupposed that he would come, but the precise event time was not known. The placement of the nuclear stress on the perfective verb expresses focus on the event.

If, however, Yosəp unexpectedly comes through the door rather than David, the speaker may say:

- (72) C. Urmi
*Yösəp tíyy-ələ.*¹
 Yösəp come.PTCP-COP.3SG.M (perfect)
 “YOSƏP has come.”

The nuclear stress is on the subject ‘Yösəp’ expressing the focus on the unexpected subject. The verb, as a consequence, becomes defocalized and this motivates the use of the perfect, which is an indirect perfective.

Other possible utterances containing the perfect in such a mirative context include:

- (73) C. Urmi
*ḵa-múd=ilə Yösəp tíyya?*¹
 for-what=COP.3SG.M Yösəp come.PTCP
 “Why has YOSƏP come?”

- (74) C. Urmi
*ḵa-mùd=ivət tíyya?*¹
 for-what=COP.2SG.M come.PTCP
 “WHY have you come?”

Also of relevance in this section is the distinction between the negation of the perfective and perfect. If a person is waiting for Yösəp but he does not come, he may say to his interlocutors either (75a) or (75b):

- (75) C. Urmi
 a. *lā tí-lə.*¹
 NEG come.PST-OBL.3SG.M
 “He has not come.”
 b. *lələ tíyya.*¹
 NEG.COP.3SG.M come.PTCP
 “He has not come.”

The negation of the perfective (75a) is used if the speakers wishes the scope of the negation to include the specific event and its event time, expressing the fact that he did not come at the time expected and there is no implicature that he will come later. When the negative perfect construction is used, on the other hand, the scope of the negation does not include a specific event and its event time but only the speech time (‘he has not currently come’), so there is a presupposition that he will come. The scope of what is explicitly negated corresponds to what Huddleston & Pullum (2002: 790–799) refer to as the ‘focus of negation’. We may say, therefore, that the lexical verb of the perfect is defocalized and presuppositional.

4.6 Remote past

A further function of the perfect is its use to express an event in the remote past. Such past events are presented with perfective aspect with a specific event time, and so will be referred to as indirect perfectives. In such cases the event may have been witnessed by the speaker, but he/she is separated from it by a long interval of time. The construction may be used, therefore, by speakers to talk in the first person about events that they were involved in. In such uses of the perfect to express the remote past the event may be said to be defocalized due to its distance from present reality. The reference time of the constructions is the present, which is reflected by the present copula in the morphology of the perfect. This is not necessarily the real present but in narrative it is often the virtual present of the narrator within the world of the narration.

An example from the J. Sulemaniyya dialect is (76). Here the perfect form *mila-y* is used to express the temporal remoteness of the death of one of the brothers in contrast to the more recent death of the other brother, which is expressed by the normal narrative perfective form *mil*:

- (76) J. Sulemaniyya
 'ó tre-'axóne ruwwè.^l *mil-i*.^l xáy-u
 those two-brothers big die.PST-DIR.3PL (perfective) one-GEN.3PL
qáme tre-šánne mil-ø^l Mòše.^l 'avál 'ó
 before two-years die.PST-DIR.3SG (perfective) Moshe but (Hebrew) that
xa-xèt^l qáme xamšàsar šánne bi-zóda milà-y.^l
 one-other before fifteen years more die.PTCP-COP.3SG (perfect)
 "The two older brothers **died**. One of them, Moshe, **died** two years ago, but the
 other one **died** more than fifteen years ago." (Khan 2004: 317)

The use of the perfect to express perfective events in such contexts is not obligatory and speakers may also use the direct perfective form to express the remote past. In some sections of my corpus of recordings of the Jewish Sulemaniyya dialect, the speaker interchanges between the indirect perfective (perfect) forms and the direct perfective when narrating events in the remote past. The choice is not random. The speaker uses the perfect forms in clauses that have importance in the discourse.¹⁴ This expression of prominence most likely arises from the present time deixis of the present copula element in the perfect. In (77) the speaker uses the perfect form of the verb 'to come' in the clause that expresses the event of his emigration to Israel, which is the pivotal point in the section of discourse in question and the main

14. For a similar motivation for the use of the perfect in narrative see Levinsohn (this volume).

concern of the speaker. The event of his getting married is presented as background elaboration, with a lower level of importance. Note that the verb ‘to come’ in the subordinate adverbial clause modifying the clause expressing the event of his getting married is also in the perfective:

- (77) J. Sulemaniyya
’ána hiy-éna m-Slemaní ba-šatá
 I come.PTCP-COP.1SG.M (perfect) from-Sulemaniyya in-year
xamši-u-xà.¹ qáme héna ga-Slemaní¹ ’ána
 fifty-and-one before come.PST.1SG.M (perfective) in-Sulemaniyya I
báxta mèli.¹
 wife bring.PST-OBL.1SG (perfective)
 “I came from Sulemaniyya in the year fifty-one. Before I came, I married in Sulemaniyya.”
 (Khan 2004: 317)

As remarked, this may be correlated with the fact that in the indirect perfective (perfect) forms the reference time coincides with the speech time of the narrator, which is reflected by the present copula of the construction. Such a use of the perfect may, therefore, be compared to the so-called ‘narrative present’, which is widely attested cross-linguistically. The narrative present is particularly characteristic of oral performances of narratives in interactional settings, in which the narrator virtually enters the temporal frame of the events of the story, especially those that are salient and associated with salient referents (Fleischman 1990). The bringing together of reference time and present performance speech time of the NENA narrative perfect is exploited to achieve the same performative effect of salience as the linking of speech time and reference time in narrative presents. Unlike in narrative presents, however, the event of the NENA narrative perfects is presented as being separated by an interval of time from the reference and speech time. The event is important but distant.

A further example is (78) from the J. Arbel dialect. Here the speaker uses the perfect *lā qṭalle* form as an indirect perfective to express the remote past. In the same section of discourse, he also uses the direct perfective form to express an event in the remote past. As in the Jewish dialect of Sulemaniyya, the motivation for the use of the indirect perfective (perfect) form is the importance of the clauses in question in the discourse. They relate to the central point of the section, which concerns the origin of his father from Ruwandiz. The fact that a previous generation came from another town has the status of elaborative background information.

(78) J. Arbel

bab-í Ruwandəzn-èle.^l 'ašl-éu 'əl-Ruwándəz
 father-my Ruwandəz.inhabitant-COP.3SG.M origin-his in-Ruwandəz
lā-ğdír-e^l son-ì=š 'əl Ruwándəz
 COP-be.born-OBL.3SG.M (perfect) grandfather-my=also in-Ruwandəz
lā-ğdír-e^l sonát bab-ì^l 'əl-Bàrzan
 COP-be.born-OBL.3SG.M (perfect) grandfather father-my in-Barzan
ğdír-e
 COP-be.born-OBL.3SG.M (perfective)

“My father is from Ruwandiz, **he was born** in Ruwandiz, also my grandfather **was born** in Ruwandiz. The grandfather of my father **was born** in Barzan.”

(Khan 1999: 269)

In some NENA dialects it is common to narrate stories using the perfect. This can be identified as the usage of the indirect perfective perfect to denote the remote past. Such a practice is particularly common in fictitious folktales, and so the events are not only distant temporally but also distant epistemically due to their taking place in a fantasy world. As remarked above, however, the present copula makes them prominent for the narrator since it places the reference time at speech time, e.g.:

(79) C. Barwar

qim-ela^l [perfect] b-lêle^l tríp-əl-la [perfect] Zine^l
 rise.PTCP-COP.3PL at-night seize.PTCP-COP.3PL-OBJ.3PL Zine
'u-mùθy-əl-la [perfect] núbl-əl-la [perfect] kəs-Mămo.^l
 and-bring.PTCP-COP.3PL-OBJ.3PL take.PTCP-COP.3PL-OBJ.3PL by-Mamo
dmix-ela.^l [perfect] řišt-ela^l [perfect]
 sleep.PTCP-COP.3PL wake.PTCP-FS-COP.3SG.F
zipt-əll-ela^l [perfect] tla-Mămo.^l [perfect]
 push.PTCP-FS-OBJ.3SG.M-COP.3SG.F to-Mămo

“At night they went [perfect] and seized [perfect] Zine and brought her [perfect], they took her [perfect] to Mămo. They took her [perfect] to Mămo. They slept [perfect]. She woke up [perfect] and pushed [perfect] Mămo (out of bed).”

(Khan 2008b: 669)

In some dialects the past perfect (participle + past copula) is used as an indirect perfective when a contrast is set up between an event in the remote past and the present situation. The past perfect does not denote an event that is prior to another past action (pluperfect), but rather an event with a specific event time that is disconnected temporally from the present situation, i.e. there is an interval between the event and the present situation. The reference time of the indirect past perfective precedes speech time and is preceded by event time ($e < r < s$, see §6):

- (80) C. Urmi
+ʼaturáyə ʼatíkə bóny-u-va ʼáha
Assyrians ancient build.PTCP-GEN.PC.3SG.M-COP.PST.3PL this
[past perfect]
bənyán-ət ʼadiyya=zə píš-ələ.^l
building-REL now=also remain.PTCP-COP.3SG.M
[present perfect]
“The ancient Assyrians **built** (indirect past perfect: e < r < s) this building,
which still **remains** (stative: r, s) today (present).”
- (81) C. Urmi
ʼe-dárs-ət yúvv-o-nva kátu kámta^l
that-lesson-REL give.PTCP-GEN.PC.3SG.F-COP.PST.1SG to.him before
[past perfect]
lélə líp-o bəxšáv-ən +spáy.^l
NEG.COP.3SG.M learn.PTCP-GEN.3SG.F think.PROG-COP.1SG.M good
[present perfect]
“I don’t think **he has learnt** (present perfect: e < r, s) well the lesson that **I gave**
(past indirect perfective: e < r < s) him some time ago.”
(Khan 2016: vol. 2, 183)

In many NENA dialects the perfect that expresses the remote past is neutral with regard to aspect. It is generally used, as in the examples cited above, to express perfectly a specific event in the remote past, but it may also be used to express habitual activities in the remote past. An example of a habitual activity expressed by the perfect in the C. Urmi dialect is the following:

- (82) C. Urmi
ʼina b-kámt-ət kámta=da hár +ʼal-jaraváy dmíx-əna
but in-before-CST before=TOP just on-roofs sleep.PTCP-COP.3PL
[perfect]
+kə̀tə.^l
summer
“But long ago they used to sleep on roofs during the summer.”
(Khan 2016: vol. 2, 176, B 10:21)

5. Function of the perfect in contact languages

Many of the functions of the NENA perfect can be identified in languages in contact with NENA. There is a particularly close correspondence to the functional distribution of the perfect in Kurdish dialects. It appears, therefore, that not only

the structure but also the function of the perfect in NENA has converged to a large extent with those of Kurdish. Close parallels can also be found with the function of the perfect in other Iranian languages, such as Persian, though these are less likely to have had a direct impact on NENA. Space does not permit entering into details in this paper. Here it will suffice to present the parallel between the use of the perfect in Kurdish to express a remote indirect past perfective and habitual with NENA:

(83)	Kurdish (Sorani Mukri)	NENA (C. Urmi)	
Function			
Past Perfective	<i>hâtîm</i>	<i>tili</i>	“I came”
Past Habitual	<i>da-hâtîm</i>	<i>ci-’atənva</i>	“I used to come”
Perfect	<i>hâtûma</i>	<i>tiyyəvən</i>	“I have come”
Indirect Past Perfective	<i>hâtûma</i>	<i>tiyyəvən</i>	“I came”
Indirect Past Habitual	<i>da-hâtûma</i>	<i>tiyyəvən</i>	“I used to come”

In Kurdish the perfect form *hatuma* has the primary function of expressing the anterior perfect ‘I have come’, but is used secondarily to express the indirect remote past perfective (Bulut 2000). It is also used secondarily to express the indirect remote past habitual when combined with the habitual particle *da*, which has been extended from the primary past habitual *da-hatim*. In NENA the equivalent remote past habitual does not have the habitual prefixed particle *ci-* of the primary past habitual (*ci-’atənva*). This suggests that NENA replicated the Kurdish system of indirect perfect forms with available resources within NENA but there was a constraint preventing the creation of forms that were not available within the existing NENA system. The perfect form *tiyyəvən* was available but not a form such as **ci-tiyyəvən*. This in turn may be due to the fact that the Iranian preverbal particle *da-* had the syntactic status of an adverbial when combined with the past and perfect forms due to its presumed historical origin as an adverbial, whereas NENA *ci-* was not adverbial, either synchronically or diachronically.

6. Analysis of temporal structure

The common denominator of the diverse functions of the NENA perfect that have been described above is the fact that the event is viewed from an **indirect reference point** and as a result the event is **defocalized**. The different functions arise from (i) the nature of the indirect perspective, i.e. temporal (resultative, anterior, existential, remote past), epistemic (evidential), cognitive (presuppositional, mirative), and (ii) the definiteness of the event (indefinite specific, indefinite non-specific, definite [i.e. bound to a definite point in time]).

In what follows I propose a Reichenbachian type of analysis based on the categories *e* = event, *r* = reference time, *s* = speech time.

The present copula is used in the perfect forms when *r* and *s* coincide. The past copula is used when *r* temporally precedes *s*. In all perfect constructions *e* is separated from *r*, i.e. *e* < *r*, where < denotes temporal, epistemic or cognitive separation.

6.1 Resultative state

Perfect with present copula (*e* < *r*, *s*)

- (84) C. Urmi
mit-əla.¹ (die.PTCP-COP.3SG.M) “He has died”

e temporally precedes *r* and *s*. *e* is specific but indefinite (i.e. not bound to a specified event time).

6.2 Anterior

Perfect with present copula (*e* < *r*, *s*)

- (85) C. Urmi
plix-əla *kəšya*.¹
work.PTCP-COP.3SG.M hard
“He has worked hard”

e temporally precedes *r* and *s*. *e* is specific but indefinite (i.e. not bound to a specified event time).

Perfective (*e*, *r* < *s*)

- (86) C. Urmi
tí-la.¹ (come.PST-OBL.3SG.M) “He has (just now) come”

e and *r* temporally precede *s*. *e* is bound to a definite event time. The interval of *r* may extend to *s* (‘just now’).

6.3 Existential

Perfect with present copula (*e* < *r*, *s*)

- (87) C. Urmi
tálja b-ánnə +danátə +xaráyə +riyy-əla *láxxa*.¹
snow in-these times last snow.PTCP-COP.3SG.M here
“It has snowed here in recent times.”

e temporally precedes *r* and *s*. *e* is indefinite, non-specific.

Perfect with past copula ($e < r < s$)

- (88) C. Urmi
tálja m-ḵám +dána +ríyy-əva làxxa.^l
 snow from-before time snow.PTCP-COP.PST.3SG.M here
 “It has snowed here before (a long time ago).”

e temporally precedes r and r temporally precedes s . e is indefinite, non-specific.

6.4 Evidential

Perfect with present copula ($e < r, s$)

e temporally precedes r and s and is separated from them epistemically. e is definite, bound to a definite event time. If the temporal structure were $e, r < s$, a past copula would have been expected.

6.5 Presuppositional

Perfect with present copula ($e < r, s$)

e temporally precedes and/or is separated cognitively from r and s , i.e. it is of a lesser degree of cognitive salience. e is definite, bound to a definite event time.

In some cases, there is cognitive defocalization of e but not its temporal separation from r, s . These include mirative constructions such as (72).

6.6 Remote past

Perfect with present copula ($e < r, s$)

e temporally precedes and is separated from r and s epistemically. e is definite, bound to a definite event time. r is virtual present (e.g. virtual viewpoint of narrator in narrative or current relevance in habitual descriptions).

Perfect with past copula ($e < r < s$)

- (89) C. Urmi
+aturáyə 'atíkə bəny-u-va 'áha
 Assyrians ancient build.PTCP-GEN.PC.3SG.M-COP.PST.3PL this
 [past perfect]
bənyán-ət 'adiyya=zə piš-əla.^l
 building-REL now=also remain.PTCP-COP.3SG.M
 [present perfect]

“The ancient Assyrians **built** this building, which still **remains** today (present).”

e temporally precedes r and is separated from it epistemically. e is definite, bound to a definite event time. r precedes s temporally.

7. Conclusions

Perfects in the NENA dialects exhibit a wide range of forms and functions. Some of the functions are common uses of the perfect cross-linguistically. Some, however, are less well attested, or at least have received less attention in the linguistic literature. This applies in particular to perfects that entail a specific event at a specific event time and so can substitute for perfectives. Also the presuppositional uses of the perfect (§4.5) show that the separation between the event and the reference point ($e < r$), which is the hallmark of the perfect, need not be temporal distance, but may be cognitive distance from the focus of attention due to the presuppositional information status of the event. Cognitive distance can indeed be identified as an overarching feature of all functions of the perfect.

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The perfect in Classical Armenian

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The paper discusses the syntax and semantics of the perfect and pluperfect of Classical Armenian. While A is usually marked for genitive, S may be marked for nominative or genitive. The perfect of terminative unaccusative verbs ('fall', 'come') describes the state of the subject after the event has reached its endpoint ('be fallen, lie', 'have come, be present'). In two-place predicates the majority of perfects occur in a single-actant construction describing the resulting state of the object of the active clause ('weave' → 'is woven'). If the underlying A is present as oblique subject in the genitive and the resulting state of O is backgrounded, the perfect may depict A as responsible for the event ('characterizing'), or as being affected more than O ('possessive'). Cases without a clear target state may have triggered the development of the perfect into a resultative in the modern language denoting present relevance of a preceding state of affairs.

Keywords: perfect, Armenian, genitive subject, target state, resultative

1. Introduction

This paper discusses the semantics of the perfect and pluperfect in Classical Armenian and sketches its diachronic development up to Modern Eastern Armenian. First some basic information on its syntax (§2) and morphology (§3) will be presented. After a description of the use of the participle without copula (§4.1), the most frequently attested functions of the perfect (§4.2), formed from one-place predicates (§4.3), and two-places predicates (§4.4) are treated. Apart from the expression of a resulting state found in these cases, the perfect is also used in a number of other functions which may be interpreted as part of a development from a present resultative to a perfect tense. Finally, §5 briefly sketches the situation in medieval and Modern Eastern Armenian.

2. Syntax

The perfect stem in Classical Armenian is formed with the participle and the present tense of the copula for the perfect and the imperfect of the copula for the pluperfect:

Table 1. Perfect and pluperfect formation in Classical Armenian

	Copula present tense	Copula imperfect	Participle
Perfect	1SG <i>em</i> , 2SG <i>es</i> , 3SG <i>ē</i> , 1PL <i>emkʻ</i> , 2PL <i>ēkʻ</i> , 3PL <i>en</i>		(verbal stem)- <i>eal</i>
Pluperfect		1SG <i>ēi</i> , 2SG <i>ēir</i> , 3SG <i>ēr</i> , 1PL <i>ēakʻ</i> , 2PL <i>ēikʻ</i> , 3PL <i>ēin</i>	(verbal stem)- <i>eal</i>

The participle is usually derived from the aorist stem, which is either identical to the root (‘root aorist’), e.g. *berem* ‘to carry’: AOR *ber-* (in contrast to the present stem with a suffix, in this case *-e-*, *ber-e-*), or is formed with special suffixes, most frequently *-cʻ* [-ts^h-], e.g. PRS *lnowm* ‘I fill’: AOR *l-cʻ-i* ‘I filled’.

The basic syntax of the perfect and pluperfect can be described as follows: the subject of an intransitive verb and that of a passive sentence are usually marked in the nominative case (cf. (1–4)), while the logical subject of a transitive verb is marked in the genitive (5). In the latter case the copula does not agree in number with the genitive subject, but is always 3SG.¹

Intransitive *hasanem* ‘to arrive’ (cf. 1 and 2):

- (1) *na haseal ē*
NOM.3SG arrive.PTCP COP.PRS.3SG
“(S)he has arrived.”
- (2) *nokʻa haseal en*
NOM.3PL arrive.PTCP COP.PRS.3PL
“They have arrived.”

Transitive *berel* ‘to bring’ (cf. 3 and 4):

1. Cf. Jensen (1959: 135), Meillet (1980: 74), Stempel (1983), Schmitt (2007: 152f.), Kölligan (2013). Indefinite objects are not marked in the singular, i.e. they are formally identical to their nominative form, while in the plural they have a case marker *-s*. Definite objects are preceded by a prefix *z-* in both singular and plural (cf. (5) *z-šiš*): indef. SG *-ø*, PL *-s*, def. SG *z-*, PL *z-...s*. For a more nuanced account of the function of *z-* in terms of differential object marking cf. Muth (2014); see also Corbett (2013: 92f.) on the question of the autonomy of the accusative case in Classical Armenian. For a discussion of the theories about the possible origins of the Armenian construction (possessive genitive, passive, calque from Iranian), cf. recently Meyer (2015).

- (3) *na bereal ē*
 NOM.3SG bring.PTCP COP.PRS.3SG
 “(S)he has been brought.”
- (4) *nok’a bereal en*
 NOM.3PL bring.PTCP COP.PRS.3PL
 “They have been brought.”
- (5) *noc’a bereal ē z-šiš-n*
 GEN.3PL see.PTCP COP.PRS.3SG ACC-flask-ART
 “They have brought the flask.”

Occasionally, from the earliest text, that is the translation of the Bible, onward, genitive subjects used with intransitive verbs also occur, cf. (6) where the PTCP *žoloveal* governs no object, but the logical subject is marked for GEN:²

- (6) John 18.2
bazowm angam žoloveal ēr andr Yisows-i
 many time gather.PTCP COP.IPRF.3SG there Jesus-GEN.SG
ašakert-awk’-n handerj
 disciple-INS.PL-ART with
 “Jesus had often met there with his disciples.”

Cf. in contrast to this (7) with an ACC-object governed by the conjunct participle *žoloveal* (the subject ‘Herod’ is recoverable from the preceding context):

- (7) Matthew 2.4
žoloveal z-amenayn k’ahanayapet-s-n harc’anēr
 assemble.PTCP ACC-all arch_priest-ACC.PL-ART ask.IPRF.3SG
i noc’anē
 from 3PL.ABL
 “He assembled all the arch-priests and asked them.”

A ‘minimal pair’ with both uses is Matthew 15.12 with the GEN *ašakertac’* “disciples” (which also has a *varia lectio* in ms. M³ with NOM-subject *ašakertk’*) beside Matthew 15.23:

2. So far no reliable numbers exist on how frequent this deviating use is, but it seems likely to be a low percentage.

3. In the edition of Künzle (1984), which uses two of the oldest mss. of the Armenian gospels (E=Ejmiac’in no. 229 [now Matenadaran no. 2374], written 989, M=Moscow no. 1111 [now Matenadaran no. 6200], written 878). They do not go back to a direct common ancestor, but ultimately rely on the text of the Greek codices D (Bezae, 6th c.) and Θ (Koridethi, 9th c.), cf. Künzle (1984: I.21*).

- (8) Matthew 15.12
matowc'eal ašakert-ac'-n nora asen c'-na
 approach.PTCP disciple-GEN.PL-ART 3SG.GEN say.PRS.3PL PREP-3SG.ACC
 "His disciples approached him (and) said to him."
- (9) Matthew 15.23
matowc'eal ašakert-k'-n nora alač'ein z-na
 approach.PTCP disciple-NOM.PL-ART 3SG.GEN ask.IPRF.3PL ACC-3SG
 "His disciples approached him and asked him."

While in (8) the GEN-subject can only be triggered by the participle,⁴ (9) is ambiguous, as the NOM might either belong to the participle or to the inflected verb.

3. Morphology

The use of the participle in *-eal* as described in 1 may indicate that it is a voice-neutral form: it does not indicate whether the logical subject of the clause is an agent (as in *nora tesimal ē* "She/He has seen.") or a patient (as in *na tesimal ē* "She/He has been seen").⁵ In this respect it can be paralleled with the Armenian infinitive in *-l* which inflects as an *o*-stem and presupposes a form with the suffix **-lo-* added to the stem of the verb, e.g. *berel* "to carry", GEN *bereloy*. In Proto-Indo-European terms, the infinitive is likely to go back to the neuter of the verbal adjective in **-lo-*, hence (transposed) a form like **b^her-e-lo-m*.⁶ The Classical Armenian infinitive is voice-neutral, e.g. the infinitive of a transitive verb like *datel* "to judge" is used both in an active and in a passive clause in the following examples:

- (10) Matthew 19.28
date-l z-erkotasan azg Israyēl-i
 judge-INF ACC-12 tribe Israel-GEN.SG
 "to judge the twelve tribes of Israel"

-
4. There are no cases of GEN-marked subjects in the present or aorist stem.
5. On subject-properties of the participant encoded in the GEN such as co-referential deletion and control of reflexive forms see Kölligan (2013: 75f.).
6. The same suffix is productive in Slavonic as part of the new periphrastic perfect, but with the oppositive voice-orientation (cf. Wiemer, this volume). It also forms adjectives in Greek like *streblós* "crooked, twisted", *mimēlós* "imitating", *sigēlós* "silent", *skópelos* [lit. "look out-place"] "peak, promontory", *aít^halos* "smoky, sooty" (cf. Meillet 1936: 129), and a variant in **-lyo-* is used in Tocharian as a gerundive (Tocharian B *-lle* or *-lye*, Tocharian A *-l < *-lylyæ < *-lyo*).

(11) Acts 25.9

kami-s *vasn* *do-c'i-n* *ir-ac'* *date-l*
 want.PRS-2SG because DEM-GEN.PL.-ART thing-GEN.PL judge-INF
araji im
 before GEN.1SG

“Do you wish to be tried on these charges before me?”

The participle in *-eal* is likely to be based on the same suffix **-lo-* as the infinitive.⁷ The preceding element *-ea-* has no unanimously accepted explanation. Its formal similarity to the element *-ea/e-* found in aorists of the type (PRS) *gorcem* “I work”: (AOR) *gorc-ea-c'* “(s)he worked” makes it plausible to assume either that the aorist stem formation with *-ea-* and the form of the participle have a common ancestor (cf. Schmitt 2007: 145) or that the element *-ea-* has been transferred from the aorist to the participle (cf. Stempel 1983: 66f.).

4. Semantics

4.1 Participle

4.1.1

As a nominal form that has gradually become part of the verbal paradigm the participle retains much of its nominal semantics; i.e. it functions as an adjective denoting a property that in terms of its time stability is half-way between substantives and verbs (in the sense of Givón 1984: 121–123). This may be seen a) by its interchangeability with underived adjectives, e.g. in the case of *merjeal* “(having come) close, near”, the participle of *merjenam* “to approach”, beside the adjective *merj* of the same meaning (cf. 12 and 13) and b) by the fact that it may translate Greek nouns and adjectives as in the (14) in which the participle *me'real* “dead” (: *me'ranim* “to die”) translates Grk. *nekrós* “dead; corpse”:

(12) Matthew 3.2 (Matthew 4.17; Matthew 10.7; Luke 10.11; Luke 10.9)

merjeal *ē* *ark'ayowt'iwn* *erkn-ic'*
 approach.PTCP COP.PRS.3SG kingdom.NOM.SG heaven-GEN.PL

“The kingdom of heaven is near.”

Greek:

ēngiken *gār* *hē* *basileía* *tôn*
 approach.PRF.3SG because ART.NOM.SG.F kingdom.NOM.SG ART.GEN.PL.M
ouranôn
 heaven.GEN.PL

7. Cf. in this sense Meillet (1936: 129), Stempel (1983: 49).

- (13) Luke 21.20 (with a *varia lectio merjeal* in ms. M)

merj ē awr nora
near COP.PRS.3SG day.NOM.SG GEN.3SG

“Its day is near.”⁸

Greek:

éngiken hē erēmōsis autēs
approach.PRF.3SG ART.NOM.SG.F desolation 3SG.GEN.F

“Its desolation is near.”

- (14) Luke 15.24

ays ordi im mereal ēr
DEM.NOM.SG son.NOM.SG GEN.1SG die.PTCP COP.IPRF.3SG

“This son of mine was dead.”

Greek:

hoútos ho hyiós mou nekròs
DEM.NOM.SG.M ART.NOM.SG.M son.NOM.SG 1SG.GEN corpse.NOM.SG

ēn

be.IPRF.3SG

“This son of mine was a corpse/dead.”

In turn, some participles are lexicalized as adjectives that may also be used as adverbs, e.g. *darjeal* “again”, originally the participle of *dar̄nal* “to turn” (AOR-stem *darj-*), and *k’alc’eal* “hungry” from *k’alc’nowm* or *k’alc’anam* “to be/become hungry”, cf. the participle of the latter cooccurring with the adjective *carawi* “thirsty”:⁹

- (15) Matthew 5.6

erani or k’alc’eal ew carawi ic’en ardarowt’ean
blessed REL.NOM.SG hunger.PTCP and thirsty COP.SBJV.3PL justice.GEN.SG

“Blessed are those who are hungry and thirsty for righteousness.”

Greek:

makáριοι hoi peinôntes kai
blessed.NOM.PL ART.NOM.PL.M hunger.PTCP.NOM.PL.M and

dipsôntes tēn dikaíosynēn

thirst.PTCP.NOM.PL.M ART.ACC.SG.F justice.ACC.SG

8. The divergence between Arm. ‘day’ and Grk. ‘desolation’ may be due to a misreading of Grk. *erēmōsis* “desolation” as *hēméra* “day”.

9. Cf. also Künzle (1984: II.684) who dedicates an independent entry to the participle, and Jensen (1959: 273) who speaks of a “completely adjectival meaning” (“völlig adjektivische[r] Bedeutung”).

4.1.2

Outside the translation of the Bible the participle frequently occurs without the copula and is used as a simple narrative verb form, usually obeying the principles of case marking described in §2, e.g.:

- (16) intransitive verb, NOM-subject, Agathangelos §214
tesil erewéal y-Astowc-oy i veray k'ér
 dream.NOM.SG appear.PTCP PREP-god-ABL.SG PREP sister.GEN.SG
t'agawor-i-n
 king-GEN.SG-ART
 "A vision from God appeared to the king's sister."
- (17) intransitive verb, GEN-subject, Buzandaran 4.4
i žołov hawanowt'iwn-s ekeal amenec'own
 PREP assembly.ACC.SG agreement-ACC.PL come.PTCP all.GEN.PL
 "They all came to the assembly willingly."

The occasional occurrence of a NOM-subject with a transitive verb as in the conjunct use described above (9) probably foreshadows the development in the later stages of the language which shows nominative-accusative alignment also in the perfect (cf. §5):

- (18) transitive verb, NOM-subject, Agathangelos §250
es tesil tesimal z-hreštak Astowc-oy
 NOM.1SG dream see.PTCP ACC-angel God-GEN.SG
 "I saw a vision, the angel of the Lord."

4.2 Perfect

The semantics of the Armenian perfect has been discussed extensively by Lyonnet (1933) and more recently by Ouzounian (2002, 2007). Both in its transitive and intransitive use the perfect most frequently denotes a state which results from a previous action or event and obtains at reference time. It may be described as a 'resultative' in the terminology of Nedjalkov & Jaxontov (1988) and Bybee et al. (1994: 54, 63), or as a 'statal perfect' in Maslov's terminology (Maslov 1988: 64) or as describing the 'target state' as defined by Parsons (1990) in the case of terminative verbs.

4.3 One-place predicates

4.3.1

With terminative unaccusative verbs like ‘to fall’ or ‘to come’ the perfect depicts the state of the subject obtaining after the event has reached its endpoint; i.e. ‘lies on the ground’ (after having fallen), ‘is here’ (after having come), cf. *ankanim* ‘to fall, to die’ → “to have fallen, to be dead”:

- (19) Jes Sir 28.22
bazowm-k' en or ankeal en i
 many-NOM.PL COP.PRS.3PL REL fall.PTCP COP.PRS.3PL PREP
sowr sowser-i
 sharp sword-GEN/DAT/LOC
 “Many have fallen by the sharp sword.”

An instructive case pointed out by Lyonnet (1933: 10f.) is the use of aorist and perfect forms, when St. Paul talks about the death and resurrection of Christ: when talking about the former, the Armenian translator uses the aorist to report an event at some definite point in the past without making any implication about the state of affairs at the moment of speech:

- (20) Rom 5.8
K'ristos vasn mer meṙaw
 Christ because of 1PL.GEN die.AOR.3SG
 “Christ died for us.”
 Greek:
Christòs hypèr hēmôn apéthanen
 Christ.NOM.SG for 1PL.GEN die.AOR.3SG

One may assume that the perfect cannot be used here, as it would imply that the subject is still dead at the moment of speech, which would be contrary to the speaker’s intention who is preaching after Christ’s resurrection. In contrast to this, the translator uses the perfect when he talks about the resurrected Christ to indicate that he is alive at the moment of speech. Note that the Greek version has an aorist here just as in (20). The Armenian use is thus independent from the Greek original insofar as it does not copy the choice of aspect stems.

- (21) Rom 6.9
K'ristos yarowc'eal ē i meṙel-oc'
 Christ rise.PTCP COP.PRS.3SG PREP die.PTCP-ABL.PL
 “Christ has risen from the dead.”
 Greek:
Christòs egertheis ek nekron
 Christ.NOM.SG rise.AOR.PTCP.NOM.SG.M from dead.GEN.PL

The same applies to the antonym *cnanim*, AOR.3SG *cnaw*, “to beget; to be conceived, to be born”, e.g.

(22) Matthew 1.20

or i nmay-n cneal ē i hogw-oy
REL PREP LOC.3SG-ART bear.PTCP COP.PRS.3SG PREP spirit-ABL.SG
sr̥b-oy ē
holy-ABL.SG COP.PRS.3SG

“that which is conceived in her is from the Holy Spirit.”¹⁰

Greek:

tò gār en autēi gennēthēn ek
ART.NOM.SG.N because in 3SG.F.DAT conceive.AOR.PTC.NOM.SG.N from
pneumatós estin hagiou
spirit.GEN.SG COP.PRS.3.SG holy.GEN.SG.M/N

In the Armenian translation of Irenaeus of Lyon, a present tense form *owni* “she has” is used in the same context in the position where the Bible text quoted in example 22 has the perfect form *cneal ē*. This allows the assumption that both forms refer to the moment of speech, the difference between the perfect and the present tense form being that the former implies a preceding change of state which the latter does not:

(23) Iren. *Adv. haer.* IV 37, p. 81 (ed. Tēr-Mkrtč'ean 1910)

z-or owni-d y-orovayn-i i hogw-oy
ACC-REL have.PRS.3SG-DEM PREP-womb-LOC.SG PREP spirit-ABL.SG
ē i sr̥b-oy
COP.PRS.3SG PREP holy-ABL.SG

“that which she has in her womb is from the Holy Spirit.”

In the story about the man born blind in John 9 the Armenian version first uses two aorists which refer to the past event (John 9.2, 19) followed by a perfect (9.34) referring to the present state of the subject:

(24) John 9.2 *harc'in c'na ašakertk'n nora ew asen. Ėrabbi, oyr vnas ē, sora' t'ē hōr ew mōr iwroy*

zi koyr cnc'i
that blind be_born.AOR.SBJV.PASS.3SG

“[And his disciples asked him, saying, Master, who did sin, this man, or his parents,] that he was born blind?” (Greek: *typhlōs gennēthēi* [blind.NOM.SG bear.AOR.SBJV.PASS.3SG])

10. As Lyonnet (1933: 17) puts it: “l'être qui se trouve actuellement conçu en elle.”

John 9.19 *Harc'in c'nosa ew asen, sa ē ordin jer, zormē dowk'n aseik'*
et'e koyr cnaw

that blind be_born.AOR.PASS.3SG

“[They asked them, ‘Is this your son,] who (you say) was born blind? [How then does he now see?]]”

(25) John 9.34

i mels isk cneal es amenewin

PREP sin.LOC.PL indeed be_born.PTCP COP.PRS.2SG wholly

“[They answered him], ‘You were born in utter sin [, and would you teach us?]]”

(Greek: *egennēthēs* bear.AOR.IND.PASS.2SG)

In contrast to the aorists in John 9.2,19, the perfect in John 9.34 does not refer to the past event of ‘being born blind’, but to the present state of ‘being the offspring of sin’ (cf. Lyonnet 1933: 18), which in the eyes of the Pharisees disqualifies the subject from teaching them. Vice versa an aorist is used in John 9.20, when the blind man has just been healed by Jesus and his parents repeat that he was blind at birth. A perfect form would imply ‘he was born blind and still is’:

(26) John 9.20

sa ē ordi-n mer ew ... koyr

DEM.NOM.SG COP.PRS.3SG son-ART GEN.1PL and blind

cnaw

be_born.AOR.PASS.3SG

“This is our son and he was born blind.”

Another instructive case is Acts 22.27–8 (cf. Lyonnet 1933: 20) where the question is whether Paul has Roman citizenship. While the tribune interrogating him has bought it, Paul can claim that he is a Roman by birth and hence is a Roman citizen at the moment of speech:

(27) Acts 22.27–8

es cneal isk i dmin em

1SG.NOM be_born.PTCP indeed PREP 3SG.LOC.SG COP.PRS.1SG

“[So the tribune came and said to him, ‘Tell me, are you a Roman citizen?’ And he said, ‘Yes.’²⁸The tribune answered, ‘I bought this citizenship for a large sum.’

Paul said,] ‘But I have actually been born into it. / I am a citizen by birth.’”

Motion verbs such as *hasanem* ‘to reach, arrive’ and *gam* ‘come’ behave in the same way; i.e., being telic, either with an overt or implied goal or with an implied starting point, the perfect describes that the target has been reached or that the starting point has been left. The Greek present *pārestin* ‘is here, is present’ is translated by the Armenian perfect *haseal ē* of *hasanem* ‘to reach’ (cf. Lyonnet 1933: 33f.):

(28) John 7.6

žamanak im č'ew ē haseal
 time 1SG.GEN NEG-yet COP.PRS.3SG reach.PTCP

"My time has not yet come / is not yet here."

Greek:

ho kairòs ho emòs oúpō
 ART.NOM.SG.M time.NOM.SG ART.NOM.SG.M my.NOM.SG.M not yet
párestin
 be_here.PRS.3SG

The perfect of *gam* (AOR *eki*, PTCP *ekeal*) "to come" behaves in the same way, translating the Greek present *párestin*:

(29) John 11.28

vardapet-n ekeal ē ew koč'ē z-k'ez
 master-ART come.PTCP COP.PRS.3SG and call.PRS.3SG ACC-2SG

"The teacher has come and is calling for you."

Greek:

ho didáskalos párestin kai phōneî se
 ART.NOM.SG.M teacher.NOM.SG be_here.PRS.3SG and call.PRS.3SG 2SG.ACC

As the perfect refers to the moment of speaking, it is compatible with expressions referring to the perceptual environment of the speaker(s) and hearer(s), e.g. *aha* "behold" in (30) and the demonstrative *ays* "this one" (31) in which -s refers to the speaker:¹¹

(30) Matthew 26.45

aha haseal ē žam
 behold reach.PTCP COP.PRS.3SG time

"Behold, the time has come."

Greek:

idou ēngiken hē hóra
 behold approach.PRF.3SG ART.NOM.SG.F time.NOM.SG

(31) Mark 1.38

y-ays isk ekeal em
 PREP-DEM indeed come.PTCP COP.PRS.1SG

"[Let us go on to the next towns, that I may preach there also, for] that is why I have come here."

Greek:

eis toúto gár exêlthon
 PREP DEM.ACC.SG.N because come_out.AOR.3SG

11. As opposed to *ay-d* with -d referring to the hearer and *ay-n* having neutral / 3rd person deixis. On deixis in Armenian cf. Klein (1996).

Conversely, the perfect is not used when the speaker does not refer to the resulting state, cf. the aorist of *elanim* “to go out” and the pluperfect of *mtanim* “to enter” in the following two examples. In the first case, the perfect of ‘to go out’ with the subject ‘power’ would mean ‘there is a force outside (of me)’ (after having gone out, cf. Lyonnet 1933: 50), whereas the aorist *el* refers to the past event without making an implication about the present state:

(32) Luke 8.46

gitac’i *et’ē* *zawrowt’iwn* *el* *y-inēn*
 know.AOR.1SG that force go_out.AOR.3SG PREP-1SG.ABL
 “[But Jesus said, “Someone touched me, for] I perceived that power has gone out from me.”¹²

Greek:

égnōn *dýnamin* *exelēlythyian* *ap’* *emoû*
 notice.AOR.1SG force.ACC.SG go_out.PRF.PTCP.ACC.SG.F from 1SG.GEN

(33) Luke 8.30

dew-k’ *bazowm-k’* *mteal* *ēin* *i* *na*
 demon-NOM.PL many-NOM.PL enter.PTCP COP.IPRF.3PL PREP 3SG.ACC
 “[Jesus then asked him, ‘What is your name?’ And he said, ‘Legion,’ for] many demons had entered him = were inside him.”

As in the case of *meṛaw* discussed above (20), the aorist *mtin i na* “they had entered (at some point in the past)” would not say anything as to the present (or respective past) state of the subject and would probably not be felicitous in this example, since the preceding clause implies the present state of ‘being inside’.¹³

4.3.2 Stative/ingressive ambiguity

Most one-place predicates forming perfects imply a situation change (i.e. ‘become x’) and their corresponding perfect describes the state obtaining after this change, e.g. *gawsanam* “to wither, become dry” → PRF “to be dry, withered”, *ceranam* “to become old” → PRF “to be old”, *hotim* “to begin to smell” → PRF “to smell”, etc.¹⁴ A number of verbs, mostly describing bodily and mental states, are ambiguous between a stative (‘be x’) and an ingressive meaning (‘become x’), e.g. *zarhowrim* “to

12. The aorist *gitac’i* of the present *gitem* “I know” has an ingressive reading here: ‘I began to know, I noticed’.

13. The Syriac Curetonian gospel translation also simply has ‘we are many in him’ (cf. Burkitt 1904: 292f.; Lyonnet 1933: 47).

14. Note that the present-stem formation in *-anam* frequently denotes an ingressive meaning BECOME(x).

be(come) afraid”, *zarmanam* “to wonder, be(/-come) amazed”, *zbałnowm / zbalim* “to be(come) worried”, *hawatam* “to believe, have faith” (ingressive ‘to start to believe, declare oneself a believer’), *yimarim* “to be/go crazy, be(come) astounded”, *oxanam* “to be(come) angry” and *c’asnowm* “be(come) angry”. A typical instance is *bnakem* “to dwell / to settle (i.e. begin to dwell)”, cf. (34) with the stative meaning in the imperfect, (35) with the ingressive meaning in the present and (36) with the stative meaning in the perfect:

- (34) imperfect ‘to live’, Genesis 21.21

bnakēr *y-anapat-i-n* *P’aran-ow*
live.IPRF.3SG PREP-desert-LOC-ART P.-GEN.SG
“He was living in the wilderness of Paran.”

- (35) present ‘to settle/dwell’, Luke 11.26

mtanē *bnakē* *and*
enter.PRS.3SG.ACT settle.PRS.3SG.ACT there
“[Then it goes and brings seven other spirits more evil than itself, and] it enters and settles/dwells there.”

- (36) perfect ‘to live’, Luke 13.4

amenayn mardik *or* *bnakeal* *en* *y-Erowsalēm*
every man.NOM.PL REL settle.PTCP COP.PRS.3PL PREP-Jerusalem
“all men who live in Jerusalem”

The presence of two possible interpretations in the present stem is less certain in the case of *dolam* “to tremble” / “to begin to tremble”,¹⁵ cf. the stative meaning in (37):

- (37) Heb 12.21

z-ah-i *hareal* *em* *ew dolam*
PREP-fear-LOC.SG strike.PTCP COP.PRS.1SG and tremble.PRS.1SG
“I am struck by fear and trembling.”

Greek:

ékphobós *eimi* *kai éntromos*
fearful.NOM.SG COP.PRS.1SG and trembling.NOM.SG

The ingressive meaning ‘to begin to tremble’ is found in the aorist:

- (38) Psalm 17.8

xróvec’aw *ew dolac’* *erkir*
shake.AOR.PASS.3SG and tremble.AOR.ACT.3SG earth
“The earth was shaken and began to tremble.”

15. The Venice dictionary of Armenian (Awetik’eán, Siwrmēlean & Awgorean 1979) glosses the lemma as both *tremo* “to tremble” and *intremisco* “to begin to tremble”.

Greek:
esaleúthē kai éntromos egenēthē
 shake.AOR.PASS.3SG and trembling.NOM.SG.M become.AOR.PASS.3SG
hē gē
 ART.NOM.SG.F earth.NOM.SG

The perfect/pluperfect has the stative reading ‘to tremble’ and is synonymous with the present:

- (39) Mark 5.33
kin-n zarhowreal ew dolac’eal (M:) ēr
 woman-ART fear.PTCP and tremble.PTCP COP.IPRF.3SG
 “But the woman was afraid and trembling.” (*“had begun to be afraid and to tremble.”)
 Greek:
hē dē gynē phobētheisa kai
 ART.NOM.SG.F but woman.NOM.SG fear.AOR.PTCP.NOM.SG.F and
trémousa
 tremble.PRS.PTCP.NOM.SG.F

If in this case the ingressive reading is not available in the present, we may assume either that the perfect relates not to the meaning of the present, but to that of the aorist with the ingressive reading, and has a ‘target state’ reading, e.g. AOR ‘to begin to tremble’: PRF “(to have begun to tremble and hence) to be trembling”, or that the Armenian perfect is not restricted to terminative verbs, but can also be applied to states. In these cases, the perfect may denote what Parsons (1990) calls a “resultant state” that obtains by virtue of the minimal occurrence of the event, e.g. if “Peter is running.” obtains at some point in time *t*, there is a resultant state ‘Peter has run.’ at *t*+1, irrespective of whether there is an ensuing state or not or whether the event continues at speech time. The first, ‘target state’ analysis has been proposed by Haug (2004: 396f., 403f.) for Greek perfects built to stative presents like *oikéō* “to live”: PRF *óikēka* “to live” which derives from the aoristic meaning “to settle, begin to live somewhere”; i.e., ‘to have settled somewhere and to live at that place’: the target state of settling holds at the moment of speech. As shown above, the corresponding Armenian verb *bnakel* “to live/to settle” seems to allow an ingressive reading also in the present, while the present of *dolam* is probably stative only and the perfect is likely to be based on the ingressive aorist.¹⁶ This analysis might apply to other stative

16. Cf. for the Greek perfect of a stative VP of the type PRS *basileúō* “be king”: AOR *ebasileusa* “become king” Haug (2004: 410). In the case of the Armenian perfect, this analysis is supported not only by the semantics, but also by the morphology of the participle, which, as described in §2, derives from the aorist stem, not from the present stem.

presents, too, such as *yowsam* “to hope, trust” which forms a synonymous perfect based on the ingressive meaning “to set one’s hope on someone/something”, cf.:

(40) Psalm 17.3

Astowac ògnakan im ew es yowsam i na
 God helper GEN.1SG and NOM.1SG hope.PRS.1SG PREP ACC.3SG
 “The Lord is my helper, I hope in him.”

Greek:

ho theós mou boēthós mou kai
 ART.NOM.SG.M god.NOM.SG 1SG.GEN helper.NOM.SG 1.SG.GEN and
elpiō ep’ autón
 hope.FUT.1SG PREP 3SG.ACC

(41) Luke 11.22

z-spařazinowt’iwn-n nora hanē y-or yowsac’ēal
 ACC-armor-ART GEN.3SG take_away.PRS.3SG.ACT PREP-REL hope.PTCP
ēr

COP.IPRF.3SG

“[But when one stronger than he attacks him and overcomes him,] he takes away his armor in which he trusted.”

Greek:

tên panoplían autoú aírei eph’ hēi
 ART.ACC.SG.F armour.ACC.SG 3SG.GEN take.PRS.3SG PREP REL.DAT.SG.F
epepoíthei
 trust.PPRF.3SG

To sum up, the perfect of terminative verbs describes the resulting state that obtains after the event has reached its end-point. In the case of verbs whose present stem may have both an ingressive and a stative interpretation, the perfect overlaps semantically with the stative reading, describing a situation after a situation change. The Armenian perfect can also be formed to verbs whose present has a stative interpretation only. In this case, its meaning ‘has become x and is x now’ may be derived from the corresponding aorist stem which may have an ingressive reading ‘became x’.

4.4 Two-place predicates

4.4.1 Resultative

While in terminative one-place predicates the target state obtains in the single participant of the event, the situation is less clear in two-place predicates: the state may obtain in the subject or object of the event or it may not be clearly attributable to one of them only. However, approximately 90% of the perfects of transitive verbs

attested in the Gospels occur in a single actant construction in which the object of the corresponding active clause in the present or aorist appears as subject and as the carrier of the resulting state (cf. Ouzounian 2002: 15f.). The large majority of Armenian perfects are thus resultatives occurring in monovalent clauses, e.g. *ankanem* “to weave (something)”: PRF “something is woven” (42) and *arjakem* “to free (somebody)”: PRF “(somebody) is freed” (43):

(42) John 19.23

patmowčan-n ēr p’or ankeal
 tunic.NOM.SG.-ART AOR.3SG.ACT piece weave.PTCP
 “The tunic was woven in one piece.”

(43) Luke 13.12

kin dow arjakeal es i hiwandowt’ēnē
 woman.NOM.SG 2SG.NOM free.PTCP COP.2SG.PRS PREP disability.ABL.SG
k’owmmē
 your.ABL.SG
 “Woman, you are freed from your disability.”

In the construction with a transitive verb in the perfect marking the subject in the genitive and the object in the accusative (cf. §2), the resulting state is prominent in the subject in most cases, e.g. the perfect of the activity verb *ant’ernowm* “to read” denotes the state that obtains after the reading-event, which in the case of the object implies no more than that it has been read, while in the case of the subject it implies a change of knowledge. Jesus’ frequent rhetorical question addressed to the Pharisees with the aorist in the Greek version *ouk anégnōte* “haven’t you read?” is translated with the perfect *anterc’ēal ē jer*, e.g.:

(44) Matthew 12.3

oč’ ic’ē ant’erjeal jer
 NEG COP.3SG.SBJV read.PTCP GEN.2PL
 “Haven’t you read [what David did when he and those who were with him were hungry]?” (cf. Lyonnet 1933: 87)
 Greek:
ouk anégnōte
 NEG read.AOR.2PL

While the Armenian aorist makes a statement only about a past event and possible implicatures about a resulting present state may be cancelled, as seen in the case of *meṛaw* “he died” discussed above (cf. 20), the perfect refers to the present state that has come about as a result of a preceding event. In (44) it is the acquired knowledge that the speaker asks about – one might paraphrase the perfect as ‘don’t you know

(as surely you must have read)?’ – i.e., the state of the logical subject marked for genitive in the case of transitive verbs (cf. §2).

However, the transitive perfect may also highlight the state of the object, e.g. when the subject of the event is not expressed because it is unknown or irrelevant, e.g. in:

- (45) Mark 16.4
t’awalec’owc’eal ēr z-vēm-n i gerezman-ē-n
 roll.PTCP COP.IPRF.3SG ACC-stone-ART PREP grave-ABL-ART
 “Someone had rolled the stone away from the grave.”
 Greek:
apokekýlistai ho líthos
 roll.away.PRF.3SG.PASS ART.NOM.SG.M stone.NOM.SG

The Armenian uses an impersonal construction with an unexpressed subject ‘some-one’ that cannot be meaningfully described as carrier of the resulting state. Rather, this applies to the object of the event which in the Greek clause is promoted to subject position in a passive construction.

While in most instances the resulting state has a clear effect on one of the participants of the event, as seen in the examples above, it is not the case that only the affected participant of the event may appear as subject in the transitive perfect construction.¹⁷ In the case of ‘to kill’ the object may reasonably be said to be highly affected by the event, yet it does not appear as subject of the transitive perfect construction in (46) which highlights the state of the subjects, Barabbas and his fellows, who have committed murder and have been jailed for this reason:¹⁸

- (46) Mark 15.7
oroc’ ayr mi spaneal ēr
 REL.GEN.PL man 1 kill.PTCP COP.IPRF.3SG
 “who had killed a man”
 Greek:
hoítimes ... phóno-n pepoiékeisan
 REL.NOM.PL murder-ACC.SG do.PPRF.3PL
 “who had committed murder”

17. Pace Ouzounian (2002: 12): “Dans le cas d’un procès impliquant deux participants – un agent et un patient – seul le participant affecté par le procès peut être sujet grammatical d’une phrase au parfait: si c’est l’agent qui est affecté, on a un parfait actif, si c’est le patient qui est affecté, le parfait est passif.”

18. Note that the indefinite object *ayr mi* “someone” has no direct corresponding form in the Greek version, which uses the abstract noun ‘murder’.

4.4.2 Characterizing

In cases where the resulting state may be attributed to the subject, the perfect characterizes the latter as having done something and as responsible for the ensuing current state of affairs.¹⁹ When Pilate asks Jesus about his alleged criminal record, his point is not to ask for a past event, but for the presumed present state of guilt resulting from it which would force him to convict Jesus. Note that the Greek aorist – simply referring to the past event – is once more translated with a perfect in the Armenian version stressing the relevance of the present state of affairs:

- (47) John 18.35
zinč' gorc gorceal ē k'o
 INT deed.ACC.SG do.PTCP COP.PRS.3SG GEN.2SG
 "What have you done?" (cf. Lyonnet 1933: 84)
 Greek:
tí epoiesas
 INT do.AOR.2SG

While the aspect of present responsibility of the subject is a recurrent feature of the Armenian transitive perfect, it may also imply a change of state in the object, especially if the latter comes about only by the preceding event, as in (47) and in (48) in which the 'signs' did not exist before they were done by the subject:

- (48) John 12.37
aynč'ap' nšan-s arareal ēr araji noc'a
 so many sign-ACC.PL do.PTCP COP.IPRF.3SG before GEN.3PL
 "[Though] he had done so many signs before them [, they still did not believe in him.]"

Since the object both in (47) and (48) is indefinite, however, it seems that the pragmatic interpretation of the perfect in both instances is that of a resulting property of the subject.²⁰

4.4.3 Possessive

Possessive resultatives are described by Nedjalkov & Jaxontov (1988: 9f., 23f.) as forms built to transitive verbs with a subjective diathesis²¹ "if the underlying object of the previous actions refers to a body part or possession of the underlying subject

19. Such a characterizing use of perfects is known also in other languages, cf. Kümmel (2000: 75) for Vedic, Rijksbaron (2002: 36 fn. 2) and Haug (2004: 406) for Greek.

20. As Lyonnet (1933: 86) puts it: "Jésus avait beau être *l'auteur* de tant de miracles faits devant eux, ils ne croyaient pas en lui."

21. I.e. cases in which the subject of the resultative construction is co-referential with the subject of the underlying preceding action, as in 'John has sat down' → 'John is sitting'.

or to something in immediate contact with the latter.”²² In these cases “the result of the action affects the underlying subject rather than the immediate patient of the action.” (Nedjalkov & Jaxontov 1988: 9). Among the groups of verbs that typically form possessive resultatives they list (p. 23) beside ‘to take’, ‘to put on clothes’, ‘to open one’s mouth’ verbal collocations such as ‘to perform a deed’, ‘to make a mistake’ and ‘to win a victory’ – in the latter cases, Nedjalkov & Jaxontov (1988: 23) argue that “the verb and the direct object function as a single semantic unit and the object does not encode any semantic role.” The first collocation corresponds to the case of *gorc gorceal ē* discussed above (47), expressing the resulting responsibility of the subject. Nedjalkov & Jaxontov (1988: 24f.) argue that possessive resultatives may be a starting point for the development of a perfect tense in which the possessor relation is diminished and the agent-property of the subject is strengthened.

4.4.4 Generalized resultatives

These are forms of the (plu-)perfect derived from transitive verbs without a clear target state in either subject or object, e.g.:

(49) Mark 16.9

y-ormē haneal ēr z-ewt’n dew-n
 PREP-REL.ABL.SG pull.PTCP COP.IPRF.3SG ACC-seven demon-ART
 “from whom he had pulled out the seven demons”

Greek:

par’ hēs ekbeblēkei heptà daimónia
 from REL.GEN.SG.F cast_out.PPRF.3SG seven demon.ACC.PL

“[Now when he rose early on the first day of the week, he appeared first to Mary Magdalene,] from whom he had cast out seven demons.”

Lyonnet (1933: 95) abstains from deciding whether this is a subjective or objective resultative; i.e. whether it might be paraphrased either as ‘(he) was the healer (since he had cast out seven demons)’ (or more literally ‘from whom (he) was the one who had pulled out the seven demons’) or as ‘the seven demons had been cast out from her (by him)’.²³ Both the subject and the object are definite – note the accusative marker *z-* in the Armenian version used for definite objects (cf. fn. 1) – and the situation obtaining after the event of ‘pulling out’ the demons involves all three participants more or less equally, the healer, the healed (Mary Magdalene) and the cast out demons. The resulting state cannot be attributed to a single participant, but only to a general ‘state of the world’ that has changed after the event has taken place.

22. On formal effects of this semantic group e.g. in German cf. Nedjalkov (1971).

23. “il était le guérisseur pour avoir chassé sept démons (état du sujet)” / “dont il avait chassé sept démons, définitivement (état de l’objet)” (Lyonnet 1933: 95).

Another instance of this kind may be:

(50) Matthew 17.12

Ēleay ekeal isk ē

E. come.PTCP indeed COR.PRS.3SG

“Elijah has in fact come.”

Greek:

Ēlías édē êlthen

E. already come.AOR.3SG

Jesus refers to the prophecy that Elijah must come again before the Messiah appears and he makes clear that John the Baptist was this Elijah. At the moment of speaking John is already dead (this has been told in Matthew 14). Hence, *ekeal ē* is a perfect of a cancelled state, ‘he has been here, but is no longer’. What is relevant is not the target state of ‘to come’ → ‘to be present’, but the more general situation defined by the fact that Elijah has been present for some time.²⁴ This perfect behaves differently from all the other cases of *ekeal ē* in the Gospels which refer to the resulting state ‘x is here’, whereas this form refers to a past fact with present relevance. This factual use of the perfect corresponds to the *konstatierend* or *faktisch* non-resultative perfects in Kümmel’s terminology (Kümmel 2000: 79). It is noteworthy that in the parallel passage in Mark, the Armenian translation uses the aorist referring to the past event only and makes the present relevance a contextual implicature:

(51) Mark 9.13

Ēlia ekn

E. come.AOR.3SG.ACT

“Elijah came.”

One may assume that in contexts such as these, in which both the aorist and the perfect may be used to refer to the same past event, the latter explicitly referring to its current relevance, the perfect may start to develop into a past tense establishing a more general relation between a past event and the current state of affairs (cf. §5 on Modern Eastern Armenian).

4.4.5 *Continuative/universal*

The Armenian perfect may also be used as a continuative perfect, also called ‘universal perfect’ (cf. Gerö & von Stechow 2003: 272), denoting that a past state extends up to the moment of speech, cf.:

24. Cf. Lyonnet (1933: 107): “the state of affairs constituted by the realization of the prophecy (the coming of Elijah) exists at this moment” (“l’état de choses constitué par la réalisation de la prophétie (la venue d’Élie) existe maintenant”).

(52) Acts 23.1

amenayn owl̄ mta-wk' gnac'ēal em aṛaṇi astowac-oy
 all straight mind-INS.PL walk.PTCP COP.PRS.1SG before god-GEN.SG
minč'ew c'-aysōr
 until PREP-today

"I have walked before God with a completely straight mind up to this day."

Greek:

pāsēi syneidēsei agathēi pepolíteumai
 all.DAT.SG.F conscience.DAT.SG good.DAT.SG.F live_as_citizen.PRF.3SG.MID
tōi theōi áchri taútēs tēs hēméras
 ART.DAT.SG.M god.DAT.SG until DEM.GEN.SG.F ART.GEN.SG.F day.GEN.SG

This also speaks for a more general meaning of the perfect in Classical Armenian than a strict target state resultative: the continuative perfect broadens the focus from the resulting state at the moment of speech to a state obtaining also for some time in the past and extending up to the moment of speech.²⁵

4.4.6 *Relative tense*

In some cases the pluperfect seems to be used as a relative tense (cf. Lyonnet 1933: 116f.), e.g.:

(53) John 19.39

ekn ew Nikodemos or ekeal-n²⁶ ēr
 come.AOR.3SG.ACT also N. REL come.PTCP-ART COP.IPRF.3SG
ar̄ Yisows i gišer-i z-aṛaṇin-n
 PREP Jesus PREP night-LOC.SG PREP-before-ART

"Nicodemus also came, who earlier had come to Jesus by night."

This is another perfect stem form with a cancelled result meaning, since at the time of *ekn* "he came" the result of *ekeal ēr* "he was there" no longer obtains.²⁷ As discussed in §4.4.4, the difference between the aorist and the perfect stem forms thus lies only in the fact that the latter explicitly refers to the current relevance of the past event. The factual use described in §4.4.4 may therefore be the starting point for the development of the use of the perfect as a relative tense. In such cases, the

25. Cf. also in Eznik § 386.8 a perfect of *pndem* "to insist", *c'-aysōr pndeal en* [PREP-today insist. PTCP COP.PRS.3PL] "they insist to this day".

26. Relative clauses may be marked as definite in Armenian, cf. Klein (1996: 17–22).

27. The same is true for the nearly identical second instance John 7.50 *Nikodemos ... or ekealn ēr ar̄ na i gišerin yaṛaṇagoyñ* "Nikodemos who had come to him before at night", as Lyonnet (1933: 117) also notes.

Armenian perfect formation may be seen as a tense in which, in Reichenbachian terms, E (event time) is prior to R (reference time), which in the perfect equals S (speech time) and in the pluperfect is located after E and prior to S. It does not entail that a target state holds at R, but denotes a more general relevance of the past event for the later state of affairs. Ouzounian (2002: 19f.) suggests that in addition to having an anteriority reading the pluperfect characterizes the subject both in (53) and in John 7.50 and John 20.8:²⁸

- (54) John 20.8
yaynžam emowt ašakert-n or ekeal ēr
 then enter.AOR.3SG disciple-ART REL come.PTCP COP.IPRF.3SG
yaṛaḡagoyṇ i gerezman
 before PREP tomb.ACC.SG
 “Then the other disciple, who had reached the tomb first, also went in.”

In favor of this interpretation she notes the relative clauses, marked in John 7.50 and John 19.39 with the definite article *-n*, and the article attached to *ašakert* “disciple” in John 20.8, making the NP definite. The characterizing reading of perfect-stem forms would then be compatible also with cancelled result perfects (cf. in contrast to this the examples discussed in §4.4.2). This may be another starting point for the development of a more general meaning of the perfect describing a past event with current relevance, in this case a property of the subject that has come about by the past event.

4.4.7 Counterfactual

A more general meaning of the perfect stem must also be assumed for the use of the pluperfect as a counterfactual. In conditional clauses the pluperfect is used in the protasis, the imperfect in the apodosis,²⁹ e.g.:

- (55) Eznik §437
ancanawt' linēr mardkan Astowc-oy barerarrowt'iwn-n t'e
 unknown be(come).IPRF.3SG man.DAT.PL God.GEN.SG beneficence-ART if
yaṛaḡagoyṇ spaneal ēr z-satanay
 before kill.PTCP COP.IPRF.3SG ACC-Satan
 “God’s beneficence would have been unknown to man, if he had killed Satan beforehand.”

28. “Nicodème se caractérise par le fait qu’il soit venu une première fois, la nuit, auprès de Jésus; c’est cette première venue qui le définit.” (Ouzounian 2002: 20).

29. The imperfect generally serves as irrealis of the present.

The pluperfect here emphasizes neither the state of God being the murderer of Satan nor of Satan being dead. The latter is only implied, and the apodosis describes the resulting state that is relevant in the eyes of the speaker. This state is not part of the lexical meaning of the verb ‘to kill’ nor can it be deduced from general world-knowledge. With the target state only implied, the focus shifts to the event of killing itself.

5. Later developments

The developments visible already in the classical language as described in §4.4 transform the original resultative construction into a temporal perfect describing a past event with current relevance in medieval Armenian, cf.:

- (56) Gregory of Akanc’ (13. c.), *History of the archers*, Blake & Frye (1949: 296).
Astowac ē towéal zōrowt’iwn ew yalt’owt’iwn noc’a
 God COP.PRS.3SG give.PTCP power and victory 3PL.DAT
 “[Thereafter when the wise princes of Armenia and Georgia realized that] God
 had given power and victory to them [sc. the Tatars] [to conquer our country ...].”

The original resultative function of the participle in *-eal* is taken over by a different form, the PTCP in *-ac*, cf. *bažnel* ‘to separate’: *bažnac* ‘separated’, *grel* ‘to write’: *grac* ‘written’ (cf. Karst 1901: 355–373). It goes back to a formation in *-ac* in Classical Armenian which served mainly as a verbal noun, e.g. *kotorel* ‘to slaughter, kill’: *kotorac* ‘slaughter’, and as a denominal adjective formation, e.g. *erkiwl* ‘fear’: *erkiwlac* ‘fearful’ (cf. the discussion of the presumable origin of the PTCP in *-eal* as a nominal formation in §3).³⁰ In Modern Eastern Armenian *-ac* is a verbal participle with resultative meaning, e.g. *grel* ‘to write’: *grac* ‘written’ (Dum-Tragut 2009: 208–210, 213–214), cf.

- (57) *girk-ə grac ē*
 book-ART write.PTCP COP.PRS.3SG
 ‘The book is written.’
- (58) *es nstac em*
 1SG.NOM sit_down.PTCP COP.PRS.1SG
 ‘I am sitting.’

30. Cf. Olsen (1999: 231–233). The former function is no longer productive in the classical language and most nouns in *-ac* already show a concrete meaning, e.g. *ararac* from the aorist stem *arar-* of *arñem* ‘to make’ is not only ‘creation’, but also ‘creature’, a meaning which comes close to a passive past participle, i.e. ‘that which is created’.

The PTCP in *-el*, which developed out of classical *-eal* by regular sound change, forms the perfect tense together with the copula and denotes an action completed in the past with current relevance:

- (59) *es ayd girk-ə kardac'el em*
 1SG.NOM DEM book-ART read.PTCP COP.PRS.1SG
 "I have read this book."

The classical 'perfect' in *-eal*, which in most cases has a resultative meaning, has thus developed into a perfect tense, while its original function is taken over by the participle in *-ac*, cf. the examples of Nedjalkov & Jaxontov (1988: 15f.):

- (60) *na (*der) ənkel ē*
 3SG.NOM still fall.PTCP COP.PRS.3SG
 "He has (*still) fallen."
- (61) *na (der) ənkac ē*
 3SG.NOM still fall.PTCP COP.PRS.3SG
 "He is (still) fallen." [i.e. (still) lying on the ground]

The temporal adverb *der* 'still' is incompatible with the terminative verb 'to fall' in the perfect as the latter does not express duration, but compatible with the resultative in *-ac* expressing a continuing state.

6. Summary

The Classical Armenian perfect is mainly used to denote a state obtaining at speech time that has come about by a situation change. If the respective verb is telic and implies a resulting state, the perfect describes this state, which in the case of intransitive verbs is attributed to their single participant. Verbs of this type typically describe physical or cognitive and emotional processes and motion through space. The perfect of transitive verbs is mostly used in a single participant construction in which the object of the corresponding present or aorist active clause appears as subject and the carrier of the resulting state. Typical verbs of this type are 'to slaughter' or 'to write' with the corresponding perfects meaning 'something is slaughtered', 'something is written'. Much rarer, amounting to about 10% of the perfect forms found in the New Testament (cf. Ouzounian 2002: 15f.), is the transitive construction with a genitive subject. While in most instances the resulting state here too holds of the notional subject (marked in the genitive), there are some cases where it cannot be clearly attributed to either subject or object, but where only a general post-change situation holds. The evidence discussed in this paper suggests that already in the classical language the perfect shows the incipient stages of a development into a

perfect tense. Specifically, we find this in the examples discussed above that can be described as possessive resultatives, generalized resultatives, continuative perfects and pluperfects functioning as relative tense and counterfactuals. In its incipient stages, this perfect tense denotes an event completed in the past with some kind of relevance for the present, the stage it has reached in the modern language.³¹

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31. Ouzounian (2002) assumes as additional functions of the transitive perfect 'polémique', 'inférentielle', and 'médiative' (~evidential). These are context-dependent connotations, e.g. in John 12.18 "Many people, because they had heard [Arm. aorist] that he had performed [Arm. perfect] this sign, went out to meet him." The supposed evidential function of the perfect depends on the presence of the matrix verb 'to hear'.

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The Hittite periphrastic perfect

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In Hittite, the meaning associated with the Proto-Indo-European perfect, i.e. to indicate a state resulting from a change-of-state event, was covered by compound verb forms consisting of the *-ant-* participle plus the finite forms of the verbs *ḫar(k)-* “have” and *eš-* “be”. The origin and the function of this construction have been a matter of debate. In this chapter, we review the standard description of the Hittite periphrastic perfect, and reassess its status and function based on an analysis of its occurrences in texts ranging from Old to New Hittite. We argue that periphrastic forms involving *ḫar(k)-/eš-* and the participle instantiate three different constructions: the stative construction and two distinct auxiliary verb constructions, i.e. the passive and the perfect. We also suggest that the stative construction was probably the most ancient, and that the perfect construction, which functions as an anterior, constitutes a later development.

Keywords: Hittite, anterior, passive, resultative, auxiliary verb construction

1. Introduction

In this chapter, we discuss the syntax and semantics of the Hittite periphrastic perfect. Based on the evidence, we argue that the periphrastic perfect is a type of auxiliary verb construction, and show that it must be kept distinct from two other constructions, that is, the stative and the passive. While in the stative the finite verbs involved should not be considered auxiliaries, the passive is also a type of auxiliary verb construction. We also argue that the possible formal identity of the three constructions, which has cross-linguistic parallels, must not be taken as a reason for not keeping them distinct.

The constructions discussed in this paper are the *stative* and the *perfect* constructions, both involving the verbs *ḫark-* “have, hold” and *eš-* “be” and the participle, plus the *periphrastic passive* construction, the latter involving only the verb *eš-* “be” and the participle of transitive verbs.

1.1 Aims and structure of the chapter

As is well known, the Anatolian verbal system does not display the common Indo-European pattern based on the three aspectual stems present/aorist/perfect. However, in Hittite the function of the IE perfect is partly fulfilled by a periphrastic formation, similar to the periphrastic perfect of modern Romance and Germanic languages. In spite of the sizable number of studies devoted in whole or in part to the Hittite periphrastic perfect, some of its features remain controversial. Accordingly, in this chapter we will review a number of open questions on the periphrastic perfect and the verb forms that compose it, and propose our own view on this type of construction. This chapter is organized as follows. In §2 we discuss some general issues concerning periphrastic perfects as a type of auxiliary verb construction, perfect auxiliaries, and participles, as well as possible connections between perfect semantics and the meaning of specific verbs (actionality, or lexical aspect). In §3, we summarize current research on Hittite constructions involving the verbs *ḫark-* “have, hold” and *eš-* “be” and the participle, and show how scholars partly disagree on the auxiliary status of *ḫark-* and *eš-* in these constructions. In §4 we discuss a number of passages containing the construction, and indicate contextual features that help to distinguish perfect periphrases from other constructions. §5 contains the conclusion. Given the differences between the Anatolian verbal system and the verbal system commonly reconstructed for PIE, we devote the remainder of this introduction to a brief discussion of the relationship between the two.

1.2 The Anatolian verbal system in an Indo-European perspective

Melchert (1997: 83) remarks that “Hittite (respectively Anatolian) is famous for the fact that its verbal system is monothematic.” Anatolian languages feature a distinction between the present/future and the preterite, but this distinction is only indicated by different sets of endings, while the stem remains the same throughout the inflectional paradigm. Even traces of non-present stems are limited and debated. Some scholars have suggested that traces of the sigmatic aorist can be detected in some verbal stems, e.g. *ganeš-* “recognize”, from the IE root **gnō-* “know”, but even on this form there is no general agreement (cf. HED *s.v.*; Kloekhorst 2008 *s.v.*).

Concerning the PIE perfect, while reduplicated stems occur in Anatolian, they appear not to be directly connected with the reduplicated perfect of the other IE languages (van Brock 1964; Dempsey 2015; for a partly different view see Jasanoff 2018). However, it has long been acknowledged that the endings (and possibly the /o/ grade) of the Hittite *ḫi*-conjugation are etymologically related to the perfect endings of Greek and Indo-Aryan, even though the precise nature of this relation is discussed (see Jasanoff 2003; Kümmel this volume and references therein).

In Hittite, imperfectivity can be expressed by the so-called iterative suffix *-ške/a-* that has been shown to behave, in certain circumstances, as an imperfective marker. This highly productive suffix indicates various types of actionality connected with imperfectivity, such as iterative, habitual, durative, distributive (Dressler 1968; Cambi 2007; Hoffner & Melchert 2008: 317–323; Inglese & Mattioli *forthc.*). Its connection with imperfectivity is reflected by the fact that it does not normally occur with stative verbs (Hoffner & Melchert 2008: 318). Other suffixes that show similar semantics are *-šš(a)-* and *-annai-* which, however, are not productive and tend to be replaced by *-ške/a-* (Hoffner & Melchert 2008: 322–323). Hoffner and Melchert do not distinguish lexical from grammatical aspect (see § 2.2), hence highlighting the imperfective meaning of *-ške/a-* without discussing its degree of grammaticalization, but, as they remark, “[a]ny basic verbal stem in Hittite may be read as perfective or imperfective, provided that its inherent meaning and the context are appropriate.” (2008: 317). This points towards a low degree of grammaticalization of aspect distinctions in Hittite: aspectual features tend to be located toward the lexical, rather than grammatical pole (for a different view and references see Cambi 2007).

2. Periphrastic perfect constructions in a cross-linguistic perspective

In this section, we discuss some properties of periphrastic or compound verb forms. We show which features must characterize a complex formed by two verb forms in order for it to be considered a single, periphrastic form. We then describe possible aspectual and actional features of the perfect cross-linguistically.

2.1 Typology of periphrastic constructions

According to Haspelmath (2000: 660), a “periphrastic expression is simply one which expresses a grammatical meaning in a multi-word construction.” In the case of compound verb forms, the multi-word construction is usually described as containing a lexical verb and an auxiliary, as in the definition in Anderson (2006: 7): “the Auxiliary verb construction (AVC) is [...] a mono-clausal structure minimally consisting of a lexical verb element that contributes lexical content to the construction and an auxiliary verb element that contributes some grammatical or functional content to the construction.” In what follows, we use ‘auxiliary verb construction’ (henceforth AVC) and ‘periphrastic construction’ as interchangeable expressions.

As we show in §3, the assumption that the verbs *ḫark-* “have” and *eš-* “be” that occur in the construction discussed here must always be taken as auxiliaries is controversial, and partly unwarranted. In recent years, research on grammaticalization has paid much attention to auxiliaries, including their synchronic behavior and the

diachronic process that favors the change from main to auxiliary verb, with the rise of periphrastic constructions out of earlier constructions that contained two autonomous verbs. Both *hark-* “have, hold, keep” and *eš-* “be (there)” are good candidates for auxiliarization, as shown by the occurrence of verbs with similar meaning as auxiliary cross-linguistically. In terms of basic event schemas, as described in Heine (1993: 28), these verbs instantiate the Possession and the Location schema, frequently providing a source for the grammaticalization of auxiliaries. However, in principle not all constructions containing one of these verbs and a participle must necessarily be considered as AVCs. For this reason, before discussing the status of Hittite constructions containing *hark-* and *eš-*, we review a number of criteria for assessing auxiliarization (see Heine 1993; Haspelmath 2000; Anderson 2006). Such criteria concern the semantics and syntax of constructions, their status within verbal paradigms of a specific language, and the internal structure of the construction.

Let us start with the by now classic definition of Heine (1993: 70), that “[a]n auxiliary is a linguistic item covering some range of uses along the Verb-to-TAM chain.” This definition must be broadened to include other verbal categories. Even a cursory look at the IE languages shows that AVCs are not so limited, as they also often extend to the encoding of verbal voice, while in several non-IE languages AVCs also encode negative polarity and version (Anderson 2006: 33–35). This being said, Heine’s approach has important implications, as it supports a dynamic view of AVCs based on different degrees of grammaticalization, rather than proposing a sharp distinction between what must be considered an auxiliary and what must not. As we will see, this approach is helpful for the understanding of different types of *hark-* and *eš-* constructions in Hittite.

A distinctive feature of AVCs is event, or conceptual, integration: in a prototypical AVC, the two verb forms involved refer to the same event, and imply co-referentiality of participants and co-temporality. As a reflex of event integration, components of AVCs tend to be contiguous. They occur in a fixed linear order and cannot be interrupted, with the exception of language specific syntactic rules, e.g. adverb placement. This follows an iconic principle by which higher event integration equals higher syntactic cohesion. As a consequence of auxiliarization, the finite auxiliary brings no lexical semantic contribution to the meaning of the construction, and can be generalized to environments which would be semantically incompatible with the original meaning of the auxiliary as a full lexical verb (Bybee et al. 1994: 289).

An important issue often discussed in connection with AVCs is the identification of the head. Indeed, there is often a mismatch in AVCs between the item that carries lexical/semantic information and the item that shares the morphosyntactic behavior of finite verbs. This mismatch is reflected in different definitions of heads in compound verb forms, which ultimately depend on the properties that one views as most important for headhood. Heads are defined as the part of a phrase that

determines its category (Luraghi & Parodi 2008: 125), that is, the profile determinant of a phrase (Langacker 2008: 235–236), and this is clearly a problem with AVCs, which consist of two verb forms. As noted by Anderson (2006: 21–27) different properties of heads are not all instantiated by the same member in AVCs. In particular, one must distinguish between morphosyntactic, phrasal, and semantic properties of heads: all these properties co-occur in non-periphrastic finite verb forms. From the morphosyntactic point of view, heads are the locus of inflection; in addition, especially within verb phrases, heads may have a specific position inside the constituent. This is what Anderson understands as the phrasal properties of heads, and accounts for the fact that, as he notes, lexical verbs tend to have the same position with respect to the auxiliary as complements have with respect to the finite verb. From the semantic point of view, a head carries the lexical meaning, including valency and information about the semantic roles of the arguments.

Even though these properties may be variously distributed between the two items of an AVC, in IE languages AVCs tend to follow the AUX-headed pattern (Anderson 2006: Chapter 2), that is, the auxiliary is the phrasal and inflectional head, while the lexical verb is the semantic head. This is the pattern known from the perfect in Germanic and Romance languages, and also applies to Hittite AVCs (§ 3.4).

2.2 Aspect and actionality

Before discussing the aspectual features of the perfect, a note on terminology is in order, as scholars use the term ‘perfect’ in different ways. Traditionally, especially in descriptions of IE languages, the term perfect refers to a form, rather than to a meaning: the Greek perfect is a specific verb form, which is said, depending on the individual verb, on the diachronic stage of the language, or on the context, to have stative or resultative meaning (Luraghi et al. 2005: 59–61). Contrary to this tradition, Nedjalkov (2001) identifies the perfect as a specific meaning, distinct from stative and resultative, and corresponding to the meaning of the English present perfect, that is, anterior. Bybee et al. (1994) acknowledge the terminological problem, and write: “Some terminological confusion arises due to the existence of terms perfect and perfective. To alleviate this problem, we have decided to use the term ‘anterior’ rather than ‘perfect’ for what in English is called Perfect.” (1994: 55). In this chapter, we follow this latter approach, and use the term ‘perfect’ for the Hittite periphrastic form, and not for a specific meaning, while distinguishing among stative, resultative, and anterior as possible meanings of *ḫark-* and *eš-* constructions.

Grammatical aspect must be kept distinct from lexical aspect, or actionality. The latter refers to properties of the inherent lexical semantics of verbal lexemes or verb phrases. Following the fourfold distinction worked out by Vendler (1957), verbs can be divided into four classes based on their actional properties: ‘states’,

‘activities’, ‘achievements’, and ‘accomplishments’ (Bertinetto 1986; Botne 2003; Croft 2012). Grammatical aspect is a grammatical category of verbs, and features a basic distinction between perfective and imperfective.

In the traditional reconstruction of PIE, mainly based on Greek and Sanskrit, the aspectual opposition between perfective and imperfective is instantiated by the aorist and present stems (cf. LIV²). How the perfect fits into this framework is controversial. As we have remarked above, the perfect can have stative meaning, thus coming closer to actionality than to verbal aspect. More precisely, the perfect is traditionally reconstructed as having a resultative meaning. According to Nedjalkov (2001: 928) a resultative form or construction “expresses a state implying a previous event (action or process) it has resulted from”. Notably, following this definition, a resultative can only be made from telic verbs (terminative verbs in Nedjalkov’s terminology, cf. 2001: 935). Nedjalkov further distinguished among three different types of resultative, depending on the participant which is affected by the change of state. In P-resultatives, the subject corresponds to the direct object of the corresponding non-resultative form. This construction is similar to the passive construction. Similarly, Bybee et al. (1994: 54) define resultatives as signaling “that a state exists as a result of a past action. [...] Resultatives are compatible with the adverb ‘still’ and are used only with telic verbs, that is, verbs which describe events which have inherent endpoints.”

An example of a P-resultative is the Ancient Greek aspirated perfect form *pépoitha* (persuade.PRF.1SG) “I trust, I am persuaded”, from *peíthō* “persuade (transitive)”: the perfect form indicates a state of the patient, ensuing from a change of state that affects it. With A-resultatives, instead, the subject remains the same as with the corresponding non-resultative form. This is the case of the Ancient Greek kappatic perfect *pépeika* (persuade.PRF.1SG) “I have persuaded (somebody)” also from *peíthō*. This and several other verbs in Ancient Greek have both an aspirated and a kappatic perfect. When the two have different meanings, it is always the case that the former indicates P-resultative, while the latter indicates A-resultative (cf. Crellin, this volume). As the kappatic perfect is thought to have arisen later than the aspirated perfect, this semantic difference is taken as a piece of evidence for reconstructing P-resultative as the original meaning of the IE perfect (Luraghi et al. 2005). The third type of resultative construction according to Nedjalkov is S-resultative, that is, the resultative form of intransitive verbs, as in Ancient Greek *téthnēken* (die.PRF.3SG) “s/he is dead” from *thnēiskō* “die”.

Resultative must be kept distinct from anterior, which is a function acquired by the periphrastic perfect of several modern IE languages. Following the definition in Bybee et al. (1994: 61), an anterior is a “past action with current relevance.” Its basic feature lies in “being relational: an anterior signals that the situation occurs prior to reference time and is relevant to the situation at reference time. Anteriors are [...] often accompanied by the relational adverbs ‘already’ and ‘just’” (1994: 54). For

them, the prototypical anterior is the English present perfect. The English anterior is distinct from the stative construction, which can also have a resultative reading, as shown in *He is dead* (STAT) vs. *He has died* (ANT). Botne (2003: 243) remarks that in English “one must use the adjective *dead* [...] to refer to the stative postliminary phase of death. The perfect form *has died* [...] refers not to a coda phase of the event, i.e., to the state of death, but rather to a retrogressive perspective of the whole event.” In other languages, the same construction can have both a stative and a past tense interpretation, as in Italian. Consider Examples (1) and (2).

- (1) *È morto da due giorni.*
 be.3SG dead.SG.M from two days
 “He’s been dead for two days.”
- (2) *È morto stamattina.*
 be.3SG dead.SG.M this_morning
 “He died this morning.”

In (1) the expression *è morto* indicates a state: here, the verb ‘be’ functions as copula and the participle is the subject complement. Since the latter is a past participle it indicates a state. In (2) the same expression is a form of the perfect of the verb *morire* “die”. Note that this is not an anterior in Italian, but a perfective past tense with generic past reference or a hodiernal past depending on the diatopic variety.

The difference between (1) and (2) implies that participles can have a double reading and a double function. This is not surprising, in the light of the complex categorial status of participles: as is well known, participles are both verbal and nominal forms, and as such they can profile both temporal processes (verbal function), as in (2), and atemporal properties (adjectival function), as in (1). In this connection, one can distinguish between an actual occurrence, or eventive, reading, in which the construction predicates an action and refers to an actual occurrence of a given event located at a specific point in time, and a property reading, in which the construction predicates a property and does not refer to the realization of an individual event (Doiz-Bienzobas 2002). It is in the actual occurrence reading that we have an AVC, as in (2), while the construction in (1) has a property reading and, as noted above, does not contain an auxiliary.

3. Current research and open issues

In this section, we survey existing scholarship on the various types of *ħark-* and *eš-* construction. We discuss the syntax and semantics of the constructions, including the semantics of the participle, the relationship with the periphrastic passive, word order, and the behavior of clitics. In conclusion, we address the question whether both *ħark-* and *eš-* can be considered auxiliaries in perfect periphrases.

3.1 *ḥark-* and *eš-* constructions

According to Hoffner & Melchert (2008: 310), Hittite attests two different constructions both involving the finite forms of the verbs *ḥark-* “have, hold” and *eš-* “be” plus the participle, that is, the analytic perfect and the stative construction.¹ The former is a Hittite innovation, as there are no traces of similar constructions in other Anatolian languages (Melchert 2003: 206; Dardano 2005: fn. 4).

The analytic perfect, which contains the present forms of *ḥark-* and *eš-*, and the analytic pluperfect, formed with the preterite of *ḥark-* and *eš-*, function as present and past anterior respectively: they express “the completion of an action prior to the time of speech (present perfect ‘has gone’) or prior to another action in the past (pluperfect ‘had gone’)” (Hoffner & Melchert 2008: 310). Examples are (3) and (4) with *ḥark-* and (5) and (6) with *eš-*. Notably, the verb *eš-* “be” is always omitted in the present indicative, while it is overtly expressed in the preterite and in the imperative, as comparison between (5) and (6) shows (see §3.5). Even though, as we show in the course of our paper, the periphrastic perfect and pluperfect are in fact compound verb forms, it must be noted that the present and preterite can also occur in contexts that would be compatible with a present and a past anterior reading respectively (Hoffner & Melchert 2008: 306, 309; cf. the examples discussed in 4.2.1 and 4.2.2).

- (3) *n=at=za=kan* *kāša* ANA ^dU ^{URU}Hatti
 CONN=3SG.ACC.N=REFL=PTCL INTJ to Stormgod Hatti
 EN=YA U ANA DINGIR^{MEŠ} BELU^{MEŠ}=YA *peran*
 lord=1SG.POSS CONJ to god(PL) lord(PL)=1SG.POSS before
tarnan ḥarmi
 let.PTCP.NOM/ACC have.PRS.1SG
 “[The sin of my father also reached me], and I have confessed it before the
 Stormgod of Hatti, my lord, and the gods, my lords.”
 (KUB 14.8 rev. 14–16, NH/NS)²

1. The lexical meaning of the verb *ḥark-* ranges from “have” to “hold, keep” (see *HW*² for a semantic treatment). However, for consistency’s sake we always gloss *ḥark-* as “have” in the examples, leaving the interpretation of the verb to the translation.

2. Hittite examples and their textual sources are given according to the layout conventions and publication series abbreviations in Hoffner & Melchert (2008: 3, 14–15). The linguistic and paleographic dating of manuscripts is given following these abbreviations: Old Hittite (OH) and Old Script (OS), Middle Hittite (MH) and Middle Script (MS), and New Hittite (NH) and New Script (NS), and discrepancies between the two are noted when relevant (Hoffner & Melchert 2008: xvii). Examples are glossed following the *Leipzig glossing rules*. Common gender is never glossed. Neuter gender of nouns is only indicated where relevant for agreement patterns. Neuter nouns are glossed as either NOM or ACC according to their function in context. However, the participle in *ḥark-* constructions is consistently glossed as NOM/ACC.

- (4) *nu=mu ištamaššan kuit harker*
 CONN=1SG.ACC hear.PTCP.NOM/ACC because have.PST.3PL
 “Because they had heard about me.” (KBo 5.8 i 23–25, NH/NS)
- (5) *nu=ššan măn halkiēš aranteš*
 CONN=PTCL when crop.NOM.PL arrive.PTCP.NOM.PL
 “When the crops have ripened [harvest them].” (HKM 25 15–16, MH/MS)
- (6) *nu=kan antuḫšātar kuit INA URU^{DIDL.HIA}=ŠUNU*
 CONN=PTCL population(N).NOM REL.NOM.N in city(PL)=3PL.POSS
EGIR-pa pān ēšta
 back go.PTCP.NOM.N be.PST.3SG
 “[They imprisoned] the population that had gone back into their cities.”
 (KBo 5.6 i 19–20, NH/NS)

In Examples (3)–(6), the complexes with *hark*- and *eš*- are AVCs: they contain an inflected form of the auxiliary verbs that conveys grammatical meaning and a participle that conveys the lexical meaning of the periphrases (see further §4).

The stative construction expresses the maintenance of a state, either in the present or in the past. Examples are (7) and (8) with *hark*- and (9) and (10) with *eš*-.

- (7) *nu KUR-e pahḫašnuwan harker*
 CONN land.ACC.PL protect.PTCP.NOM/ACC have.PST.3PL
 “They kept the land protected.” (KUB 14.16 i 24, NH/NS)
- (8) *nu=mu DINGIR^{LUM} ištamanan lagan*
 CONN=1SG.DAT god ear.ACC bend.PTCP.NOM/ACC
hark
 have.IMP.2SG
 “O god, keep your ear inclined to me.” (KUB 24.1 i 16–17, NH/NS)
- (9) *^dTešimi=wa=kan āššiyanti genuwa šanniziuš*
 T.DAT=QUOT=PTCL be.dear.PTCP.DAT knee.ACC.PL sweet.ACC.PL
tešḫuš šuppariyanza ēšta
 dream.ACC.PL sleep.PTCP.NOM be.PST.2SG
 “On the lap of (your) beloved Tesimi you were dreaming [*lit.* sleeping] pleasant dreams.” (KUB 36.89 rev. 56–57 NH/NS)
- (10) *LÚ.MEŠ SANGA LÚ.MEŠ GUDU₁₂ MUNUS.MEŠ AMA-ia ANA*
 priest(PL) anointed.priest(PL) mother.deity.priestess(PL) to
DINGIR^{MEŠ} nahḫanteš ašandu
 god(PL) be.fearful.PTCP.NOM.PL be.IMP.3PL
 “The priests, the anointed ones, and mother deity priestesses shall be reverent toward the gods.” (KUB 13.1 + iii 32, MH/MS)

In Examples (7)–(10) we also find finite forms of the verbs *ħark-* and *eš-* with a participle, but the two finite verbs do not function as auxiliaries. Note that reference works usually speak of a single stative construction (see Hoffner & Melchert 2008: 311–312); however, the examples above make clear that, strictly speaking, one should regard the construction in (7) and (8) as stative-resultative, as the participles indicate states that result from a change of state, while this is not the case for (9) and (10), which are purely stative. As we will see in §3.2, the difference depends on telicity: participles of atelic verbs are not resultative, and indicate permanent states, not resulting from a change of state. In the course of this paper, we use the term stative construction both for stative-resultative and for stative ‘proper’, in keeping with common practice, and differentiate between the two only if relevant. Examples (7)–(10) show a different distribution of *ħark-* and *eš-* with respect to telicity: note however that atelic participles can also occur with *ħark-* (see Examples (22) and (30)). As we suggest in §3.5, the choice between *ħark-* and *eš-* in the stative construction depends on the lexical meaning of the two verbs.

The meaning of stative constructions with *ħark-* is compositional: the verb keeps its lexical meaning ‘have, hold, keep’, contrary to the AVC in which the lexical meaning is only conveyed by the participle, and the participle of transitive verbs is P-oriented, contrary to its meaning in AVCs (see §3.2). Note that the stative construction involves different types of verb that indicate events with an internal temporal structure, including accomplishments and activities, and highlights the ongoing unfolding of the event, based on the lexical meaning of *ħark-*. We follow Cotticelli Kurras (2015: 55, 59), and refer to this construction as instantiating the continue phase.³

The verb *eš-* in stative constructions functions as a copula as in other nominal sentences. In Example (9), the participle indicates a state, and does not have a resultative meaning: the complex *šuppariyanza ēšta* does not have the meaning ‘have slept’, but means ‘were sleeping’, and the verb *eš-* does not function as an auxiliary. The meaning is compositional, as it results from the sum of the meaning of the participle, ‘sleeping’ (on the semantics of the participle see § 3.2), and the meaning of the copula, ‘were’, and does not convey the anterior meaning of the periphrastic perfect. Even though *ħark-* and *eš-* do not function as auxiliaries, as one can see from their semantics and from the use of subject clitics that we discuss in § 3.5, stative constructions show the same formal characteristics of AVCs in terms of word order and headhood (§ 3.4), as well as of reference. Indeed, the two

3. Cotticelli Kurras refers to Engerer (2014), who discusses possible division of events into phases. In this respect, verbal semantics can profile the ingressive phase (*He started writing a letter*), the egressive phase (*He finished writing a letter*), and the continue phase (*He continued writing letters*).

verbs show a high degree of conceptual integration, as they refer to the same event and to the same participants: on a cline of ongoing grammaticalization, they can be considered somewhat more advanced than full verbs (§ 4.3).

3.2 Semantics of the Hittite participle

Hittite has a single participle, which is built with the suffix *-ant-*, cognate to the suffix **-e/ont-* of participles in several other IE languages (Kloekhorst 2008: 184). All verbs can have *-ant-* participles, irrespective of their inflectional class (Frotscher 2013: 153). The meaning of the *-ant-* participle depends on transitivity, and for intransitive verbs also on actionality (cf. Luraghi 1997: 29; Hoffner & Melchert 2008: 339; Frotscher 2013; Dardano 2014).

According to Neu (1968: 120), who discusses *-ant-* participles of *media tantum*, the participle of stative verbs remains stative, while the participle of change-of-state verbs is resultative, and indicates a state resulting from a change of state (Frotscher 2013: 202–222). Neu mentions as examples of stative verbs, among others, *tarra-* “be able” PTCP *tarranza* “being able”, *ar-* “stand” PTCP *aranza* “standing”, *iya-* “walk, march” PTCP *iyanza* “walking”. The last two verbs can be regarded as denoting activities, rather than states. Indeed, if one widens the observation to all verbs besides the *media tantum*, one can see that, among intransitive verbs, most atelic verbs, including states and activities, have participles that indicate an ongoing state or activity rather than a result, as in the case of *ḫuwai-* “run” PTCP *ḫuwanza* “running”, *ḫuiš-* “live, survive” PTCP *ḫueššanza* “living, alive”.

Participles of intransitive telic verbs are S-resultative, as in *irmaliya-* “become ill” PTCP *irmaliyanza* “fallen ill”, or *akk-* “die” PTCP *akkanza* “died/dead”. With transitive verbs, participles are P-resultative even with stative verbs, as with *ḫā-* “trust” *ḫānza* “trusted” (not ‘trusting’), in spite of a few exceptions. For example, the participle of *šākk-* “know, recognize”, *šākkanza*, mostly means “known”, but in a couple of passages it is used as an attribute of the Sumerogram ZI ‘mind’ and it does not have resultative semantics, meaning “intentionally, knowingly” [*lit.* “with a knowing mind”] (Frotscher 2013: 226–229; Dardano 2014). The participles of verbs of consumption *ad-* “eat” and *aku-* “drink” can pattern with atelic predicates and mean ‘eating’ or ‘drinking’, in addition, especially the participle *adant-* can be P-resultative “eaten”, or A-resultative “who has eaten” (see Neu 1968: 117; Frotscher 2013: 224–226). The participle *adan* also occurs in the *ḫark-* periphrastic perfect, in which it is A-oriented (examples in Frotscher 2013; for an opposite view, see Dardano 2014: 241–243).

Notably, with *ḫark-*, the participle of transitive verbs is P-oriented in the stative construction, as in (7) and (8). In these occurrences, we find two participles of

active verbs, *lagan* from *lak-* “turn” and *pahḫašnuwan* from *pahḫašnu-* “protect”, both P-oriented. In the periphrastic perfect, however, the participle and the auxiliary verb together build a compound verb form with a single orientation. Such compound forms are A-oriented. For example, in (4) the meaning of the periphrasis *ištamaššan ḫarker* is not the sum of the lexical meaning of *ḫark-* and *ištamašš-* (“hold (it) heard”, with the P-oriented participle). Rather, the construction as a whole indicates an event that has taken place prior to another event in the past, and that has been accomplished by the subject. It is therefore A-oriented as a result of the full integration of the two verbs. This shift from P- to A-orientation is crucial in explaining why the construction may further develop an anterior function (§4).

3.3 The periphrastic passive construction

Generalizing over the above description of the meaning of Hittite participles, one can detect a relationship with voice: participles of transitive verbs, which with a few exceptions are P-oriented, are passive. When they occur with the verb *eš-*, they give rise to a periphrastic passive construction, which is frequently used instead of the morphological mediopassive, and can also take an overt agent expression (Hoffner & Melchert 2008: 304; Frotscher 2013: 288–290), as in (11).

- (11) *GIŠTUKUL^{HIA}-iš=wa=tta šiunit piyanteš*
 weapon.NOM.PL=QUOT=2SG.DAT god.INS give.PTCP.NOM.PL
 “The weapons are given to you by the Gods.” (KBo 22.6+ i 25 OH²/NS)

Similar to the periphrastic perfect, the periphrastic passive is also an AVC. The two should be kept distinct: while *eš-* occurs in the periphrastic perfect with intransitive verbs (more specifically, unaccusative, see §3.5), in the periphrastic passive it occurs with transitive verbs. Moreover, the passive construction refers to a present event, and does not necessarily entail an anterior reading. Alternation between *ḫark-* and *eš-* with the same verb may indicate voice opposition (Cotticelli Kurras 1991: 122–135). Such alternations neatly show how the *ḫark-* construction eventually acquired A-orientation, i.e. active voice semantics, whereas the construction with *eš-* preserves P-orientation of the participle. Compare Example (11) and (12).

- (12) *našma=ši ABU=YA dUTU^{ŠI}=ya kuit*
 or=3SG.DAT father=1SG.POSS my.sun=CONJ REL.ACC.N
piyan ḫaruweni
 give.PTCP.NOM/ACC have.PRS.1PL
 “What we, my father and (I) my Majesty, have given him [...]”
 (Bronzetafel iii 73–74, NH/NS)

It is often difficult to determine whether the construction has a passive eventive reading or a stative reading, like German *die Tür wird geöffnet* [PRS.PASS] “the door is being opened” vs. *die Tür ist geöffnet* [PRS.RES] [lit. “the door is opened” meaning “the door is open”] (Hoffner & Melchert 2008: 304; also Cennamo 2006: 315–316; Zúñiga & Kittilä 2019: 98–99). As is often the case when one must distinguish between a stative construction and a passive periphrasis, one must look at the context for disambiguation. Let us compare Example (11) with (13) and (14).

- (13) ANA LUGAL KUR ^{URU.dU}-*tašša*=at *piyan*
 to king land T.=3SG.NOM.N give.PTCP.NOM.N
 “It is assigned to the king of Tarhuntassa.” (Bronzetafel ii 7, NH/NS)
- (14) *n*=at *arḫa ḫarranteš ešer*
 CONN=3PL.NOM away damage.PTCP.NOM.PL be.PST.3PL
 “They (sc. the birds that you sent to me) were spoiled.” (AT 125.12, NH/NS)

In (13), the context strongly favors a stative reading, despite the formal equivalence with (11). In (14), too, it is the context that supports a stative construction, as also remarked in Hoffner & Melchert (2008: 304). Notably, Italian displays the same ambiguity between stative and passive readings of periphrastic constructions with *essere* “to be”, as shown in (15).

- (15) a. *La porta era aperta.*
 The door(F).SG be.IPRF.3SG open.PST.PTCP.SG.F
 “The door was open.” (stative)
- b. *Il corteo era aperto dalle delegazioni sindacali.*
 the parade(M).SG be.IPRF.3SG open.PST.PTCP.SG.M by.ART.PL
 delegation.PL union.PL
 “The parade was opened by the trade union delegates.” (passive)

This polysemy type is consistent with the widespread tendency of stative/resultative markers to be further grammaticalized into passive markers (cf. Haspelmath 1990), the link between the two functions being provided by their focus on the resulting state of the P argument of a transitive change-of-state verb. In fact, as Bybee et al. (1994: 54) note “[t]he resultative is often similar to the passive in that it usually makes the patient the subject of the clause but differs in that a resultative may apply to an intransitive verb, as in *He is gone*, without a change of subject.”

3.4 Formal aspects of *ħark*- and *eš*- constructions

In spite of semantic differences, and of the different statuses of the verbs *ħark*- and *eš*-, the stative construction and the periphrastic perfect share the same morphosyntactic behavior (Boley 1984, 1992; Luraghi 1998). In particular, in both constructions when the verb *eš*- occurs the participle agrees with the subject, as shown in Examples (5) and (14) with third person plural common gender subjects and participles inflected in the nominative plural common gender. With *ħark*- the participle is always inflected in the nominative-accusative singular neuter, and never shows agreement with the core arguments: compare (4), with a first person direct object, a third person plural subject and the participle *ištamaššan* in the nominative-accusative neuter singular, and (7) with a neuter plural object and a third person plural subject, in which likewise the participle *paħħašnuwan* is a nominative-accusative neuter singular.

From the point of view of word order, both in the stative construction and in the periphrastic perfect, the combination of *ħark*- and *eš*- plus participle cannot be interrupted by items that normally occupy the preverbal position, such as negation, including the negative indefinite pronoun, as in (16) to (18), or place words, as in (19). (See §3.5 on the negation with copular sentences).

- (16) *memiyann=a=kan* EGIR-*anda* *arħa* UL *ištamaššan*
 thing.ACC=CONN=PTCL afterwards away NEG hear.PTCP.NOM/ACC
ħarmi
 have.PRS.1SG
 “And I have not heard afterwards about the matter.”
 (KUB 31.121 iii 16–17, NH/NS)
- (17) [...] UL *arān* *ēsta*
 NEG rise.PTCP.NOM.N be.PST.3SG
 “[...] had not risen.”
 (KUB 14.16 i 21, NH/NS)
- (18) *n=at* *anzel* *iwar* EGIR-*pa* UL *kuiški*
 CONN=3PL.ACC.N 1PL.GEN like back NEG INDE.NOM
newaħħa[n *ħart]a*
 renew.PTCP.NOM/ACC have.PST.3SG
 “And no one has renewed them like us.”
 (KUB 17.21 + i 17, MH/MS)
- (19) *n=at* EGIR-*pa* ANA ^{SAI}*Zi=pat* *w[aħ]ān*
 CONN=3SG.NOM.N back to Z.=FOC turn.PTCP.NOM.N
eštu
 be.IMP.3SG
 “Let it be turned back on Z.”
 (KBo 15.10 ii 28 MH/MS)

In Examples (16)–(19) the complex participle plus finite verb is never interrupted. As Boley points out, “the participle and *hark-* build a syntagm [...], as if it were a simplex.” (2001: 44). This remark also applies to *eš-* constructions, no matter whether we have perfect or passive periphrases or stative constructions.

The only exception to the rule illustrated above concerning word order is that of the indefinite pronouns and the subordinator *kuit*, which are placed between the participle and forms of *hark-* or *eš-* as in (4) and (20) (cf. Luraghi 1990; Hoffner & Melchert 2008), arguably for reasons of phonotactics (see Huggard 2015; Sidelstev 2015). In this respect, Example (20) provides evidence that indefinites break the combination of the participle plus *hark-* only where the clause does not feature a viable host to the left (Huggard 2015: 77).

- (20) *našma=za dān* *kuiški* *kuitki* *ħarzi* ...
 or=REFL take.PTCP.NOM/ACC INDEF.NOM INDEF.ACC.N have.PRS.3SG
našma ĖSAG *kuiški* *kinuwan* *ħarzi*
 or granary INDEF.NOM open.PTPC.NOM/ACC have.PRS.3SG
 “Either someone has taken something for himself [...] or someone has broken
 open a granary.” (KUB 13.2 15–20 MH/NS)

Not surprisingly, head properties within *hark*- and *eš*- constructions are borne by different parts of the construction. The morphosyntactic head is constituted by *hark*- or *eš*-, which are inflected, and also fulfill the function of phrasal heads, as they share the constraints of finite verb forms on word order. In its turn, the participle is the semantic head of the construction, as it conveys its lexical meaning. This is most clear in AVCs, as in stative constructions the meaning is compositional, and *hark*- and *eš*- also make a separate semantic contribution.

Finally, is it worth observing the behavior of third person clitic subjects in *hark*- and *eš*- constructions. According to Garrett (1996; see further Luraghi 1990), intransitive verbs can be sorted into two classes, traditionally labelled 'unaccusative' and 'unergative', based on their behavior with respect to clitic subjects. In the absence of a subject noun phrase, unaccusative verbs obligatorily require a clitic subject pronoun. By contrast, such clitics never occur with transitive and unergative verbs.⁴ Verbs that occur in the periphrastic perfect construction with *eš*- are unaccusative either because of their lexical semantics, or, in the case of participles of transitive verbs, because they are P-oriented, hence passive (cf. Garrett 1996), and as such require subject clitics. Notably, however, the verb *eš*- is also unaccusative, and

4. The class of Hittite unergatives largely overlap with unergatives elsewhere, but, as noted by Hoffner & Melchert (2008: 280–283), the syntactic behavior of some verbs is partly unpredictable from their semantics (and this is particularly true with motion verbs, cf. Luraghi 2010).

requires subject clitics even without the participle. For this reason, the occurrence of third person clitics is not a reliable diagnostic to assess whether the head of the construction is *eš-* or the participle of an unaccusative verb.

However, when *eš-* occurs with unergative verbs, as in Example (21), no subject clitic occurs, consistent with the tendency for unergative verbs not to require subject clitics.

- (21) GAM-*an* *kaninanza* *ěšdu*
 under crouch.PTCP.NOM be.IMP.3SG
 “Let him be crouched down.” (VBoT 120 ii 17–18, MH/NS)

Interestingly, Example (21) features an occurrence of the stative construction, rather than the periphrastic perfect, in which *eš-* does not function as an auxiliary, and the degree of grammaticalization of the construction is lower than in AVCs. This explains why the use of the clitic subject is not determined by *eš-* but by the participle.

A similar pattern is shown by the *ħark-* construction in (22). Since the verb *ħark-* is transitive, it does not require a clitic subject pronoun, so that the occurrence of the clitic =*aš* in (22) must be triggered by the participle of the verb *naħħ-* ‘be fearful’, which is known to be syntactically unaccusative (Garrett 1996: 95).

- (22) *nu=war=aš=za* *naḥḥān* *ḥardu*
 CONN=QUOT=3SG.NOM=REFL be.fearful.PTCP.NOM/ACC have.IMP.3SG
 “He shall behave respectfully [*lit.* keep being respectful].”
 (KUB 36.118 8, MH/MS)

More generally, the distribution of clitic subject pronouns with intransitive verbs in stative *hark*- constructions seems to be determined by the participle rather than by the finite verb (see Frotscher 2013: 294–295 for examples).

To sum up, evidence from clitic subjects suggest that, at least in stative constructions, it is the participle, and not the finite verb, that triggers the use of the clitic pronouns, providing further evidence that the participle constitutes the lexical head of the construction.

3.5 Relationship between *hark*- and *eš*- constructions

In the preceding sections, we have referred to *hark*- and *eš*- constructions implying that they function in basically the same way, and that both can either instantiate AVCs or a stative construction. However, there is some disagreement on this point, partly on account of the fact that *eš*- constructions are much less studied than *hark*- constructions. Indeed, a number of authors focus on the latter and only mention the former as equivalent in function, with no further discussion of specific

occurrences (cf. Boley 1984, 1992 and references therein; Dardano 2005; Hoffner & Melchert 2008). In this section, we review some of the evidence discussed by different scholars concerning the coordination of *ḥark*- and *eš*- constructions, the use of the clitic particle =*za*, which obligatorily occurs in nominal sentences with 1st and 2nd person subjects, and the placement of the negation.

Garrett (1996) suggests that Hittite displays a single periphrastic perfect. The alternation between *ḥark*- and *eš*- should be interpreted as auxiliary selection: transitive and unergative verbs select *ḥark*- as their perfect auxiliary, while unaccusative verbs select *eš*- (cf. Boley 2001), in a way similar to Romance and Germanic languages; see further Luraghi (1998) and Dardano (2005). As a piece of evidence for this assumption, Garrett (1996: 104) and Dardano (2005: fn. 35) remark that constructions with the two verbs can be coordinated, as in (23).

- (23) *išḥēniu*(š)=š*maš*=*kan* UMB[IN^{MEŠ}=*y*]*a dān*
 hair(N).NOM=3PL.DAT=PTCL nail(PL)=CONJ take.PTCP.NOM.N
ēšdu *parkuwa*=*ya* TÚG^{HLA} *waššan*
 be.IMP.3SG clean.ACC.PL.N=CONJ cloth(N.PL) wear.PTCP.NOM/ACC
ḥarkandu
 have.IMP.3PL

“Let their hair and nails have been cut, and let (them) have put on clean clothes.”

(translation by Garrett 1996: 104. KUB 13.4 i 16 MH/NS)

Example (23) does indeed feature coordinated *eš*- and a *ḥark*- constructions, but it is not without problems. In fact, the form *dān ēšdu* is a passive, and given the common use of the participle plus *eš*- construction in the place of the inflectional medio-passive, another possible, and likely better translation is “let their hair and nails be cut”. As for the construction *waššan ḥarkandu*, it can hardly be interpreted as a perfect, since in NH the construction *waššan ḥark*- has stative meaning, and has been lexicalized as a substitute for earlier finite forms of stative transitive *wešš*- “wear” (cf. Boley 1984: 60–62; Melchert forthcoming; see Frotscher 2013: 247–248 for a different explanation). Indeed, it is not clear whether perfect periphrases occur at all with the imperative, as we discuss in §4.1. In any case, this example at least shows that both *eš*- and *ḥark*- plus participle can occur in the imperative. As we have shown above, they can both also occur in the preterite and denote the pluperfect, that is, completion of an action prior to another action in the past, as in (4) and (14) (Cotticelli Kurras 2015).⁵

5. Another possible occurrence of coordination is mentioned by Frotscher (2013: 224). The sentence contains a participle of an intransitive verb *akkanza* in the first clause and one of a consumption verb *adan* which ends before a fracture. Editors restore *adan[za]*, thus implying an omitted *eš*- (see Reichmuth 2011: 116; Dardano 2014; Cotticelli Kurras 2015). Notably, this

A different stance is taken by Cotticelli Kurras (1991, 1992) and Frotscher (2013), who argue that *eš-* constructions with the participle do not constitute the equivalent of *hark-* constructions for unaccusative intransitive verbs, but should be viewed as nominal copular sentences, where the verb is not an auxiliary. Indeed, *eš-* constructions with a participle, including those that are considered perfect periphrases, show the same morphosyntactic behavior as nominal sentences. In the first place, in both constructions *eš-* is omitted in the present indicative, whereas it regularly occurs with the preterite and with the imperative (Cotticelli Kurras 1991, 1992; Luraghi 1998; Hoffner & Melchert 2008); compare Example (5) with omission in the present tense with (14), which features a preterite, and (10) with an imperative. In the second place, the participle shows agreement with the subject, in the same way as adjectival predicates (Hoffner & Melchert 2008: 238), as shown in Example (24), which also shows the attributive use of the participle *handanza* “trusted”.

- (24) *handanza=kan antuḥšaš tuk=pat aššuš*
 trust.PTCP.NOM=PTCL man.NOM 2SG.DAT=FOC dear.NOM
 “The righteous man is dear to you.” (KUB 31.127 i 8–9)

Furthermore, the reflexive particle *=za* occurs with 1st or 2nd person subjects both in copular sentences and with periphrastic constructions with *eš-* (Hoffner & Melchert 2008: 362–364), even with participles of verbs that would not normally require the particle, as in (25):

- (25) *nu=za ḥaliy[aš] uddanī mekki paḥḥaššanuwanteš*
 CONN=REFL watch.GEN matter.DAT much be.vigilant.PTCP.NOM.PL
ēšten
 be.IMP.2PL
 “Be very vigilant concerning the matter of the night watch!”
 (KUB 13.4 ii 73–74, NH/NS)

In Example (25) the participle is from a verb, *paḥḥaṣanu-* “protect, be watchful”, which does not normally take the particle *=za*; rather, its occurrence is connected

would be the only occurrence of a participle of the verb *ed-* with a direct object without *hark-*. Frotscher suggest restoring a form of *hark-*, as shown below.

- nu antuwaḥḥaš kuiš agganza GU₄^{H1.A} UDU^{H1.A} kuiš arḥa*
 CONN man.NOM REL.NOM die.PTCP.NOM cattle(PL) sheep(PL) REL.NOM away
adān [ḥarzi]
 eat.PTCP.NOM/ACC have.PRS.3SG
 “The man who has died, and has eaten cattle and sheep.”
 (KUB 23.72+ rev. 14, MH/MS)

with the verb *eš-*. Notably, in *ḫark-* plus participle constructions *=za* occurs when it is required by the latter, as in Example (20), in which the particle *=za* gives a self-beneficiary meaning to the construction, and is semantically required by the verb *dā-* “take”.

As insightful as the above observations may be, they can hardly be taken as evidence for the fact that *eš-* plus participle constructions are never periphrastic perfects and that *eš-* is never used as an auxiliary. In fact, cross-linguistic evidence shows that AVCs built with the verb ‘be’ may follow the morphosyntax of copular sentences, as in the Italian perfect in Examples (26a, b).

- (26) a. *Maria è andata al cinema.*
 Maria(F) be.3SG go.PTCP.SG.F to.DEF.SG cinema
 “Maria went to the movies.”
 b. *Maria è bella.*
 Maria(F) be.3SG beautiful.SG.F
 “Maria is beautiful.”

In (26a) the verb ‘be’ is an auxiliary, and is part of the compound verb form *è andata* “went”, which is the perfect of the verb *andare* “go”. The participle *andata* agrees in number and gender with the subject *Maria*, in much the same way as does the subject complement *bella* “beautiful” in (26b), in which the verb ‘be’ functions as copula. Similarly, in Hittite copular sentences with *eš-* the nominal predicate shows agreement with the subject, as does the participle, as comparison between (5) and (24) shows.

Finally, it is worth mentioning that there is limited syntactic evidence that copular sentences with *eš-* plus a nominal predicate might be treated differently from constructions of *eš-* with the participle. As we have observed for Example (17), the preverbal negation cannot interrupt the sequence of the participle and the verb *eš-*, showing that these syntactically behave as a single unit. By contrast, in nominal sentences the negation is inserted between the adjectival predicate and the verb, as in Example (27).⁶

- (27) *namma=ta=kkan damāis DINGIR^{LUM} nakkis salliss=a*
 again=2SG.DAT=PTCL other.NOM deity honored.NOM big.NOM=CONJ
UL ēszi
 NEG be.PRS.3SG
 “No other deity is more honored and greater than you.”

(KUB 24.3 i 34, MH/NS)

6. On account of the extremely low frequency of the negation with an expressed copula, which is restricted to the preterite and the imperative, it is admittedly difficult to draw compelling quantitative conclusions about these patterns.

Agreement of the participle with the subject in *eš*- constructions is consistent with the origin of the participle as a verbal adjective (Neu 1968; Brosman 2010; Cotticelli Kurras 2015). It contrasts with what we find in *ħark*- constructions, in which the participle does not agree either with the subject or with the object. Rather, it is always inflected in the default form of nominative-accusative neuter singular. There is no general consensus about the origin of this state of affairs. According to most scholars (Benveniste 1962; Houwink ten Cate 1973; Boley 1984, 2001; Dardano 2005; Frotscher 2013), the participle in *ħark*- constructions has an adverbial origin. This also explains its occurrence with intransitive verbs, as in (28), which, according to proponents of this theory, could not be explained by its origin as an object complement (see below for counterarguments).

- (28) *nu* ^{LÜ}*SAG.IA* *kuiš* *ħašši* *tapuša paršan*
 CONN cup_bearer REL.NOM brazier.DAT next_to crouch.PTCP.NOM/ACC
ħarzi
 have.PRS.3SG
 “Which cup-bearer is crouching next to the brazier, [stands up.]”
 (KUB 25.1 iv 11, OH/NS)⁷

This use is paralleled by occurrences of the full-verb *ħark*- used intransitively with adverbs (Benveniste 1962; Boley 1984, 2001), as in (29).

- (29) *menahħanda ħark*- “to keep in front, to consider”
arahzanda ħark- “to keep surrounded, to protect”
arħa ħark- “to keep away”
peran ħark- “to keep in front”
ħanza ħark- “to keep with benevolence”

This view is not without problems (see Luraghi 1998; Dardano 2005). In fact, it introduces a circular argument, as ‘adverbial’ participles are found only with *ħark*- constructions. Otherwise, adverbs are built on participles with the *-ili* suffix, e.g. *karuššiyant*- “being silent” > *karuššiyant-ili* “silently”, with the possible exception of *ħandan* “truly” from *ħandai*- “order” (see further Frotscher 2013: 283), while the forms in (29) are not synchronically NOM-ACC neuter singular, but plain adverbs, so that they formally differ from ‘adverbial’ participles. (Note that even if one considers

7. It needs to be remarked that the stative construction with this verb can also feature *eš*-. An occurrence is mentioned in Boley (1992: 40), in which the participle *paršananteš* “crouched. NOM.PL” seems to have the same meaning as *paršan ħarzi* in (28). In view of the fact that these are stative constructions, and not AVCs, the variation between *ħark*- and *eš*- is unproblematic, as both can occur with all types of intransitive verbs in this type of construction. Tentatively, we suggest that the difference is between a state ‘be crouched’ with *eš*- and a continue-phase reading ‘keep on being crouched’ with *ħark*-; see §4.1.

their diachronic origin, only the adverb *peran* can possibly be reconstructed as a nominative-accusative neuter form of a noun.)

Another possible origin of the Hittite *hark-* construction connects it to grammaticalization processes known from the development of auxiliaries in other languages. Following this reconstruction, the participle originated as an adjective, and originally had the function of object complement with transitive verbs. At this initial stage, it must have shown agreement with the object. Later on, as the outcome of increasing grammaticalization, the participle lost agreement, and the construction was extended to unergative intransitive verbs (Luraghi 1998). Extension to environments which could not fit the original meaning of the auxiliary as a full lexical verb is typical of auxiliarization, as remarked in Bybee et al. (1994: 289; see §2.1). A similar development is attested in the Romance languages, which show different patterns of agreement and non-agreement between the participle and the object (Loporcaro 1998). Note that there is no evidence for original agreement between the participle and the direct object (Dardano 2005 discusses a single controversial example). Also, while in the case of the rise of auxiliaries the grammaticalization process described above has numerous cross-linguistic parallels, lack of agreement also in the stative construction with *hark-* is harder to explain, as in this case the participle seems in fact to function as an object complement, and object complements normally agree with the object with other verbs (Luraghi 1997: 9; Hoffner & Melchert 2008: 247).

4. AVC or stative construction?

In this section, we discuss a number of passages in which the *hark-* and *eš-* plus participle constructions occur in different tenses and moods, and show what type of evidence can help distinguish between the periphrastic perfect, the stative construction, and the passive. After analyzing the examples, we address the issue of the possible inner Hittite chronology of the constructions. We discuss first occurrences of *hark-* and *eš-* plus participle constructions with the imperative (§4.1), as their interpretation is more straightforward, and turn to occurrences in the indicative in §4.2.

4.1 Imperative

The imperative is not easily compatible with perfect semantics. This concerns both the resultative and the anterior meanings of the perfect: orders are not normally given in the past or relative to some result, and their occurrence is exceptional.

This is reflected in the rarity of perfect imperatives in Ancient Greek, and in their peculiar semantics. As observed by Schwyzer & Debrunner (1950: 340–341), the perfect imperative has stative meaning, and is essentially equivalent to the present imperative, as in *mè deídite* “don’t be afraid!” (Hom. *Il.* 20.366) or with various verbs of speech and communication, as *eirésthō* “let it be said” (Herodotus *passim*; see Harry 1905). In New Testament Greek, the perfect imperative is extremely infrequent with two occurrences out of four from the verb *oída* “know” which is basically a present (Boyer 1987: 41). In Hittite, as we will see, it is the stative construction or the passive that occur with imperatives, rather than true periphrastic perfects.

With *ḥark-* and the participle of transitive verbs, the participle is P-oriented, and the construction indicates maintenance of an ongoing activity resulting from a change of state, as in Example (8). In (8), the participle *lagan* “turned” indicates a state of the direct object *ištamanan* “ear”, and *ḥark-* profiles maintenance of the subject’s activity of keeping a certain posture (i.e. keep their ears turned). Similarly, with intransitive atelic verbs, the participle is S-oriented, and indicates active maintenance of a state, as in (22) and (30).

- (30) *nu=wa karuššīyan ḥarak*
 CONN=QUOT be.silent.PTCP.NOM/ACC have.IMP.2SG
 “Keep (being) silent!” (KUB 14.4 iv 11, NH/NS)

In (22) and (30) the participles *naḥḥān* and *karuššīyan* indicate states. Notably, these verbs are syntactically unaccusative, and would normally take *eš-* as an auxiliary if they could have a periphrastic perfect. As we noted above, in (22) the participle *naḥḥān* also triggers the occurrence of the third person subject clitic *=aš*, consistent with the fact that it is unaccusative. Note that this verb can also occur in the stative construction with *eš-*, as shown in Example (10).

Examples (8), (30) and (22) are occurrences of the stative construction, rather than perfect periphrases: the verb *ḥark-* retains its lexical meaning, and does not function as an auxiliary. This is shown by the fact that the participle of transitive verbs is P-oriented, rather than A-oriented as in AVCs, as we have argued in §3.2. Notably, the only possible occurrence of an A-oriented participle with *ḥark-* and the imperative is *waššan ḥarkandu* in (23), which, however, can be differently interpreted (see §3.5).

With *eš-* and the participle of intransitive atelic verbs, the S-oriented participle profiles a state and *eš-* indicates the persistence of this state. The meaning of the *eš-* and the *ḥark-* constructions with such verbs is similar, as shown by comparison of (10) and (22). Likewise, with intransitive telic verbs, the participle is S-oriented and indicates the resulting state of the change-of-state verb. The verb *eš-* indicates persistence of this state, as in (21).

With transitive verbs, the construction has passive meaning (unfortunately, there are no occurrences of imperatives with overt agent expression, which would provide compelling evidence for a passive reading), as shown in (31).

- (31) *n=at* *iyan=pat* *ēšdu*
 CONN=3SG.NOM.N make.PTCP.NOM.N=FOC be.IMP.3SG
 “Be it made!” (KUB 13.4 ii 40, MH/NS)

Imperative *eš-* and *hark-* do not behave as auxiliaries, but as full verbs. Unsurprisingly, their distribution is not accounted for by the intransitivity of the verb: as we have shown in §3.5, in the stative construction all types of intransitive verbs can occur with both auxiliaries without showing the split between unaccusative and unergative featured in AVCs. In stative constructions, the reason for the choice of either *eš-* or *hark-* must be sought in the semantics of the two verbs. Comparison of (10) and (22) can shed some light on this issue. In both cases, we find a participle of the verb *naḥḥ-* “be afraid”, and in both occurrences, someone is ordered to be fearful or respectful of some authority. The choice of *eš-* or *hark-* indicates a slight difference in profiling: while with the former reference is made to a persistent state (“be fearful”), the latter profiles an ongoing activity, or continue phase (“continue being fearful”).

4.2 Indicative

The occurrences of indicative forms of *eš-* and *hark-* plus the participle can be interpreted as anterior or as stative constructions. The interpretation partly depends on the semantics of the participle: with participles of stative verbs and some activity verbs, i.e. those indicating an ongoing state of affairs (see §2.2), the anterior reading is impossible; hence these verbs cannot occur in the periphrastic perfect. With other verbs, the interpretation depends on contextual factors, as we show in §4.2.1 and §4.2.2.

4.2.1 With *hark-*

With the verb *hark-* “have” and a transitive verb, the meaning of the participle, whether it is P- or A-oriented, helps us distinguish the stative construction from the periphrastic perfect. In addition, contextual cues may point on the one hand either toward a property reading or indicate an actual occurrence, or, on the other hand, can either highlight the lexical meaning of *hark-* or the anteriority meaning of the construction. Let us consider Examples (32) and (33).

- (32) *nu* ^dUTU-uš *maḥḥan* še[r *katta*] *nepišza* *ḥuyan*za *n=ašta*
 CONN sun.NOM when above down sky.ABL run.PTCP.NOM CONN=PTCP
utniy[aš *ḥumandaš*] *lalukišnuwan* *ḥarzi*
 land.DAT.PL all.DAT.PL illuminate.PTCP.NOM/ACC have.PRS.3SG
 “And as the Sun is running down from up in the sky and keeps the entire land
 illuminated [so let the Mothergoddess give light to the queen in her soul.]”
 (KBo 34.77 obv. 3–5, OH²/NS)
- (33) *natta=šmaš* ^{LÚ.MEŠ}DUGUD-aš *TUPPI* *ḥazzian* *ḥarzi*
 NEG=2PL.DAT dignitary.DAT.PL tablet pierce.PTCP.NOM/ACC have.PRS.3SG
 “[As my father keeps writing to you], has he not written the tablet to you dig-
 nitaries [saying: Look, go into the country...]?” (KBo 22.1 i 23, OH/OS)

In (32), the participle *lalukišnuwan* refers to a habitual behavior of the god. In addition, the coordinated clause that precedes it contains the participle *ḥuyan*za “running”, which is atelic and hence indicates an ongoing activity. Thus, it is safe to consider the complex *lalukišnuwan ḥarzi* as a stative construction that indicates maintenance of the state of the object (“keeps the land illuminated”), rather than as an anterior (“has illuminated the land”; cf. Boley 1984: 28). In (33), attention is given to the fact that the tablet has been written and the king has already admonished the dignitaries, while the actual possession of the tablet remains in the background. This makes an anterior reading more likely, i.e. past action with current relevance for the speech time, even though the stative/resultative reading is not completely ruled out (cf. Boley 1984: 33). As this passage comes from an Old Hittite original text, it might be a hint of an incipient development of the anterior meaning, and thus constitute a bridging context between stative-resultative and anterior (see further 4.3).

Temporal adverbs or clauses can also support either of the possible meanings, as shown in (16) and (34).

- (34) *nu=wa=za* *karū* 30 ^{É^{TUM}} *ašešan*
 CONN=QUOT=REFL already 30 house(ACC) settle.PTCP.NOM/ACC
ḥarzi
 have.PRS.3SG
 “[Pihinakki is occupying the town of Lipisira] and he has already settled 30
 houses.” (HMK 10 rev. 6, MH/MS)

In (34), only an anterior reading is available. The construction refers to the completion of an action in the past which is highly relevant for the current time of speech, as evidenced by the occurrence of the adverb *karū*.⁸ Similarly, in (16) the adverb EGIR-*anda* sets a limit in time for the relevance of the state of affairs.

8. The adverb *karū* “formerly, already” is often paired with an anterior reading of *ḥark-* and *eš-* constructions (Boley 1984: 71; Cambi 2005; Bertinetto & Cambi 2006; Cambi 2007: 152;

With preterite forms of *ḫark-* we can find the past stative construction or a pluperfect. Again, it is the context that allows us to distinguish between the two, as shown in (35) and (36).

- (35) *n=an=kan* *INA UD.7.KAM anda waḫnuwan*
 CONN=3SG.ACC=PTCL for 7.day in besiege.PTCP.NOM/ACC
ḫarta
 have.PST.3SG
 “He kept it under siege for seven days [and on the eighth day he fought a battle against it].” (KBo 5.6 iii 28, NH/NS)
- (36) [*z*]*ik=za* ^m*Tatamaruṣ* DUMU.MUNUS NIN=YA
 2SG.NOM=REFL T.NOM daughter sister=1SG.POSS
 DAM-*anni dān* [*ḫa*]*rta*
 marriage.DAT take.PTCP.NOM/ACC have.PST.3SG
 “You, Tattamaru, had taken the daughter of my sister in marriage. [But fate dealt you a grievous blow: she died on you!]” (KUB 23.85 rev. 5, NH/NS)

In (35), the occurrence of the temporal adverbial phrase *INA UD.7.KAM* ‘for seven days’ suggests that focus is given to the maintenance of the activity in the past. In (36), the temporal structure of the text suggests that the periphrasis should be interpreted as an anterior with past reference, as it focuses on the completion of an event (the telic event of getting married) before the current time of reference, before other events took place.

In a way similar to instances in the present, preterite instances of *ḫark-* plus participle can have property or an actual occurrence readings. In the former case, we have a stative construction in the past, as in (7). As we have remarked above, in such instances *ḫark-* must not be taken as an auxiliary, but as a full verb, and it indicates continue-phase. By contrast, in (37) an actual occurrence reading is supported by the context.

- (37) *nu=mu* KUR ^{URU}*Tipiya kuit* *kūruriyaḫḫan*
 CONN=1SG.DAT land T. because become.hostile.PTCP.NOM/ACC
ḫarta
 have.PST.3SG
 “And since the land of Tupiya had become hostile to me [and was not delivering troops to me, I attacked Kathaidduwa.]” (KBo 3.4 i 49, NH/NS)

With the change-of-state verb *kūruriyaḫḫ-* “to become hostile”, occurring in a background clause, the construction with *ḫark-* indicates an event that has occurred

Hoffner & Melchert 2008: 306). This reflects a more general compatibility of anteriors with adverbs meaning ‘already’, as pointed out by Bybee et al. (1994: 45).

prior to another event in the past, rather than profiling an ongoing activity in the past. The discourse context indicates that the verbal complex must be taken as an AVC with pluperfect meaning. Notably, this discourse pattern, with an anterior in the background and a present tense in the foreground is compatible with the behavior of anteriors elsewhere (Givón 1982; Bybee et al. 1994: 62). As we noted in 3.1, the preterite can also express anteriority in the past (Hoffner & Melchert 2008: 309), as shown in (38).

- (38) *nu=mu kūs kuyēs URU Gasga^{HLA}*
 CONN=1SG.DAT DEM.NOM.PL REL.NOM.PL K_town(PL)
kūruriyahhir
 become.hostile.PST.3PL
 “These Kaskean towns which had become hostile to me [I moved against them].”
 (KBo 2.5 ii 4, NH/NS)

4.2.2 With *eš-*

As we remarked in §3.5, the periphrastic perfect with *eš-* “be” is less studied than the *hark-* perfect. This state of affairs is partly owing to the lower frequency of *eš-* as an auxiliary with respect to *hark-*: while the latter occurs with transitive and a subset of intransitive (unergative) verbs, the former is limited to a subset of intransitive verbs (unaccusative), and even with them it is further limited to change of state verbs, as participles of stative verbs do not have a resultative meaning (§3.2), and therefore cannot give rise to an anterior reading. In addition, *eš-* is also the auxiliary of the periphrastic passive (§3.3). Finally, the fact that the participle in *eš-* constructions agrees with the subject has led some to deny the existence of a periphrastic perfect (§3.4). However, comparison among different occurrences of participles of telic unaccusative verbs provides evidence for two constructions with *eš-*, a stative construction and an anterior periphrasis, either in the present (perfect) or in the past (pluperfect), in much the same way as with *hark-*. Let us compare Examples (39) and (40).

- (39) *kinuna=at katta mutān n=at arḥa*
 now=3SG.NOM.N down neglect.PTCP.NOM.N CONN=3SG.NOM.N away
harkan
 perish.PTCP.NOM.N
 “[In this town either the temple of the Stormgod or the temple of some other deity], it is now neglected, and it is ruined.” (KUB 13.2 ii 30, MH/NS)
- (40) *n=aš māt karū pānza*
 CONN=3SG.NOM if already go.PTCP.NOM
 “And if he has already/formerly gone.” (HKM 75, 23–24, MH/MS)

In (39), the participle indicates a state resulting from a previous event, but focus is given here to the present state rather than to the past action leading to it, as suggested by the adverb *kinun* “now”. Accordingly, the form has a property reading. By contrast, in (40) the occurrence of the adverb *karū* “already” suggests an anterior interpretation (see fn. 8), whereby focus is given to the completion of the event indicated by the participle, rather than on the resulting state, and the construction has an actual occurrence reading, and hence it functions as periphrastic perfect. (Notably, the preterite with *karū* can also be interpreted as an anterior; see Hoffner & Melchert 2008: 309.)

The preterite of *eš-* with the participle of a telic unaccusative verb can indicate an event that has occurred prior to another event in time, i.e. an anterior (actual occurrence reading). Compare Examples (6) in §3.1 and (41).

- (41) KUR^{URU} *Nerik* *hūdak=pat* *karūliyaš* ANA LUGAL^{MES} *karū*
 land N. suddenly=FOC former.GEN.PL to king(PL) formerly
ḫarkanza *ēšta*
 perish.PTCP.NOM be.PST.3SG
 “The land of Nerik had already suddenly perished under (the leadership of)
 the previous kings.” (KUB 21.19 + iii 11, NH/NS)

In Example (6) and (41) the constructions refer to the completion of an event prior to the time reference in the past. This reading is supported by the occurrence of the adverb *karū* “already” in (41) (cf. Cambi 2005).

4.3 Discussion

In §4.1 and §4.2 we discussed occurrences of the *ḫark-* and *eš-* plus participle constructions with different verbal moods and tenses. We provided evidence for considering the occurrences as instantiations of the stative construction, or as periphrastic perfects or pluperfects, that is, AVCs.

Concerning the relationship with mood, we argued that periphrastic perfects and pluperfects do not occur with the imperative: imperatives of *ḫark-* and *eš-* plus participle must all be taken as stative or passive constructions. This explains the remark in Hoffner & Melchert (2008: 311) that “[t]his construction is **more common** with the auxiliary verb *ḫar(k)-* in the **imperative**.” In fact, the impression that the stative construction is more frequent with the imperative is a consequence of the non-availability of the perfect AVC with this mood.

With the indicative mood, participles of atelic intransitive verbs, which are not resultative, only occur in the stative construction. With participles of other verbs, one can find either the stative(-resultative) construction or an AVC, with the

interpretation dependent upon the context. AVCs can be of two types: either they indicate an anterior, or, in the case of transitive verbs with *eš-*, a passive. Only in the former case does the whole construction trigger an A-oriented interpretation, while in passive constructions the participle remains P-oriented. This difference is possibly reflected in the different chronology of the emergence of the two constructions, as we argue below. AVCs featuring *ḫark-* with transitive and telic unergative verbs or *eš-* with telic unaccusative verbs may indicate completion of an event prior to a reference point in the present, and function as perfects, or in the past, and function as pluperfect.

According to Boley (1984, 1992) the *ḫark-* construction shows a diachronic development, with a turning point between Old and Middle Hittite: while only the stative construction is attested in Old Hittite, in Middle Hittite one also starts finding evidence for the anterior. In fact, all occurrences of *ḫark-* plus participle from Old Hittite originals can be held to instantiate the stative (or stative-resultative) construction. However, as we have argued in the case of (33), some bridging contexts are available, in which the anterior reading is also possible. Notably, the periphrastic passive construction is already well attested in the Old Hittite original of the Laws (see examples in Hoffner & Melchert 2008: 303), thus likely preceding the development of the periphrastic perfect. This is unsurprising, since the combination of the copula with ‘passive’ participles can be possibly traced back to PIE (Kümmel, this volume).

Boley (1992) further envisages a restriction of the use of the perfect with respect to the preterite in New Hittite, and also highlights the frequent equivalence of the pluperfect with the preterite. She also argues that the resultative meaning gave way to the anterior meaning, especially in New Hittite. Because Boley uses resultative and anterior in a slightly different way from the way in which we use the term, it is not clear whether her observation captures a real decay in the use of the stative-resultative construction.

We have said that *ḫark-* and *eš-* have auxiliary status only in the perfect and pluperfect (anterior) periphrases, and, in the case of *eš-* only, in the periphrastic passive. However, as we remarked in 3.1, stative constructions show a high degree of conceptual integration, while their meaning remains compositional. Adopting a dynamic definition of auxiliary, as we proposed in §2.1, we can regard *ḫark-* and *eš-* in the stative construction as quasi-auxiliaries, and the constructions as being on their way to becoming AVCs.

Broadening the view to all constructions discussed in this paper, including the stative (and stative-resultative), the passive, and the perfect or anterior, we can detect differing degrees of grammaticalization. The lowest, as we argued above, pertains to the stative and stative-resultative construction, whose meaning remains compositional, in spite of conceptual integration (cf. §3.1). The lower degree of

grammaticalization of stative constructions is partly reflected by the behavior of third person clitic subjects (cf. §3.4), and by the fact that *ḫark-* and *eš-* can freely occur with the same verb, in which case they provide different construals of the same event based on their lexical meaning (see fn. 7). The periphrastic perfect and pluperfects show the highest degree of grammaticalization: the construction as a whole acquires a new meaning, that of anterior, which is non-compositional, as shown by the fact that the participle of transitive verbs is not P-oriented. In addition, in this construction alternation between *ḫark-* and *eš-* is strictly determined by the syntax of the base verb, and can be described in terms of auxiliary selection (Garrett 1996). We argued that the verb *eš-* in the periphrastic passive can be regarded as an auxiliary. The degree of grammaticalization, however, is lower than in the case of the periphrastic perfect, because, as we remarked in 3.3, the meaning of this construction derives directly from the P-oriented meaning of the participle. Based on these observations we can draw the auxiliarization cline in (42).

(42) Degree of grammaticalization of *ḫark-* and *eš-* constructions



5. Conclusion

In this chapter, we have discussed occurrences of *ḫark-* “have” and *eš-* “be” with the participle in Hittite. We have argued that they instantiate three different constructions. In the first place, and constituting possibly the most ancient construction, we found a stative. In this construction, the verbs *ḫark-* and *eš-* do not function as auxiliaries, and the meaning of the construction is compositional. However, since the events denoted by *ḫark-* and *eš-*, on the one hand, and the participle, on the other hand, share the same participants, we have argued that the two verbs should be considered semi-auxiliaries in this construction. The meaning of the stative construction is maintenance of a state, either permanent, or resulting from a change of state. In the second case, the construction is stative-resultative. As we have shown based on the semantics of the Hittite participle, participles of atelic verbs denote permanent states, while participles of telic verbs are resultative.

A second construction, which only involves *eš-*, is the periphrastic passive. This construction is frequent, and involves participles of transitive verbs. The passive meaning of the construction follows naturally from the P-oriented nature of the participle of transitive verbs in Hittite. Notably, in New Hittite the periphrastic

passive competes with the frequent passive use of the middle voice (cf. Melchert forthcoming; Inglese 2020).

The third construction discussed in this chapter is the anterior, which, depending on the tense of *ḫark-* and *eš-*, can be a periphrastic perfect or a periphrastic pluperfect. We have argued that *ḫark-* and *eš-* in this construction must be regarded as auxiliaries, as the meaning of the construction is not compositional. This is especially clear in *ḫark-* constructions, in which the transitive participle is not P-oriented: rather, the construction as a whole is reinterpreted as being A-oriented. Contrary to some other scholars, we have argued that both *ḫark-* and *eš-* function as auxiliaries in the periphrastic perfect and pluperfect, and that their distribution depends on verbal semantics, with *ḫark-* occurring with transitive and unergative verbs, and *eš-* with unaccusative verbs, as shown in Garrett (1996). Contrary to Garrett, we do not consider occurrences of imperative forms of *ḫark-* and *eš-* with the participle as perfect periphrases. Rather we have argued that only the stative or the passive constructions are available with the imperative.

Concerning the chronological development of the periphrastic perfect, we have followed Boley (1984, 1992), who argues that the anterior meaning developed after the Old Hittite period. However, we have shown that some bridging contexts occurred in Old Hittite, in which both the stative-resultative and the anterior reading were available. We have also argued that the development of constructions containing *ḫark-* and *eš-* and the participle in Hittite follows a well attested path of grammaticalization, whereby anteriors may develop out of resultatives. Figures 1 and 2 contain a summary of our findings, and of the development of the Hittite constructions.

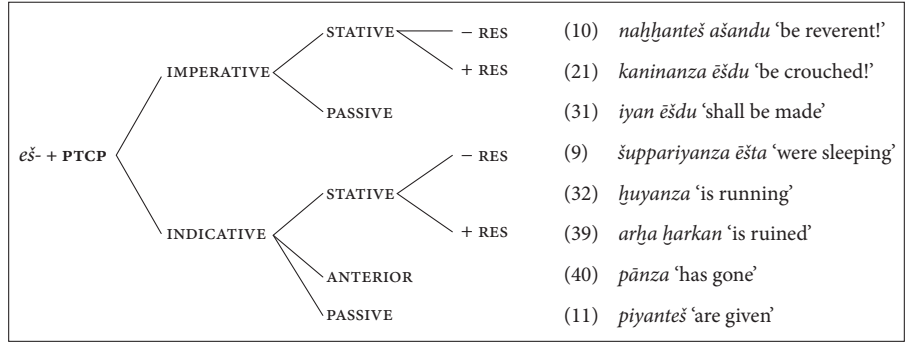


Figure 1. Meanings of the [*eš-* + participle] construction

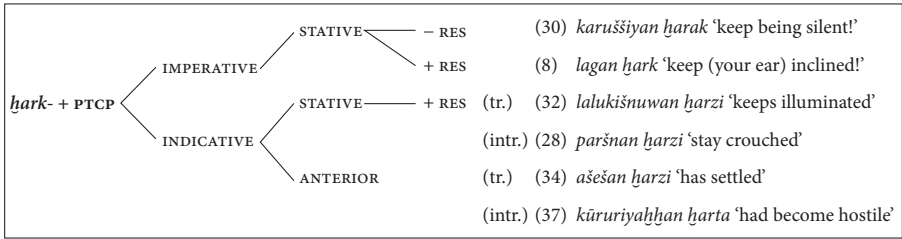


Figure 2. Meanings of the [ḫark- + participle] construction

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The Gothic perfective constructions in contrast to West Germanic

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The paper deals with selected questions of ‘perfectivity’ as both aspect and tense function in Gothic in comparison with old and contemporary West Germanic languages. Perfectivity is treated as a functional category which originated in verbal aspect, but which has been re-analysed in many languages which have lost aspect as a grammatically marked opposition. In old East Germanic (Gothic), the prefix *ga-* originally marking terminative *aktionsart* was grammaticalised as the marker of perfective aspect. This is still reflected in Gothic, but lost in West Germanic. Hence, the development of perfectivity in Old Germanic is connected with the development of perfective aspect. However, in old West Germanic languages comparable prefixed compounds have already lost their aspect-marking function and could be used as general semantic modifiers of related simplex verbs. Beside the perfective-marking prefix, perfectivity also could be encoded by means of periphrastic forms, which gradually developed from aspect to tense function, so that in contemporary West Germanic languages aspectual (perfective) readings of periphrastic constructions are extremely peripheral.

Keywords: viewpoint aspect, lexical aspect, Gothic *ga-*compounds, periphrastic constructions

1. Introductory remark on the term ‘perfect’

The term ‘perfect’ is one of the most ambiguous concepts in linguistics, since it can refer to the domains of both aspect and tense. Moreover, in Indo-European aspect studies (cf., among others, Stang 1932; Kuryłowicz 1964; Watkins 1969; Krasukhin 1987, 2007), the genuine PIE perfect is also referred to as the verbal form closely connected with the category of medium ‘the middle’ as opposed to the original Indo-European present active. In Indo-European reconstructions, ‘perfect’ is treated as a verbal aspect within the basic categorial opposition of imperfectivity vs. perfectivity in the PIE verbal system, being primarily a grammatical indicator of the

so-called ‘viewpoint aspect’ (cf. Comrie 1976; Klein 1994, 1995; others). A similar definition applies to ‘aspect languages’ like Slavic. On the other hand, however, the term ‘perfect’ is also used in the description of the verbal systems of so-called non-aspect languages like Germanic, where it denotes the category of verbal tense. Moreover, ‘aspect’ or ‘aspectuality’ are often used to refer to phenomena such as so-called ‘lexical aspect’ (the opposition between telicity and atelicity), which is situated either at the interface of pure lexical categorization (*‘aktionsart’*) and grammatical aspect or even treated as effectively equivalent to *aktionsart* (cf. Eckhoff & Haug 2015: 190; Miller 2019: 396–397). In order to avoid terminological ambiguity, the term ‘aspect’ is used here to denote a functional category which originated in verbal aspect, but which has been reinterpreted as an ‘aspect-like’ categorial function in many languages which have lost aspect as a grammatically marked opposition. Concerning the verbal paradigms of IE languages with both perfective and imperfective readings of perfect forms, e.g. perfective-resultative readings of a denoted process vs. imperfective readings of a denoted state (i.e. if we presume the functions of perfect forms in the Greco-Arian systems with the present-aorist-perfect opposition), the terms ‘perfectivity’ and ‘perfect’ have to be treated separately from each other. According to Meier-Brügger (2010: 298), present verbal stems encode imperfective viewpoint (i.e. grammatical) aspect, whereas aorist stems encode perfective aspect, and the perfect stems encode “a sort of resultative aspect” (Meier-Brügger 2010: 298). In this sense, these languages behave ‘*mutatis mutandis*’ like most old and new Germanic languages with the (analytic) perfect functioning as a tense (rather than an aspectual) form, but differently from Slavic languages with the grammatical form of perfective aspect. Thus, in our further observations we will rather use the term ‘perfectivity’ than ‘perfect’ when speaking of the ‘viewpoint aspect’ function.

2. The Gothic *ga*-compounds as viewpoint-aspect markers

Gothic is the oldest Germanic corpus language belonging to the no longer living Eastern Germanic group. The Gothic written corpus predominantly consists of translations of the New Testament books from Hellenistic Greek originally made in the 4th century, but the oldest existing Gothic manuscripts are recorded later, i.e. at the earliest in the 6th century.

In Gothic, which one could regard in some sense as a ‘test laboratory’ of language change, there are several markers of ‘perfectivity’ generally heading towards ‘lexicalization’ or ‘temporalization’: (i) the so-called *ga*-compounds¹ (cf. Mourek

1. I use here the original term according to the New Grammarian’s tradition in which no difference between compounds and prefixal derivatives was made. In the modern terminology, verbs

1890; Streitberg 1891) like *gahausjan*, *gasaihan*, *gabindan*, *gaskapjan*, encoding perfectivity in opposition to the simple verbs *hausjan* “hear”, *saihan* “see”, *bindan* “bind”, *skapjan* “create, manage”; (ii) the periphrastic constructions with *wisan* “be” and *wairpan* “become” with past participle which connect aspectual, temporal and diathetical functions. In this section, Gothic compounds with *ga-* will be discussed. The gradual lexicalization of the Germanic *ga-* compounds, which at least at an earlier stage encoded lexical aspect, i.e. the function of telicity according to the terminology of Dahl (1985: 84–85), has triggered several essential changes in the whole inventory of verb forms. But, before speaking about these changes, I recapitulate the problem of the real origins of the reconstructed aspectual segments of the Proto-Germanic verbal system.

It is well known that the complex verb system of PIE, in which aspect, voice and – later – tense forms interacted with each other, was heavily simplified in Proto-Germanic. The latter had only two tense forms, namely present and past,² and probably no grammatical (viewpoint) aspect anymore: “In the aspectual system, the Indo-European perfect became the strong preterite in Germanic” (Miller 2019: 519). It is possible that it possessed the category of *predel’nost’* (delimitation) (cf. Maslov 1959, 1984) which is similar to so-called lexical aspect (telicity). This categorial function was originally encoded by means of prefixation which is comparable with the emergence of the ‘new’ Slavic-style aspect. Lexical prefixes change the *aktionsart* of a verb so that one gets a pair of two verbs, one with an affinity to imperfectivity, the other one to perfectivity, with further reanalysis as an aspectual pair. There is another reason for the multifunctional status of the prefix *ga-*. As Yarceva (1968: 30) claims, verbal aspects are generally “more lexically marked” in comparison to other categories, such as e.g. verbal tenses. I do not think that this is a general feature of aspect as a function, but rather a feature of the forms employed to encode it. In my opinion, aspects encoded by means of inflection, like viewpoint aspects, are as grammatical as tenses or even more grammaticalised, because of their internal meaning and deictic essence, whereas, as Reichenbach (1947) has shown, tenses are more related to the external concept of time. We can find similar opinions, among others, in Comrie (1976: 3). Thus, the affinity between lexical meaning and grammatical function expressed by a prefix-marked aspect is not due to the function itself, but rather due to the means of its encoding. For Old Church Slavonic, for example, we can assume two separate aspect markers – on the one hand, the genuine Indo-European inflectional marking of imperfectivity (in the present and

with the prefix *ga-* in Gothic and their counterparts in other Germanic languages are called prefixed derivatives.

2. More correct seems the opposition of past/non-past, which, beyond Old Germanic, was preserved in Anatolian (e.g. Hittite) (cf. Miller 2019: 519).

past) and of perfectivity (in the present and aorist), and, on the other hand, the new Slavic system of encoding aspect by means of prefixation (cf. Eckhoff & Haug 2015).

In early Germanic, and probably in Proto-Germanic, there were neither perfect nor aorist as aspectually marked tenses, nor, from the perspective of reconstruction, temporally marked aspects. The PIE present has generally been reanalysed as a present tense and has received its so-called primary endings, whereas the PIE perfect and aorist were reanalysed as one past tense with secondary and perfect endings. The so called Germanic preterito-presents demonstrate, however, that original PIE Perfecta tantum (e.g. verbs which had only perfect forms) preserve their original (i.e. perfect) forms in the Germanic present tense, whereas their new past forms are built after the Germanic model of weak verbs. The majority of them receive the new function of deontic modality with its strong affinity to perfectivity (cf. Abraham 2014: 268–270).

The only aspect marker was the new prefix *ga-*, which goes back to the same particle stem as the Slavic *so-*, *sv-* with originally sociative meaning (cf. Miller 2019: 399), partly retained also in Gothic (as, for example, in *gaqiman* ‘come together’ derived from *qiman* ‘come’) which was later reanalysed as having successive (cf. Kacnel’son 1960) and perfective (or rather telic) force (cf. Smirnickaya 1966; Daviet-Taylor 1997; Miller 2019: 399–401). In the discussion with Streitberg’s direct comparison of the Gothic *ga-* with Slavic prefixal perfective markers, his opponents especially stressed that the Gothic *ga-* compounds primarily encoded rather lexical than grammatical functions (cf. Mourek 1890; Maslov 1959; Kacnel’son 1960; Smirnickaya 1966; West 1981 and others). Wedel & Christchev (1989) and Wedel (1997) do accept the primarily grammatical function of the Gothic preverbal *ga-*, though they prefer to define it, other than the Slavic perfect, as ‘complexive aspect’ (i.e. ‘limited duration’ as in ‘had travelled from Monday to Tuesday’) which denoted the function similar to the Greek (and Old Slavonic) aorist (about the basic functions of the aspectual resp. quasi-aspectual prefix in Germanic cf. also Schrodts 2004: 2–4, 104–106, 114–115 and Schrodts & Donhauser 2003: 2504–2510). In his comprehensive Gothic grammar, Miller distinguishes between the functions of definiteness, sequence completion or effectuation, change of state, temporal completion and event actuality/factuality (cf. Miller 2019: 402). The latter is in his opinion not the same as perfectivity, although it is sometimes confused with it (Miller 2019: 402). As an example he provides the following verse from Lk 8, 10: *ei saihvandans ni gasaihvaina, jah gahausjandans ni frapjaina* (Lk 8:10) “that seeing they not really see, and (though) really hearing they not understand”, in which *ga-* is equivalent to “really” (cf. Miller 2019: 402).

Nevertheless, in Gothic (and perhaps also in Proto-Germanic) this marker can and even must in many cases be interpreted as an indicator of viewpoint aspect (grammatical aspect) denoting perfectivity (cf. Kotin 2012: 294–301), cf. Matthew 8, 14:

- (1) *jah qimands Iesus in garda Paitraus, <jah> gasahv*
 and coming Jesus in house Peter's and saw.PFV.PST.SG
swaihron is ligandein in heitom.
 mother-in-law his lying in fever

Greek:

καὶ ἔλθων ὁ ἰησοῦς εἰς τὴν οἰκίαν πέτρου εἶδεν τὴν
 and coming DEF Jesus in DEF house Peter's saw.AOR.SG DEF
πενθερὰν αὐτοῦ βεβλημένην καὶ πυρέσσουσαν.
 mother-in-law his lying and fevering

“When Jesus came into Peter’s house, he saw Peter’s mother-in-law lying in bed with a fever.”

Though the Greek verb appears in the aorist form εἶδεν “saw”, it does not encode here complexive function, but rather perfective. Thus, the Gothic prefixed past tense form *gasahv* also has the function of perfectivity denoted by the prefix *ga-* which in this example does not have any additional (lexical) meaning in comparison with the simplex verb *saihv* “see”.

Concerning the Greek forms, one has generally to take into account that the Greek aorist had several different functions and especially in the Hellenistic Koine it was very often used apparently as an alternative to the perfect (cf. Streitberg 1920: §298, Anm. 1; as well as Moulton 1906: 140f.; Fanning 1990: 299–301; Jones 2009: 224).

The next example demonstrates the very same function of the Greek aorist in a perfective reading and, correspondingly, of the Gothic *ga-*compound in the past tense form, cf. Matthew 8, 13:

- (2) *jah qab Iesus þamma hundafada: gagg, jah swaswe galaubides*
 and said Jesus DEF centurion go and how believed.PST.2SG
wairþai þus. jah gahailnoda sa þiumagus is in
 become.OPT.3SG you.DAT and heal.PST.PFV.SG DEF servant his at
jainai heilai.
 that moment

Greek:

καὶ εἶπεν ὁ ἰησοῦς τῷ ἑκατοντάρχη, ὕπαγε, ὥς ἐπίστευσας
 and said DEF Jesus DEF centurion go how believed
 γεννηθήτω σοι. καὶ ἰάθη ὁ παῖς [αὐτοῦ] ἐν τῇ
 become you and heal.AOR.PASS.SG DEF servant his at DEF
 ᾧρᾳ ἐκείνῃ.
 moment that

“Then Jesus said to the centurion, ‘Go! Let it be done just as you believed it would.’ And his servant was healed at that moment.”

There is a conspicuous affinity of Gothic *ga*-prefixations and Greek aorist forms when encoding events in past time. In the Gospel of Mark, which contains a total of 324 Greek aorists, more than a half, i.e. 163, are translated by Gothic prefixed preterites (cf. Miller 2019: 398). This is one of the most convincing pieces of evidence for the aspectual function of Gothic *ga*-, since the Greek aorist usually encodes the inherent ‘telic-like’ counterpart to the Greek imperfect.

The present tense form of the Gothic *ga*-compounds nearly always refers to the future and, simultaneously, very often encodes perfective readings, i.e., it occurs then in the functions typical for the Slavic perfective aspect, cf. John 16, 17:

- (3) *leitil ei ni saihvīþ mik jah aftra leitil jah gasaihvīþ*
 little that not see.PRS.IPFV.2PL me and after little and see.PRS.PFV.2PL
mik.
 me
 Greek:
 Μικρὸν καὶ οὐ θεωρεῖτέ με, καὶ πάλιν μικρὸν καὶ ὄψεσθέ με.
 little and not see.PRS.2PL me and again little and see.FUT.2PL me
 “In a little while you will see me no more, and then after a little while you will see me.” (NLT)

This example clearly demonstrates the categorial opposition between Gothic *simplicia* and *ga*-compounds in the functional area of verbal aspect. The present form of the verb *saihan* with a future reading denotes in connection with the negative particle the termination of the present state in the future, whereas the prefixed form *gasaihvīþ* “see.PRS.PFV” encodes the inchoative and, thus, perfective function, since inchoativity in aspect languages is strictly connected with the perfective aspect (cf. Kątny 1994: 41–45). Theoretically, the usage of *ga*- with *saihvīþ* in the first part of the clause would be correct as well. An indirect, but nevertheless very convincing piece of evidence for this claim is the usage of prefixed perfectives at both places of this verse in the Russian translation, i.e. *ne u-vidite* “not see.PFV” vs. *u-vidite* “(will) see.PFV.” However, the negative particle definitely allows the imperfective form, too. Thus, in the Polish version the future tense form of the imperfective verb *widzieć* “to see” with negation is used, whereas in the second case the perfective verb *ujrzeć* “to get to see” appears. Moreover, in the Greek text the negated verb is a present form with future reading, whereas in the second part, the future form is used in Greek. This model forces the Gothic translator(s) to use the *ga*-compound instead of the simplex to encode perfectivity in the future by means of prefixation, since Gothic does not have a morphological future form and consequently uses other means of encoding future events, primarily present form of *ga*-compounds, to create future interpretations by means of indicated terminativity or inchoativity.

In the following example, the prefix *ga-* is used with one imperative form and two forms of present indicative, cf. Matthew 11, 4:

- (4) *gaggandans gateihþ* *Iohanne þatei gahauseiþ* *jah*
going report.IMP.PFV.2PL John what hear.PRS.PFV.2PL and
gasaihiþ.
see.PRS.PFV.2PL

Greek:

- Πορευθέντες ἀπαγγείλατε Ἰωάννη ἃ ἀκούετε
going report.AOR.IMP.2PL John what hear.PRS.2PL
καὶ βλέπετε.
and see.PRS.2PL

1. New International Version: “[Jesus replied], ‘Go back and report to John what you hear and see.’”
2. New Living Translation: “[Jesus told them], ‘Go back to John and tell him what you have heard and seen’ [...]”

Conspicuously, two different translations into Modern English use different tense forms of the verbs ‘hear’ and ‘see’. From the Greek text the aspectual reading cannot be obtained, since simple present forms are used. In such cases, either imperfective (as in the version 1) or perfective (as in version 2) readings of a *verbum sentiendi* can be preferred. In the case of perfectivity, for its part, either past or future reference are possible, whereas present reference is excluded. Obviously, the Gothic translator(s) have interpreted the aspectual function of ‘hear’ and ‘see’ as a perfective one, i.e. in line with the anteriority of the English translation under 2 (where the perfect tense form of both *verba sentiendi* simultaneously encodes anteriority and terminativity), but, contrary to this version, they have read both verbs as future-referring. That is why they selected (a) not simplicia, but *ga*-compounds and (b) not past, but present tense. Thus, if Gothic did not have the grammaticalized opposition between imperfective and perfective aspect (as the critics of Streitberg claim), it could not regularly express perfective and future meanings by the present form of neutral verbs like *hausjan* or *saihvān* by means of the *ga*-prefixation. (Under neutral verbs I understand entities which are unmarked for lexical *aktionsart*, e.g. terminative, inchoative, resultative, durative meanings etc.). Such verbs are especially striking from the aspectual viewpoint, for they can encode imperfective vs. perfective functions independently of such aspect-sensitive *aktionsart* as e.g. telicity. From this point, the following examples discussed by Miller in his Gothic Grammar are salient: (i) *gamatidedun þan jah sadai waurþun* (Mk 8: 8) “they then ate and were sated” vs. (ii) *jah matidedun jah sadai waurþun allai* (Lk 9: 17) “and they all ate and were sated.” (cf. Miller 2019: 401). In both cases, in Greek the aorist form

éþagon “they ate” is used (Miller 2019: 401). “The Luke [Mark? – M.K.] translator interpreted the *Vorlage* to mean ‘they finished eating’, ‘they consumed (all) the food’, hence *ga-matidedun*” (Miller 2019: 401, with a reference to Wedel & Christchev 1989: 202). In my opinion, *éþagon* is a so called ‘confective’ (or ‘complexive’) aorist (cf. Krasukhin 2007: 7; 32–35) encoding a durative action which is completed not in the sense of a successive finishing of the action, but rather in the sense of a limited duration within a fixed time. For this reason, the translation of both verses into modern East or West Slavic languages without an aorist category (e.g. Russian *jeli*, Polish *jedli*) does not use the perfective aspect of ‘eat’. Complexity is, for its part, always encoded in Slavic languages by means of imperfective verbs, since the imperfective aspect in languages with so called ‘Slavic-style aspect’ is unspecified, hence, unmarked (neutral), and can be, under certain conditions, re-interpreted as ‘hidden telicity’ as a result of the neutralization of the privative opposition ‘in favour’ of the unmarked form. As a consequence the Gothic translator(s) could choose either form (with or without *ga-*), since this prefix did not have a ‘strong’ perfective function, as in Slavic. In Old Church Slavonic, where both aorist and perfective aspect encode aspectual functions (cf. Eckhoff & Haug 2015), the aorist form of the imperfective verb is used as an exemplary ‘confective aorist’ (*jadoša*) in both verses.

3. ‘Aspectual-like’ prefixations vs. periphrastic constructions in Western Germanic

Grammaticalized viewpoint aspectual distinctions have been abandoned in the West Germanic languages, where the *ga-/gi-/ge-/ze-*derivatives can be read as expressing at least lexical aspect (telicity) or even as carrying purely lexical denotation, like in the Example (6) below from the *Hildebrandslied*. In the older West Germanic languages (Old High German, Old English, Old Saxon), there is a comparable opposition of simple verbs and derived verbs with a prefix related to Gothic *ga-*: OHG. *gi-*, OS *ge-*, OE *ze-*. The function of these prefixes is, however, less evident than it is in Gothic (and we know that even Gothic does not consistently mark viewpoint aspect). Despite this, we do have some evidence from West Germanic (which could be called ‘negative evidence’) for the genuine aspectual (at least lexically aspectual) function of the prefix in question; namely the lack of this morpheme in, for instance, OHG, in the past participles of telic verbs like OHG *fintan* “find”, *bringan* “bring”, *queman* “come”, i.e. *funtan*, *brâht*, *quoman*, whereas atelic and neutral verbs formed their past participles with the prefix *gi-*, cf. OHG. *suochen* “seek” – *gisuochit*, *tuon* “do” – *gitân*, *uuesan* “be” – *giuueran* etc. Moreover, other verbal prefixes could encode functions comparable to *ga-/gi-/ge-/ze-*, e.g. OHG *ar-/er-/ir-*, *fora-/furi-* etc. This evidence is important, because as a rule many prefixes

could not appear simultaneously. Thus, in the case of derived verbs with prefixes other than *ga-/gi-/ge-/ze-*, the quasi aspectual function was combined with pure lexical modifications. Below it will be shown, how it worked.

Nevertheless, early West Germanic texts *do not* contain oppositions similar to Slavic-style aspect (cf. Comrie 1976; Dahl 1985), i.e. obligatory telic readings of perfectives (cf. Dahl 1985: 85; Eckhoff & Haug 2015: 191) as one of the central features of the aspectual opposition, as in the forms of the Russian verb *videt'/uvidet'* 'see':

(5)	Past	Present	Future
imperfective	<i>videl</i>	<i>vižu</i>	<i>буду videt'</i>
perfective	<i>u-videl</i>	–	<i>u-vižu</i>

The perfective form *u-vižu* morphologically corresponds to the imperfective present *vižu*, but it is used as a future tense.

Cf. OHG *Hildebrandslied* 46–47 where *gisihu*, despite the prefix *gi-*, does not have a perfective reading, but changes atelic ‘see’ into telic ‘catch sight of’:³

- (6) *wela gi-sihu ih in dinem hrustim dat du habes heme*
 well PREF.TELIC-see.PRS.1SG I in your armour that you have home
herron goten.
 lord good
 ‘I can see well in your armour that you have a good lord at home.’

However, Gothic does not have the construction with HAVE and the past participle which was the main exponent of the more recent analytic forms in West Germanic encoding ‘perfect’, and which has been reinterpreted as a tense form with several aspect-like features. This form arose from the possessive syntactic construction of the OHG type, for example: *phīg boum habēta sum gi flanzōtan in sīnemo uuīngarten* (Tat. 102) [*lit.*] “a fig tree had somebody planted in his vineyard”, and appears in the oldest West Germanic texts (Old English, Old Saxon and Old High German). Its functional status is a ‘categorical mixture’ of aspectuality, temporality and diathesis. The West Germanic ‘perfect’ analytic tense form developed then as a consequence of a ‘competition’ between the – older – BE and the – later – HAVE-perfect (cf., among others, Smirnickaya 1977; Grønvik 1986; Kuroda 1999; Watts 2001; Miller 2019: 519).

3. Cf. the similar conclusion in Schrodtt (2004: 3): “ist nicht bloße Anschauung der Rüstung gemeint, sondern die durch die Rüstung vermittelte Erkenntnis des Standes Hadubrandts: ‘Gut erkenne ich an deiner Rüstung, daß du daheim einen guten Herren hast’” However, this reading is essentially different from the ‘classic’ perfective one, where perfective readings of present tense forms in such contexts are, both in Slavic and Germanic, simultaneously prospective.

In English, the HAVE-perfect has been retained, whereas in some continental West Germanic languages (Dutch and German), both types of the analytic perfect with a relatively weak aspectual function exist. The selection of the auxiliary verb in the perfect form depends partly on the 'aspect-like' and partly on the syntactic properties of the verbs in question, cf. German *Wir haben einen VW gefahren* "We drove a VW" vs. *Wir sind nach Rom gefahren* "We drove to Rome", [*lit.* "have driven" vs. "are driven"]; and Dutch *Gisteren zijn we naar Leiden gefietst* "Yesterday we cycled [*lit.* are cycled] to Leiden." vs. *Op vakantie heb ik veel gefietst* "In the holidays I have cycled a lot", [*lit.* "I did a lot of cycling in the holidays"]. Moreover, resultative passive constructions without a temporal reference with HAVE are possible, cf. *Das Pferd hat die Beine gefesselt* "The horse has its legs fettered." In the latter case, the telic reading is obligatory. The southern German dialects select *sein* "be" in perfect constructions even with intransitive verbs which do not indicate perfectivity, i.e. which belong to the group of durative unaccusatives or, according to Vendler (1957), STATES, cf. *Peter ist lange gesessen* "Pete sat [*lit.* is sat] for a long time", or "Pete stayed sitting for a long time."

In the West Germanic languages, the system of tenses has been significantly reduced to two tenses. At the same time, unlike Gothic, it did not have any opposition of imperfectivity and perfectivity, i.e. grammatical aspect, or even of telicity and atelicity, i.e. lexical aspect. Such systems are, for many reasons, generally very weak and develop either towards aspectual systems with few tenses or into branched tense systems. The latter have tenses which are at least partly aspectually marked, in essence with lexical aspect, but in part also with viewpoint aspect. In the last case they can later develop into an autonomous aspectual system, although (like the highly grammaticalized opposition between habituality and durativity in Modern English) not necessarily with a Slavic-type aspect (cf. Smirnickaya 1977: 29–35).

West Germanic encoded these new quasi aspectual meanings by means of analytic constructions, the most recent of which is the construction with HAVE verbs as auxiliaries. Schrodt (2004: 16–18) compares the periphrases with the auxiliaries HAVE and BE in West Germanic with prefixal derivatives with *ga-* in Gothic claiming that the periphrastic tense forms in West Germanic languages functionally go back to the resultative meaning of the Gothic *ga-*derivatives and originally encode the grammatical functions of Passive, Resultative and Perfect. The most important affinity between Gothic *ga-*derivatives and West Germanic periphrases is in his opinion the encoding of a state as the result of a previous act.

Of course, the old periphrases with BE and BECOME verbs can still encode, among other things, perfectivity or imperfectivity, but their primary functions lay in the denotation of voice and its interaction with aspect. For this reason, these periphrases will be considered later and we shall deal first with the 'HAVE+Past Participle' periphrasis, which does not exist in Gothic. My claim is that this can be

explained by the fact that Gothic still possessed a relatively highly grammaticalized opposition between the simple and *ga*-compound verbs described earlier (cf. Schrodtt 2004: 9–18).

Consider the following classical syntactic construction which is generally taken to be the origin of the Modern German perfect (Tatian 102, 2):

- (7) *phîgboum habêta sum giflanzôtan in sînemo uuîngarten.*
 fig_tree had one_man planted in his vineyard
 Latin:
arborem fici habebat quidam plantatam in vinea sua.
 tree fig had one_man planted in vineyard his
 “Somebody had a fig tree planted in his vineyard.”

In the original construction, in which the HAVE-verb is not yet an auxiliary, the past participle is an attribute agreeing with the object, and the proposition does not have the obligatory reading whereby the subject is the agent and can also be the possessor, and it thus has only the telic reading. It denotes possession arising as the result of a prior completed action carried out by the subject or another person. The prior completed action is denoted only by the past participle. Atelic readings are excluded in such circumstances. Thus, telicity – that is situation lexical aspect rather than viewpoint aspect – is here a *conditio sine qua non*. The original tense of the auxiliary in the biclausal construction is adopted by the lexical verb when it becomes mono-clausal.

The proposition refers to past time, but thanks to the present form of the auxiliary verb, this is related to the present, as opposed to the simple past form (preterite). What has happened in the past retains its actuality in the present, and hence it leads to the so-called “outer perspective”, i.e. perfectivity (cf. Leiss 1992: 35, 46f.). However, this function is a phenomenon of covert grammar because it does not denote perfectivity as such, but only ‘situational perfectivity’, connecting the action in the past not to its result, but to its observation from the perspective of the present. Compare the following example from OHG – Notker, *Psalms* III, 14, 10:

- (8) *dînen zôrn fûrhtendo hábo ih [...] keuuéinôt.*
 your anger fearing have I cried
 “Fearing your anger, I have cried.”

The verb *uuéinôn* is intransitive, and therefore cannot be an element of a syntactic construction with an attributive past participle, since the clause containing it cannot take an object. At the same time the verb is atelic-durative, and consequently the clause cannot carry a telic reading. Nevertheless, *hábo keuuéinôt* differs in essence from *uuéinôta*. The question is what kind of difference we are dealing with. Obviously, it does not belong to the domain of tense, because both propositions

refer to the past, described by Reichenbach (1947) as ‘time of act before time of speech’. On the other hand, it cannot be described in strong aspectual terms, as Schrodts (2004: 18) tries to do by introducing the term ‘complexive aspect’, which obviously does not have any specific formal encoding in West Germanic. Hence, it must be interpreted as a special kind of tense form referring to the present of a speaker looking back at a process or activity which is still important for the present. Such uses are in many ways complex. From the perspective of aspect, they encode the outer perspective and thus have perfective force. The speaker is not referring to presence in the middle of a state or process, but rather to observing from a distance, i.e. from the outside in the sense of Weinrich’s “world that is talked about” vs. from the inside in the sense of Weinrich’s “world that is narrated” (cf. Weinrich 2001 and Hewson 2001: 74f.). However, *uueinôn* is durative only. In cases when the verb is ambiguous from the perspective of its lexical aspect (like *uuerkôn* “work” in Example (9)), OHG texts provide us with very clear and definite examples which show the aspectual difference between the simple past and the past perfect with the HAVE-auxiliary. In (9) the verb *uuerkota* in the simple past form is a typical Vendlerian ‘activity’ verb and thus it denotes a non-limited activity and is intransitive. Moreover, imperfectivity is additionally stressed by the negation *ni*, in line with the “Negation-Imperfectivity Convergence Generalization” by Abraham & Leiss (2008: xiii). In (10) the periphrastic form *kiuuerkot hapeta* has to be interpreted as a Vendlerian accomplishment: it is transitive and telic, what is additionally stressed by the adverb *eo*.

OHG *Muspilli* 29–30 (early 9th c.):

- (9) *ni ist in kihuctin himiliskin gote, uuanta hiar in uuerolti after*
 not is in memory heavenly God.DAT because here in world after
ni uuerkota.
 not worked
 “[The wretched soul] is not in Heavenly God’s memory, because it was not acting here in the world according to his bids.”

versus OHG *Muspilli* 35–36:

- (10) *dar scal er vora demo rihhe [d]az rahhu stantan pi daz er in*
 there will he before the judge the charge stand for that he in
uuerolti eo kiuuerkot hapeta.
 world ever worked had
 “There he will answer before the judge for everything he had ever done in this world.”

In Old Saxon, the perfect construction with HAVE and the past participle of the main verb also are relatively highly grammaticalized, although in most cases the reading of the construction in question is rather both past and perfective, cf. *Heliand* 2264–2265:

- (11) *Thô habda sie that barn godes ginerid fan theru nôdi.*
 than had them the child of God saved from the distress
 “Then the child of God had saved them from the distress.”

In contrast to the Tatian example, a passive reading with the possessive semantics of the HAVE-verb is impossible here, as Christ (*barn godes*) can only be the agent and not the possessor. But the perfective (telic) reading is obligatory here, too, and this is different from the Notker example. The same aspectual reading can be found in the following verse from the OS Genesis, in which the HAVE-auxiliary is used in the present tense, cf. OS Genesis, 43–45:

- (12) *Thuo sprak im eft ûsa drohtin tuo: «All haBas thu sô giuuerkot»,*
 Then spoke him again our Lord to All have you so done
quad he, «sô thi ti thînaro uueroldi mag uuesan thîn hugi hriuuiuig,
 said he what you to your life will be your mind remorse
thes thu mid thînum handon gidedos, that thu uuurdi thînes
 that you with your hands did.PRF that you became your
bruodâr bano»
 brother murderer
 “Then our Lord spoke to him again: ‘All have you so done’, he spoke, ‘so that it will last as your remorse throughout all your life, since you have done it with your hands, that you became your brother’s murderer.’”

Conspicuously, the prefixed verb *gidedos* “have done” also has a synonymous (telic) reading in this context. This is a good example of the similarity in function of the ‘old’ prefixation and the new periphrastic construction.

A perfective (telic) reading is also most typical for forms with the HAVE-verb and the past participle in Old English, cf. OE *Beowulf* 205–207:

- (13) *Hæfde se goda Geata leoda cempa gecorone þara þe he [...]*
 had REFL good Geats people warriors selected there then he
findan mihte
 find might
 “He had selected good Geat people, the warriors, whom he could find.”

The second analytic form for the Germanic perfect function which was reinterpreted as a tense form with an aspectual co-function is the construction with the BE-verb and past participle in German:

- (14) *Elke ist nach Paris gefahren.*

Elke is to Paris gone

“Elke has gone to Paris.”

- (15) *Peter ist schon erwacht.*

Peter is already woken_up

“Peter has already woken up.”

or Dutch

- (16) *Gisteren zijn we naar Leiden gefietst.*

yesterday are we to Leiden cycled

“Yesterday we cycled to Leiden.”

Constructions of this type are built with intransitive, unaccusative verbs, with the meaning of transformativity or movement. In the Old Slavic languages, the analytic perfect and past perfect with the auxiliary BE could be constructed from all verbs (not only from unaccusatives). In the West Germanic languages, this construction has been fully (in the case of English) or partly (in the case of German and Dutch) replaced by the perfect with the auxiliary HAVE. In OHG, the periphrastic construction with ‘BE + past participle’ with intransitive verbs mainly encodes telicity (lexical aspect), as in the following examples, cf. OHG Isidor V, 6:

- (17) *dher allero heilegono heilego druhtin nerrendeo Christ iu ist langhe*
the of_all holies holy Lord saviour Christ already is long
quhoman.

come.PST.PTCP

“the holiest of all holies, the saviour Lord Christ has already come for a long time.”

OHG Tatian 7, 1:

- (18) *After thiū thō argangana uuârun ahtu taga, [...]*

after these then passed were eight days

“After that, eight days had passed.”

OS *Heliand* 5823:

- (19) *hie ist astandan iu.*

he is risen already

“He has already risen [from the dead].”

OS *Heliand* 5834:

- (20) *iro drohtin uuas fan dode astandan.*

their Lord was from dead risen

“their Lord had risen from the dead.”

A later development leads to the grammaticalization of the BE-perfect as a tense form in constructions with atelic verbs, e.g. with the Vendlerian ‘activities’, as in Modern German:

- (21) *Elke ist gestern sehr schnell gelaufen.*
 Elke is yesterday very quickly run
 “Elke ran yesterday very quickly.”
- (22) *Wir sind im vergangenen Sommer viel gereist.*
 we are in last summer a_lot travelled
 “Last summer we travelled a lot.”

But this function has not been developed in Dutch, cf.

- (23) *Op vakantie heb ik veel gefietst.*
 in vacancies have I a_lot cycled
 “I have cycled a lot during my vacations.”

In the Upper German dialects, as well as in Austrian varieties of Modern German, the auxiliary *sein* “be” is also used instead of *haben* “have” and the past participle with intransitive durative (and hence atelic and imperfective) verbs like *sitzen* “sit”, *stehen* “stand”, *liegen* “lie”, cf.

- (24) *Wir sind gestern in der Gaststätte lange gesessen.*
 we are yesterday in the pub long sat.
 “Yesterday we sat in the pub for a long time.”

In this way, we can register three basic types of the periphrastic perfect and pluperfect constructions which are distributed regionally in the West Germanic area, namely: (i) the HAVE-perfect area of insular West Germanic, i.e. English, (ii) the HAVE and BE-perfect area of Continental West Germanic, with the BE-perfect used with verbs characterized by at least one of the following features: intransitivity, unaccusativity (cf., among others, Abraham 1986), telicity, movement semantics, and (iii) the HAVE- and BE-perfect area of the southern West Germanic, with the BE-perfect used with verbs characterized by the features intransitivity and unaccusativity. The feature characteristics in question have to be understood as a scale of decreasing distinction.

However, transitivity does not play a role for the HAVE-perfect in German. Rather, in this case telicity must be especially prominent, cf.

- (25) *Schließlich sind wir ihn losgeworden.*
 in_the_end are we him got_rid_of
 “In the end we got rid of him.”
- (26) *Die Mitarbeiter sind die Papiere aufmerksam durchgegangen.*
 The staff_members are the documents attentively gone_through
 “The staff have studied all the documents attentively.”

4. Periphrastic constructions with perfective function in Gothic and their counterparts in Old Western Germanic languages

In Gothic there is no systemic opposition of simple verb forms and verbal periphrases in the active paradigms. There are only sporadically used forms with the verb *wisan* “be” and the past participle of telic intransitives, and only one attestation of the verb *haban* “have” with the past participle of a transitive verb in an obviously possessive reading, cf. Mark 1, 33:

- (27) *so baurgs alla garunnana was at daura.*
 this town all run_together.PST.PTCP was before gate
 “The whole town had run together (so as to be) in front of the gate.”

Luke 19, 20:

- (28) *frauja, sai sa skatts þeins, þanei habaida galagidana in fanin.*
 Lord, here this treasure your REL had.1SG laid in cloth
 “Sir, here is your mina; I have kept it laid away in a piece of cloth.” (NLT)

Many more overlaps between East (Gothic) and West Germanic can be observed with respect to periphrastic passive constructions. It is generally difficult to determine the degree of grammaticalisation. However, Gothic passive periphrases with *wisan* “be” and *wairþan* “become” are used in an opposition ‘telic’ vs. ‘atelic’ that comes close to one of ‘perfectivity’ vs. ‘imperfectivity’ to ‘telicity’ vs. ‘atelicity’. In the case of *wairþan* plus past participle, the feature ‘transformativity’, and hence telicity, must be present (cf. Guchman 1964; Abraham 1987), cf. Matthew 10, 26:

- (29) *ni waiht auk ist gahulip, þatei ni andhuljaidau.*
 no thing also is hidden which not uncover.PRS.MP.OPT.3SG
 “[...] for there is nothing concealed that will not be disclosed, or hidden that will not be made known.” (NLT)

Luke 9, 22:

- (30) [...] *þatei skal sunus mans manag winnan jah uskusans fram*
 that must son man.GEN a_lot suffer and thrown_away by
sinistam wairþan.
 elders become
 “The Son of Man must suffer many things and be rejected by the elders.”

1. Cor 1, 13:

- (31) *ibai [...] in namin Pawlus daupidai weseip?*
 if in name.DAT Paul baptised be.PST.OPT.2SG
 “were you baptised in the name of Paul?”

Mark 1, 14:

- (32) *ip afar þatei atgibans warþ Iohannes [...]*
 and after this delivered became John
 “after John was delivered [...]”

While the construction with *wairþan* always has a transformative and, hence, telic reading, the reading of the construction with *wisan* generally depends on the aspectual semantics of the main verb and is hence unmarked. In neutral contexts, the reading of the *wisan*-periphrases depends on the context, like in (31) earlier ‘were baptised’ vs. ‘were being baptised’.

This rule is universal for all the older Germanic languages because the passive constructions in question were not auxiliary constructions in their modern sense, but rather syntactic constructions in which the inflected verb maintains its original semantics, which in the case of *wairþan* is always transformative and telic. The distinction in Modern English is very like that of Gothic. Thus, *At the age of ten he was baptised* has in principle two readings: (1) ‘His baptism took place when he was ten years old’ and (2) ‘By the age of ten he had been baptised’.

In the case of *wisan* we are dealing with an unmarked construction. The aspectual reading of the overall construction derives solely from the main verb that appears as the past participle, with the aspectual meaning of the verb *wisan* itself neutralized.

A comparable situation is typical of Old English, Old Saxon and Old High German, cf. OE Alfred the Great, *Pastoral Care* (*Cura (Regula) Pastoralis*), 9th century 40, 291, 9:

- (33) *Ne bið se no gefylled ðæs Halgan Gæsdæses se ðe [...]*
 not is that never filled the Holy Ghost.GEN that which
forlæt ðone wielm ryhtwislices andan
 forsakes the fervour righteous zeal.GEN
 “He is not filled with the Holy Ghost who abandons the fervour of righteous zeal.”

OE Ælfric *Lives of Saints*, 10th century 20, 113 (the state of ‘being healed’ is denoted):

- (34) *Þær wæron gehælede þurh ða halgan femnan fela adlige men.*
 there were healed through the holy maiden many ill men
 “There many ill men were healed by the holy maiden.”

OE Ælfric's *Lives of Saints* 21, 132 (the transformation from ‘being ill’ to ‘becoming healthy’ at a concrete place is denoted):

- (35) *Þær wurdon gehæled eæt ðære halgan byrgene eahta untrume men.*
 there became healed at the holy tomb eight unsound men
 “There at the holy tomb eight ill men were healed.”

OS *Heliand* 160, 6–7:

- (36) *fan huilicumu kunnie Krist afodid uuas.*
 from what people Christ originated was
 “to which people Christ belonged.”

OS *Heliand* 106, 6:

- (37) *that uuirdit im is al gilonot.*
 that becomes him it all paid_back.
 “all that will be paid back to him.”

OS *Heliand* 73, 9–10:

- (38) *uuard that corn farloren.*
 became the corn lost.
 “the corn was lost.”

OHG Tatian 3, 3:

- (39) *Thô siu thi u gisah, uuas gitruobit in sinemo uuorte.*
 when she this saw was saddened in his word.DAT
 “When she saw that, she became saddened by his words.”

OHG Tatian 7, 4:

- (40) *Sênonu thô uuas man in Hierusalêm, thes namo uuas gihêzzan*
 at_that_time then was man in Jerusalem whose name was named
Simeon [stative, atelic]
Simeon
 “At that time a man lived in Jerusalem, whose name was Simeon.”

OHG Otfrid 4, 4, 9:

- (41) *Thar wîrdit fon iu fûntan ein éselin gibûntan.*
 there becomes through you found a donkey tied
 “There will be found by you a tied donkey.”

OHG Tatian, 81, 2:

- (42) *Inti sie [...] gitruobte vvurdun.*
 and they saddened become.PST.3PL
 “And they were saddened.”

OHG Tatian 62, 9:

- (43) *Fon themo uuahsamen thie boum uuirdit furstantan.*
 from the fruit the tree becomes understood
 “The tree will be recognised by its fruit.”

The last example, (43), differs from all the previous ones, since due to its gnomic sense it contains the meaning of habituality, which belongs to the sphere of imperfectivity/atelicity. The mechanism of this change resides in the essential possibility of almost every telic verb to be read in specific contexts as multiple (repeated) processes or activities. Each phase of the activity or process in question is resultative and/or triggers transformation (as in the case of *werden*), but its repetition implies iterativity which belongs to the categorial field of imperfectivity. The next step is the reinterpretation of a single iteration as an instance of ‘gnomic iterativity’, i.e. habituality. Thus, this new feature, which is absent both in OE and OS, implies a higher degree of auxiliariation of the verb *uuerdan* “to become” followed by the past participle in OHG in comparison to Gothic, but also to other West Germanic languages. This provides a sufficient explanation for the further grammaticalization of the construction *uuerdan* + past participle in the German passive. With the loss of transformativity (also called ‘mutativity’ in Germanic studies) and thus telicity as an obligatory marker of aspect, this construction inevitably becomes unmarked in a language like German, which lacks the category of aspect. It can be used without restriction as a marker of the passive.

In a further development the verb *weorðan* was lost in English, and this process was almost complete in Middle English. As a result, as far as the problem of perfectivity discussed here is concerned, the English passive has no additional means of marking perfectivity or telicity in comparison to the active paradigm. In German, on the contrary, the construction *werden* with the past participle has not only survived, but it has become the main grammatical exponent of passivity and it follows that in a language without grammaticalised aspect like German it has lost any aspectual features. On the other hand, though, constructions with *sein* “be” and the past participle of transitive verbs have not disappeared either. They have been moved into the periphery of the diathetic system and hence acquired a new aspectual markedness, namely the feature of perfectivity, as will be shown in the next short section. However, one must stress that the German construction *sein* + past participle which is often called *Zustandspassiv* (i.e. passive of state) in grammar books of the contemporary German language is in actual fact not a real passive periphrasis, but rather a syntactic construction with the copula *sein* “be” and the past perfect complement denoting an inactive state. Though the feature ‘inactive’ holds it in the categorial sphere of inactivity which is opposite to activity (and, thus, to active forms), it cannot be treated as a part of the privative opposition between the active and the *werden*-Passive, cf. examples like *Die Blüten sind noch geschlossen* (“The blossoms are closed yet”) which does not imply an anterior activity or process, or *Das Fenster ist ungeöffnet* (“The window is unopened”) vs. **Das Fenster wurde ungeöffnet* (“*The window became unopened”).

5. A remark on Modern German passive constructions

Though Modern German does not possess the grammatical category of aspect in active voice, the totality of its inactive constructions can be divided into the two following groups:

- aspectually unmarked (passive with *werden* “become”):

(44) *Das Buch wird/wurde gesucht/gefunden.*
 the book becomes/became looked_for/found.
 “The book is/was (being) looked for // is/was found.”

(45) *Das Tor wird/wurde geöffnet.*
 the gate becomes/became opened
 “The door is / was (being) opened.”

- aspectually marked – perfective (inactive with *sein* “be”):

(46) *Das Buch ist/war *gesucht/gefunden.*
 the book is/was looked_for/found.
 “The book is / was (being) looked for // is / was found.”

(47) *Das Tor ist/war geöffnet.*
 the gate is/was opened
 “The door is/was opened.”

The feature of perfectivity can, however, be neutralised in phrases with the meaning of a general state which does not necessarily presuppose that the denoted state is a result of an anterior process/activity. On the other hand, perfectivity is an obligatory attribute in cases when it can be theoretically presumed, so that e.g. *durativa tantum* cannot form sentences with *sein* “to be” + past participle, cf. the examples above.

In comparison with German, the difference between the resultative construction and the passive construction in English becomes apparent, when exemplified as follows by George Curme (1931: 445f.):

(48) *The door was shut at six when I went by, but I do not know when it was shut.*
 “Die Tür war geschlossen um sechs, als ich vorbeiging, aber ich weiß nicht, wann sie geschlossen wurde.”

6. Conclusion

The opposition between simple verbs and those prefixed with *ga-* in Gothic has several features of a Slavic-style aspect, although it is not easy to distinguish between grammaticalized ‘viewpoint aspect’ and so called ‘lexical aspect’ (telicity vs. atelicity). All the same, the degree of grammaticalization of this opposition is

definitely higher than in early West Germanic. Apart from the prefix *ga-*, Gothic has no other means of expressing perfectivity in the active voice, though the passive voice possesses aspectually marked periphrastic constructions in the form of an opposition between the aspectually neutral periphrasis with *wisan* and the past participle vs. the perfective (telic-mutative) periphrasis *wairþan* + past participle. In the early West Germanic languages, i.e. Old High German, Old Saxon and Old English, the perfective function, which can be perceived mostly in terms of lexical aspect (telicity), was originally encoded by the grammaticalized possessive construction with the auxiliary verb ‘have’ with the past participle, as well as the construction with *BE* and the past participle, both for the active voice. Both these constructions were further reanalysed as periphrastic tense forms. In English, only the *HAVE*-periphrases remained, whereas in Standard German both constructions have survived. The second one is marked everywhere, but its markedness is weaker in southern German in comparison to other areas of German or Dutch. Aspectual features are more distinct in the passive voice than the active. The auxiliarisation of ‘to be’ is typical of English and Dutch, whereas ‘to become’, which was present in all the Old West Germanic languages, has disappeared in English. In German, conversely, the *BE* verb has been shifted into the periphery of the auxiliary system, whereas ‘become’ has moved into its centre. In this way it has lost the ability to mark (perfective-telic) aspect, which has survived in the case of the *BE*-passive, whereas the latter is not distinguished in Modern English. Thus, in German the auxiliary selection in resultative constructions of both transitive verbs (the so called *Zustandspassiv*) and intransitive verbs (within the perfect periphrasis) is identical: both periphrases select *sein* ‘to be’, whereas in English the first ones select *BE* and the latter ones select *HAVE*.

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The perfect system in Ancient Greek

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The present paper surveys the diachronic development of the Ancient Greek perfect in four periods: Mycenaean, Archaic, Classical and post-Classical. At each stage the semantic evaluation of perfect is assessed in the context of the semantics of its predicate. While generally confirming the standard picture of increasing anteriority and past reference in the perfect correlating with greater numbers of verbs able to form perfects, the present study contributes empirical data to support this assertion. The article traces the growing paradigmatisation of the perfect form throughout its history. However, this development is not linear. Instead in the post-Classical language we witness a bifurcation along diglossic lines, with the literary language remaining much more conservative in terms of the perfect's semantic range, while in lower-register material the perfect increasingly competes with the aorist to denote perfective semantics.

Keywords: perfect, anterior, event and argument structure, lexical aspect, resultative

1. Introduction

1.1 Morphology

Ancient Greek attests three tenses of the perfect: past (known as the 'pluperfect'), present (known as the 'perfect') and future (known as the 'future perfect'). The last of these is only attested in non-active formations, and is very rare. Accordingly, it will not be addressed here. The pluperfect serves in principle as the past of the perfect, that is, it sets the topic time¹ of the sentence prior to utterance time. Past tense is marked by the augment *e-*, which is prefixed to the reduplicated stem, and is also seen in the aorist and imperfect with the same signification. The pluperfect will not be treated separately in this analysis, since the semantics of the perfect

1. For the term, see Klein (1992), equivalent to 'reference time' in other works.

Table 1. Perfect indicative, infinitive and participle formations

	Person	SG	PL
IND.ACT	1	<i>lé-loip-a</i>	<i>le-loip-amen</i>
	2	<i>lé-loip-as</i>	<i>le-loip-ate</i>
	3	<i>lé-loip-e(n)</i>	<i>le-loip-asi(n)</i>
IND.NACT	1	<i>lé-leim-mai</i>	<i>le-leim-met^ha</i>
	2	<i>lé-leip-sai</i>	<i>lé-leip^h-t^he</i>
	3	<i>lé-leip-tai</i>	<i>le-leip-atai</i> <i>le-leim-ménoi eisi(n)</i>
INF.ACT		<i>le-loip-énai</i>	
INF.NACT		<i>le-leip^h-t^hai</i>	
PTCP.ACT.NOM.M.SG		<i>le-loip-ôs</i>	
PTCP.NACT.NOM.M.SG		<i>le-leim-ménos</i>	

as a category are transparent from the perfect and pluperfect together, once the difference in topic time is taken into account.

The Proto-Indo-European verbal adjective in **-tos* is present in Greek. However, it is not integrated into the verb system, and therefore falls outside of the scope of the present study.

Ancient Greek attests a number of periphrastic constructions with *eimí* “be” and *ék^hō* “have”, whose place within the verb system is a matter of debate. These will not be discussed here, but they are discussed in connection with medieval and modern Greek (see Horrocks, this volume). For a full treatment, the reader is directed to Bentein (2016).

The most common terminations of the perfect in Ancient Greek, formed to the verb *leípō* “leave”, are given in Table 1.²

1.2 Periodisation

Ancient Greek may be divided into the following periods:

- Mycenaean (1400–1200 BCE; cf. Ferrara 2010: 11)
- Archaic (covering the epic poems of Homer, written down after the reintroduction of writing in C8/7th BCE, but stemming from a much older tradition of oral poetry going back into the Bronze Age; cf. Horrocks 2010: 44–49)

2. Based on information from Smyth (1920) and the TLG. Not all forms are necessarily directly attested. For full details of the morphological characteristics of the Archaic Greek perfect, see Willi (2018).

- Classical (C5th – C4th BCE; cf. Bentein 2016: 6)
- Post-Classical (C3rd BCE – C6th CE; cf. Bentein 2016: 6)³

The perfect is attested at each stage, and the purpose of this chapter is to trace the development of the syntax and semantics of the form through each of these stages.

1.3 The problem of the semantics of the Greek perfect

The Ancient Greek perfect, in all varieties and periods, except the documentary material, is striking for its apparent combination of pure state, resultative and anterior semantics in a single form, albeit that the difference is for the most part lexically determined. Thus compare the following forms from the *Iliad*:⁴

- (1) *taût' ainôs deídoika katà p^hréna, mē*
 DEM.ACC.N.PL terribly fear.PRF.IND.ACT.1SG in heart.ACC.SG NEG
 “I **have** this terrible **fear** in my heart, that [the gods carry out this man’s threats]”
 (Il. 9.244, text Monro & Allen 1920)
- (2) “So Hector picked up the stone and carried it straight against the timbers
haí r^ha púlas eírunto púka stibarôs
 REL.NOM.F.PL PTCL gate.F.ACC.PL defend.1PRF.IND.NACT.3PL solidly strongly
araruías
 join.PRF.PTCP.ACT.F.ACC.PL
 that solidly defended the firmly **fitted** gates”
 (Il. 12.453–4, text Monro & Allen 1920)
- (3) *tó s' aú nún oíō*
 PTCL PRON.F.ACC.SG again now think.PRS.IND.ACT.1SG
apotisémen hóssa m' éorgas.
 pay_back.AOR.INF.ACT REL.ACC.N.PL PRON.ACC.1SG do.PRF.IND.ACT.2SG
 “So now I am minded to pay you back for all **you have done** to me”
 (Il. 21.399, text Monro & Allen 1920, translation based on Lattimore 1951)

3. I treat the post-Classical period as one. For a more fine-grained approach, at least for periphrastic constructions, see Bentein (2016) who divides post-Classical Greek into early, middle and late periods.

4. Texts and translations used are given in the references section. Texts were provided digitally by the *Perseus Digital Library* (<https://www.perseus.tufts.edu/hopper/>), the TLG (<https://stephanus.tlg.uci.edu/>), the *Chicago Homer* (<http://homer.library.northwestern.edu/>), the *Loeb Classical Library* (<https://www.loebclassics.com/>) and <https://www.papyri.info>, accessed between June 2017 and October 2018. Where not cited, translations are my own. Examples were found using my own Microsoft Access database, for more details of which see n. 18 below.

On the one hand, (1) describes a present state for the speaker, while (3) clearly has anterior reference. Finally, the perfect in (2) describes the state at topic time resulting from an event finishing prior to reference, or topic, time.

In the earliest stages of Greek, the perfect is taken to denote the state of the syntactic subject, often but not always that resulting from an event completing prior to topic time (e.g. Haug 2004: 393–394; Gerö & von Stechow 2003: 268–270).⁵ In the Classical period the perfect is generally held to move towards prototypically denoting the state of the object (cf. the foundational studies of Wackernagel 1904 and Chantraine 1927), a shift which is accompanied by a concomitant move towards greater anteriority (cf. Gerö & von Stechow 2003: 268–270) and an increase in the number of lexical verbs which may form perfects. This is seen in turn as the necessary prerequisite for ‘aoristic’ perfects to emerge in lower register documents of the later Koine period (cf. Berrettoni 1972: 163), although other accounts have been given of the mechanism for the development (cf. Crellin 2016a; Haug 2004; Speyer 2003; Gerö & von Stechow 2003). As an example of the ‘aoristic’ use of the perfect, consider:

- (4) “Having found [AOR.PTCP.ACT.M.SG] a pearl of great value
apelt^hōn *pépraken* *pánta* *hósa*
 depart.AOR.PTCP.ACT.NOM.M.SG sell.PRF.IND.ACT.3SG all.ACC.N.PL REL.N.PL
eík^hen *kai* *ēgórasen* *autón*.
 have.IPRF.IND.ACT.3SG and buy.AOR.IND.ACT.3SG PRON.ACC.M.3SG
 he left, sold all he had and bought it.” (Matt. 13.46, text NA28)

That there is truth to this picture of the development is indicated by the undeniable increase in the number of verbs with perfect active stems in the Classical period, by the undoubted appearance of ‘aoristic’ perfects, and by the eventual demise of the perfect stem itself, whose function was for many centuries carried out by the aorist, before the eventual resurrection of the category in the medieval period (for which see Horrocks, this volume). However, we will see that the picture is more nuanced, with some surprising productivity of resultative readings in the literary post-Classical language. Not only this, but we will see that the key semantic developments necessary for the later expansion of the perfect are already in place in Homeric Greek.

5. For the view that the perfect in later stages of Greek has this denotation, see McKay (1965). Cf. also Olsen (1994) and references there.

2. Theoretical preliminaries

2.1 Homogeneity, state and change-of-state

For the purposes of this study, we will distinguish three main classes of eventuality: homogeneous, change-of-state (COS) and non-homogeneous non-change-of-state (NH NCOS). A homogeneous eventuality is one that may be infinitely subdivided into subeventualities of the same kind as the larger eventuality of which they are a part (for the term, see e.g. Tenny & Pustejovsky 2000 and Mourelatos 1978). States, such as ‘being red’, or ‘sitting’, are homogeneous because each instance of a state is also a state with the same description as the larger eventuality of which it is a part. By contrast, ‘building’ is non-homogeneous, since each instance of a building event may not necessarily be regarded as also comprising a building event: it might be a sawing event or another kind of event that may not in and of itself be regarded as a building event. Activities, such as swimming, which are cyclical in nature may be regarded as homogeneous down to a certain level of granularity (Ramchand 1997: 123–124), but for these purposes I am interested only in the ‘strong’ form of homogeneity.

A change of state, such as ‘water freezing’, is also as a whole non-homogeneous, insofar as it may, following Rappaport Hovav & Levin (1998: 104f.) and Kiparsky (2002: 115), be thought to consist of two subeventualities, an event of change, in this case going from water to ice, and a post-state, being in a frozen state, neither of which of themselves may be thought of as a change-of-state event of freezing. Note, however, that the post-state is homogeneous, insofar as it is a state. We will see that COS eventualities, in terms of the construal of the Greek perfect’s tense-aspect semantics, often behave like their stative counterparts.

2.2 Target (T) and Result (R) states

Important for discussion of the semantics of the Ancient Greek perfect has been Parsons’ (1990) introduction of the distinction between Target (T) and Result (R) states. These two different states refer to the post-situation described by a given predicate’s event schema. Parsons’ T-state refers to a change of state. Thus in an event of ‘freezing’, or ‘going to the cinema’, the relevant T-states are ‘being frozen’ and ‘being at the cinema’ respectively. By contrast, Parsons’ R-states are states which are not prescribed by a given predicate *per se* but which are a logical consequence of it. Thus in an event of ‘walking’, without stated goal, there is no T-state, but there is an R-state which follows once this event has terminated, namely ‘having walked’. However, this ‘state’ has a different character, since it is more abstract and derived from the semantics of the predicate, rather than defined by it. In event

structural terms R- and T-states have the same properties: both are homogeneous and atelic. The difference lies in the level of abstraction from the semantics of the predicate, so that T-states are defined by the predicate itself, while R-states are derived secondarily.

One may furthermore distinguish different kinds of state for different participants in a given eventuality. This is important in the case of two-place predicates where the post-situation of the different participants is likely to be different. Thus in an event of ‘making a chair’, the chair enters the state of ‘having been made’, a T-state. By contrast, there is no T-state for the subject in this case. Rather, one may only derive an R-state, namely that of ‘having made a chair’, for the subject.

2.3 Internal and external arguments

We will see that critical for the interpretation of the Greek perfect is whether or not the subject can describe an entity which has entered a state or not. Consequently, Williams’ (1981) distinction between internal and external arguments will be important. The external argument is the argument which is “outside the maximal projection of the verb” (Tenny 1994: 9) and always becomes the syntactic subject if present. By contrast, the internal argument is governed by the verb at D-structure, and receives its thematic role from it (Tenny 1994: 9).

In COS eventualities, it is the internal argument which undergoes change. In unaccusative predicates this internal argument is realised as subject by default. In addition, through the causative alternation, the internal argument of causative COS predicates may be realised as subject if the external argument is not provided. Thus it is possible to say in English both ‘I froze the water’, and ‘The water froze’. The internal argument in such cases may be referred to as an ‘internal causer’, that is, an internal argument actively involved, to some degree, in bringing about the final state. The internal causer may be distinguished from a patient, which only undergoes the action of the predicate, without contributing anything itself.

Telic non-homogeneous non-change-of-state events, such as ‘building a house’, have an event structure which is in some ways parallel to change-of-state eventualities, insofar as the house at the end of such an event has entered a state of existence. Crucially, however, as we will see, the perfect active in Greek cannot realise the internal argument of such predicates as subject, whereas the non-active may.⁶

6. For a fuller discussion of these phenomena in the context of the Greek perfect, see Crellin (2016b).

3. Mycenaean

The earliest directly attested Greek is that found in the corpus of Mycenaean documents, written in a very archaic variety of Greek on clay tablets dating from the second half of the second millennium BCE. However, the contribution that Mycenaean is able to make to our understanding of the verb system is necessarily limited owing to the nature of the material, consisting as it does largely of economic material such as lists of agricultural produce in which (indicative) verbs are something of a rarity. For this reason the number of tokens is very limited, numbering only thirty three perfects (Bartoněk 2003: 336), of which a maximum of four are indicatives, the rest being participles.⁷

The Mycenaean perfect attests two sets of terminations, which equate to the active and non-active forms of later periods. Consider the following text, where active and non-active terminations occur alongside one another. The following text includes both perfect active and non-active perfect participles describing a chariot:⁸

- (5) *i-qi-jo* *a-ja-me-no* *e-re-pa-te*
 horse-chariot.NOM.DU inlay.PRF.PTCP.NACT.NOM.DU ivory.DAT.SG
a-ra-ṛo-mo-te-me-no *po-ni-ki[-jo]* | *a-ra-ru-ja*
 assemble.PRF.PTCP.NACT.NOM.DU red.NOM.DU fit.PRF.PTCP.ACT.NOM.PL
a-ni-ja-pi *wi-ri-ni-jo* *o-po-qo* *ke-ra-ja-pi* *o-pi-i-ja-pi*
 rein.INS.PL leathern.INS.PL cheek_straps.INS.PL horn.INS.PL bit.INS.PL
 “[Two] horse-(chariots without wheels) **inlaid** with ivory, (fully) **assembled**,
 (painted) crimson, **equipped** with bridles with leather cheek-straps (and) horn
 bits” (KN Sd 4401, text & translation based on Chadwick et al. 1990)

It is immediately striking that despite the difference in morphology, both ‘active’ and ‘non-active’ forms describe resultant states from events completing prior to reference / topic time and are intransitive. Furthermore, no transitive examples of the perfect active are attested in the Mycenaean corpus, and there are no active ~ non-active oppositions in the same verb. From the perspective of later Greek, the ‘active’ formations are detransitivising. Thus, *a-ra-ru-ja* is the perfect of the verb which in later Greek is attested in the present form as *ararískō*, meaning ‘fit, equip’, and is in active formations transitive.

7. For a full survey of the perfect in Mycenaean Greek, see Chantraine (1967).

8. Following convention Mycenaean texts are here given in transcription and are not normalised. Hyphens indicate division of characters in the Linear B script. The order of the lines of the text has been normalised.

The indicative only attests non-active forms, but where it occurs, it also describes resultant state. The following example is of the perfect non-active indicative, very clearly passive in sense, from the verb *epidatéomai* “distribute”:

- (6) *o-a₂ e-pi-de-da-to* | *pa-ra-we-wo wo-no*
 thus distribute.PRF.IND.NACT.3SG of_Pa-ra-we- wine.NOM.SG
 “Thus the wine of *Pa-ra-we-* is / **has been distributed**”
 (PY Vn 20, text & translation Chadwick 1973)

There then follows a list of places where the wine has been distributed. It is unclear to what extent the prior event of distribution is directly related to topic time by the perfect in this example.

The two verbs attested in the perfect with active terminations but detransitivising sense in Mycenaean are also attested in the same set of terminations with detransitivising sense in later varieties of Greek. Since in later Greek the perfect active detransitivises certain causative change-of-state predicates, it is very possible that the same underlying rationale applies in Mycenaean. There is, however, insufficient data to be sure.

4. Archaic Greek

4.1 State and other homogeneous predicates

The active perfect is used to describe a state of the subject. It is frequently so used in the case of one-place mental state verbs:

- (7) “Just as arrow-shedding Artemis comes down from the mountain [...] and, along with her, nymphs [...] haunt the fields in play,
gégēthē *dé te p^hréna* *Lētō*
 rejoice.PRF.IND.ACT.3SG PTCL PTCL heart.ACC.SG Leto.NOM.SG
 and Leto **rejoices** at heart [as she holds [*ék^hei* hold.PRS.IND.ACT.3SG] her head ... above them all]”
 (*Od.* 6.106, text Murray 1919, translation Huddleston 2006)

However, this treatment is not dependent on the predicate describing a state *per se*, but rather that the predicate describes a homogeneous eventuality. It is in this context that the present time reading of the perfect of noise predicates is to be understood, e.g.:⁹

9. Cf. Chantraine (1927: 16–17), who attributes stative value to noise predicates headed by the perfect (cf. Berrettoni 1972: 26, 30–31, 147–148), and Gerö & von Stechow (2003: 266–267) for a relatively recent expression of the analysis of the perfect in these verbs, and some others, as

- (8) “Not even a lusty man could shoot an arrow with a bow from his hollow ship and reach into the hollow cave

ént^ha d’ enì Skúllē naíei deinòn
there PTCL in Scylla.NOM.F.SG live.PRS.IND.ACT.3SG terrible.ACC.N.SG

lelakuía

howl.PRF.PTCP.ACT.NOM.F.SG

Scylla lives in there, **howling terribly**.”

(*Od.* 12.85, text Murray 1919, translation Huddleston 2006)

The presence of a direct object does not automatically lead to a change in the semantics of the perfect, if the object does not alter the homogeneity of the predicate. Thus two-place state predicates in the perfect retain the same argument structure as if they were headed by non-perfect forms. Consider the following examples from $\sqrt{\text{keut}^h}$ “hide”:

- (9) “For as I detest the doorways of Death, I detest that man,

hòs k^h, héteron mèn keút^hēi enì

REL.NOM.M.SG PTCL one_of_two.ACC.M.SG PTCL hide.PRS.SBJV.ACT.3SG in

p^hresin, állo dè eípēi.

heart.DAT.PL other.ACC.N.SG PTCL say.AOR.SBJV.ACT.3SG

who **hides** one thing in the depths of his heart, and speaks forth another.”

(*Il.* 9.312–13, text Monro & Allen 1920, translation Lattimore 1951)

- (10) “But come now, go straight to Nestor, the tamer of horses.

eídomen hēn tina mētin ení

see.PRF.SBJV.ACT.1PL REL.ACC.F.SG INDEF.ACC.SG counsel.ACC.F.SG in

stēt^hessi kékeut^he.

chest.DAT.N.PL hide.PRF.IND.ACT.3SG

We want to know what counsel **he keeps hidden** in his heart” (*Od.* 3.17–18, text Murray 1919, translation based on suggestions from S. Schumacher, p.c.)

4.2 Change-of-state predicates (non-causative)

In Greek the perfect of predicates describing changes of state demonstrates particular behaviour. First we address the perfect of one-place change-of-state (COS) predicates. These simply predicate the post-state described by the predicate of the subject. Resultative, as opposed to pure state, implicatures are often hard to discern:

carrying intensive value. For the suggestion that perfects heading such predicates are not to be seen as original perfects, and references, see Willi (2018: 238–239). Against this Willi points out that these perfects have normal reduplication for perfects, and have the perfect terminations, which are synchronically idiosyncratic.

- (11) *hōs heik' ek díphroio kek'ēnóta*
 so haul.IPRF.IND.ACT.3SG from chariot.GEN.M.SG gape.PRF.PTCP.M.ACC.SG
douri p^haeinōi
 spear.DAT.N.SG bright.DAT.N.SG
 "So he hauled him, (mouth) **open** to the bright spear, out of the chariot"
 (Il. 16.409, text Monro & Allen 1920, translation based on Lattimore 1951)

As with state verbs, the mere presence of a direct object does not change the reading. As long as the subject of the active construction changes state, the perfect always describes the final state of that participant, often without any apparent reference to the event of change that brought about that state. Let us consider in this regard *oída* "know" from $\sqrt{\text{weid}}$.

This verb's paradigm has been analysed as splitting at the pre-Greek stage (Kölligan 2007: 281). This is first on semantic grounds, as it apparently evinces a different sense from the aorist of the same root, viz. "know" as opposed to "see". Secondly, it has no paradigmatic present. Indeed, unlike all other perfects, it lacks reduplication.¹⁰

Nevertheless, there is evidence that at least in Homer the senses may not have fully diverged: if the root originally meant something like "come to perceive", whether by physical or mental perception, the semantics of the perfect could be viewed as simply providing the post-state of the predicate, albeit restricted to metaphorical 'seeing', that is, with the mind. Compare the following two examples involving the perfect and the aorist respectively:

- (12) "But come, he must also taste the point of our spear
óp^hra idōmai eni p^hresin
 in_order_that perceive.AOR.SBJV.NACT.1SG in mind.DAT.PL
 that I **may perceive** in mind [and learn whether in like manner he will return from their, or the life-producing earth will detain him]"
 (Il. 21.60–61, text Monro & Allen 1920)
- (13) *eú gâr dē tódē idmen eni p^hresin,*
 well PTCL PTCL DEM.ACC.N.SG perceive.PRF.IND.ACT.1PL in mind.DAT.PL
estē dē pántes márturoi
 be.PRS.2PL PTCL all.NOM.PL witness.NOM.PL
 "For we **know** well in our minds, and you are all witnesses"
 (Il. 2.301–302, text Monro & Allen 1920)

10. For a recent form-function analysis of the lack of reduplication in this verb based on an original paradigm without an augment with imperfective semantics, see Willi (2018: 250–252).

In (12) it is clear that *idōmai* refers to mental perception, made explicit by the modification *enì p^hresin* ‘in mind’. Suggestive of the aorist and perfect being seen as part of the same paradigm is that fact that this adverbial phrase is paralleled in (13). While, therefore, the perfect *oída* is often treated as exceptional, there may be only a limited need to do so, viz. in respect of the semantic specialisation to a metaphorical sense, and, of course, the lack of augment. The tense-aspect semantics and interaction with argument structure are entirely as would be expected.

4.3 Causative COS predicates

Causative COS predicates demonstrate idiosyncratic interactions with a predicate’s argument structure. Specifically, active forms outside of the perfect head transitive two-place predicates, while perfect active forms head one-place predicates with the causer participant deleted and internal argument, i.e. undergoer of change, raised to subject position. This is to say that the perfect demonstrates lability with respect to other active forms in the verb system.

As an example, consider the following contrast of the present and perfect from **√welp* ‘hope, cause to hope’:¹¹

- (14) *pántas mén r^h élpei*
 all.ACC.M.PL PTCL PTCL make_hope.PRS.IND.ACT.3SG
 “She causes all to hope” (Od. 2.91, text Murray 1919)

- (15) *nún dè nôi g’ éolpa* [...] [
 now PTCL PRON.ACC.1DU PTCL make_hope.PRF.IND.ACT.1SG
oísest^h ai méga kúdos Ak^haioísi
 carry.FUT.INF.NACT great.ACC.N.SG glory.ACC.N.SG Achaean.DAT.M.PL
proti néas
 to ship.ACC.F.PL
 “I have hope now [...] that we two at least will bring back to the ships great glory for the Achaeans” (Il. 22.216–217, text Monro & Allen 1920)

Notice how in each case the perfect stem appears to carry little if any reference to the event of change. Although predicates describing the acquisition of a mental state are prominent in this group, it is not restricted to them. We see the same characteristics, for example, in perfects from the roots **√steH₂* ‘stand, make to stand’ and **√H₂er* ‘(cause to) fit together’:

11. For an example of the pluperfect with the same semantics, *mutatis mutandis*, see e.g. Il. 19.328.

- (16) *en dè pít^hoi oínoio [...] héstasan [...]*
 in PTCL jar.NOM.PL wine.GEN.SG set_up.PRF.PST.IND.ACT.3PL
exeíēs potì toík^hon arērótes
 in_order against wall.ACC.SG fit.PRF.PTCP.ACT.NOM.PL
 “There, too, **stood** great jars of wine [...] **ranged** in order along the wall”
 (Od. 2.340–342, text & translation Murray 1919)

Finally, in extent predicates, there need be no indication of any prior event. Indeed, such an interpretation is often impossible. Consider the following example involving the perfect active of *anatrék^hō* ‘run up’, where similarly there can be no presupposition of a prior event:

- (17) “Round the whole (of Aeolus’ floating island) is an impregnable bronze wall,
lissè d’ anadédrome pétrē.
 sheer.NOM.F.SG PTCL run_up.PRF.IND.ACT.3SG rock.NOM.F.SG
 and a sheer rock **runs up**.” (Od. 10.3–4, text Murray 1919)

Similar examples can be found in the literary post-Classical material (for which see §6.2).

The lack of event implication has been analysed under an extent predicate framework.¹² According to this view, all predicates may be understood at a very general level to be predicates of space-time, with the semantics of the elements involved ultimately determining whether the predicate is one of space or time alone, or both. Accordingly, the perfect in (17) may be understood to presuppose a spatial ‘eventuality’, with all the entailments inherent in the perfect’s semantics preserved, namely that the subject exists at or beyond the terminal point of an eventuality schema, in this case such that the sheer rock traces a path to a high place, but without any entailment that that situation is predicated on an event terminating prior to topic time.

4.4 Two-place verbs introducing non-homogeneous non-COS predicates

If the perfect in Homer denotes a past event, this is often seen as secondary to denoting the ensuing state (cf. Bentein 2016: 112 n. 30; Chantraine 1927: 13; Sicking & Stork 1996: 161). However, the perfect active of verbs introducing non-COS

12. For discussion of extent predicates in general, see Koontz-Garboden (2010) and references there. For application in the context of the literary post-Classical Greek material, see Crellin (2016b: 199–216). Nedjalkov & Jaxontov (1988: 14) refer to such constructions without implication of a prior event taking place as “quasi-resultatives”. These are discussed by Perel’muter in reference to Homeric Greek (1988: 285).

non-homogeneous two-place predicates can generally be seen to carry anterior denotation. Consider the following example, in addition to (3) above:¹³

- (18) “Father Zeus, will you be at all angry with me
aí ken Árēa | *ligrōs peplēguia*
 if PTCL Ares.ACC.SG banefully strike.PRF.PTCP.ACT.F.NOM.SG
mák^hēs exapodiōmai?
 battle.F.GEN.SG chase.AOR.SBJV.ACT.1SG
 if, when I have banefully struck Ares, I chase him out of the battle?”
 (Il. 5.762–3, text Monro & Allen 1920)

Here I take the verb *plēssō* “strike” to mean “hit so as to wound”. This eventuality is neither homogeneous, nor does it describe a change of state, but rather a situation which is predicated on a previous event. Anteriority in examples of this kind is generated through the interaction of the semantics of the perfect with those of the predicate in each case. The perfect then ascribes a homogeneous atelic eventuality to the subject following from the predicate, which in these cases is the very minimal eventualities of ‘being someone who struck Ares / did something’ respectively. It follows that the perfect characterises the subject in virtue of the event. In many cases this means that the perfect-headed predicate refers to a series of past acts, as in (3), since it is easier to characterise the subject if there are several events of the same kind to refer to. However, that this is not a requirement, and thus not part of the semantics of the perfect, is shown by the highly event-specific example in (18) (cf. differently Willi 2018: 228–231).

Predicates of this kind do not participate in the causative alternation because they do not engender a new state in the internal argument; it is only where the internal argument enters a new state that lability occurs. In these cases, to suppress the external argument and raise the internal argument to subject position, non-active morphology is used. Although oppositional active ~ non-active pairs are rare in Homer, it is attested for *√ed* “eat”:¹⁴

13. Examples like this are sometimes taken differently. For the view that the stem *peplēg-* should be analysed as having iterative semantics, see McKay (1965: 1), Wackernagel (1904: 5), and Tichy (1983: 66, 71), who discusses this example. Chantraine (1927: 14–15), cf. McKay (1965: 1), sees here a contamination with the aorist system. Willi (2018: 216–217), however, takes the perfect participate from this root as a perfect. The existence in general of perfects with anterior denotation in Homer is sometimes minimised, e.g. Gerö & von Stechow (2003: 268, 270–271). However, for their existence see Kümmel (2000: 73–74), Bentein (2016: 111–112) and Berrettoni (1972: 158–159). For an Extended Now analysis of perfects of this kind, although applied in the context of Classical, Hellenistic and Greco-Roman Greek, see Gerö & von Stechow (2003: 274–283).

14. Greek *√ed* “eat” is sometimes taken as heading a COS predicate when construed with an object that changes, so that the perfect would come to mean something like ‘be satiated (as to something)’.

- (19) “he himself went up [on the chariot] bloody as to his feet and hands above
hós tís te léōn katà taúron
 as INDF.NOM.SG PTCL lion.NOM.SG completely bull.ACC.SG
edēdós.
 eat.PRF.PTCP.ACT.NOM.SG
 just as a lion which **has devoured** a bull.” (Il. 17.542, text Monro & Allen 1920)
- (20) “Then after this we, making amends throughout the land,
hóssa toi ekpépotai kai edédotai
 REL.N.PL PTCL drink.PRF.IND.NACT.3SG CONJ eat.PRF.IND.NACT.3SG
en megároisi
 in place.DAT.PL
 for whatever **has been eaten** and drunk in the palace”
 (Od. 22.56, text Murray 1919)

Parallel is the following pair of examples involving the pluperfect active of *bállō*, again here with the meaning “strike, hit”:¹⁵

- (21) “Immediately he unwrapped [*esúla* strip_off.1PRF.IND.ACT.3SG] his bow, of the polished horn from a running wild goat which he himself had once shot [*tuk^hé^sas* hit.AOR.PTCP.NOM.SG] in the chest, as he had lain in wait [*dedegménos* await.PRF.PTCP.NACT.NOM.SG] in a covert as the goat stepped down [*ekbaínonta* come_down.PRS.PTCP.ACC.SG] from the rock and
beblēkei pròs stēthos
 throw.PRF.PST.IND.ACT.3SG towards chest.N.ACC.SG
had hit [it] in the chest” (Il. 4.105–8, text Monro & Allen 1920, translation based on Murray 1924–1925)
- (22) *béblētai mèn hò Tudeídēs*
 throw.PRF.IND.NACT.3SG PTCL ART.M.NOM.SG son_of_Tydeus.NOM.SG
krateròs Diomēdēs
 strong.NOM.SG Diomedes.NOM.SG
 “The son of Tydeus, strong Diomedes, **has been hit**”
 (Il. 11.660, text Monro & Allen 1920, translation based on Lattimore 1951)

It may logically be true that once one has eaten one may be sated. However, at least in these examples this is not linguistically relevant, and does not affect the tense-aspect interpretation, not least given the presence of an internal argument. Here anteriority in the perfect necessarily follows from the fact that the predicate describes an eventuality of change, viz. the progressive eating of the bull, so that the bull ends up being consumed, and the characterisation of the subject following this eventuality. On the active vs. middle distinction in Homer, see also now van Beek & Migliori (2019), which appeared too late for me to incorporate the findings into this account.

15. Although Haug (2008: 299) states that “[t]he combination of a middle perfect and an active pluperfect does not seem to occur”, these examples involving *bállō* seem to be a case of this. Chantaine (1927: 15–16) sees the pluperfect here as a contamination between aorist and perfect systems.

4.5 Semantics of the perfect in Archaic Greek

The interpretation of the tense-aspect semantics of the perfect in Archaic Greek in a given case bears a relationship to the event-structure semantics of the predicate introduced by it as well as its interactions with argument structure. In verbs heading homogeneous atelic predicates, the perfect simply derives another homogeneous atelic predicate from it. By contrast, in verbs heading change-of-state predicates, whether causative or not, the perfect describes the property of the subject as newly configured. This is to say that in causative COS predicates the perfect is detransitivising.

In verbs heading predicates not describing a change of configurational property of the subject, but rather some other event of change, the perfect active refers to this event and presents the subject as having arrived at whatever post-situation is laid out in the predicate's event schema. The perfect of two-place non-COS non-homogeneous predicates derives the predicate R-state and is read as anterior, that is, with the completed event as a whole presented as a property of the subject, but without any well-defined target state having been reached for the subject participant. In these predicates non-active morphology is required to suppress the external argument, allowing the predicate as a whole to express the target state of the internal argument and to be read resultative.

Notice that the Parsons T-state reading is primary: the perfect active of causative COS verbs is detransitivising because the internal argument can be realised as subject. Only when realisation of this participant as subject is blocked can the R-state reading arise. Furthermore, the perfect of atelic predicates apparently carries no reference to any event terminating prior to reference (or topic) time. This suggests the priority of pure-state readings of the perfect.¹⁶

In these terms, therefore, the semantics of the perfect in Archaic Greek poetry may be summarised as follows:¹⁷

The perfect derives a homogeneous atelic eventuality from a predicate, predicates this eventuality of the subject, and includes the eventuality in topic time.

We should note, however, that although the perfect is in theory compatible with a wide range of predicate types in Archaic Greek, the great majority of instances head state predicates. This may be seen from Table 2, which gives the top twenty perfect

16. For similar conclusions, see Crellin (2012: 279–295) and Willi (2018: 284).

17. For the mechanisms of derivation, including 'event realisation' (Bohnenmeyer & Swift 2004) and negation, see Haug (2004: 409–410) and Crellin (2016b: 229).

actives in Homer and their semantic types.¹⁸ This is further supported by the presentation of the results in Table 3, which gives the distribution of instances and mean rank of the top twenty perfect actives in Homer.¹⁹ Strikingly, non-homogeneous non-COS verbs make up only 2% of instances of the perfect. This offers an explanation for the perfect’s very stative feel’ in this period.

A final indication of the overriding stativity of the perfect in this period is the fact that when agent-with-passive constructions occur, they are marked with the dative, as though as an affected participant, rather than an outright agent.²⁰

(23) *érk^homai* *eí tí* *toi* *énk^hos*
come.PRS.IND.NACT.1SG if INDEF.NOM.N.SG PRON.DAT.2SG spear.NOM.N.SG
enì klisíēsi *léleiptai* | *oisómenos*
in tent.DAT.F.PL leave.PRF.IND.NACT.3SG carry.FUT.PTCP.NACT.M.NOM.SG
“I am going to get a spear, if one **has been left by you** in the tents”
(Il. 13.256–7, text Monro & Allen 1920)

Table 2. Top twenty perfect active stems by lexical verb in Homer

Rank	Lemma	Gloss	Sem. type	Instances
1	<i>oída</i>	“know”	Ste (Df)	317
2	<i>ánōga</i>	“command”	NH NCOS (Noise)	135
3	<i>éoika</i>	“be like, look like”	Ste (Df)	125
4	<i>mémaa</i>	“intend”	Ste (Df)	115
5	<i>hístēmi</i>	“set up”	cCOS	102
6	<i>t^hnēskō</i>	“die”	COS	57
7	<i>ararískō</i>	“fit”	cCOS	52
8	<i>dédoika</i>	“fear”	Ste (Df)	44

18. COS = Change-of-state; cCOS = causative change-of-state; Df = Defective, i.e. without full paradigm; NH NCOS = non-homogeneous non-COS; Ste = State. Data for quantitative analyses provided both here and below derive from the database built for Crellin (2012), using XML texts provided by the *Perseus Digital Library*. Instances were initially located using software written by the author on the basis of morphological analyses provided in the Diogenes software package (<https://community.dur.ac.uk/p.j.heslin/Software/Diogenes/>), analyses which were in turn provided by the *Perseus Digital Library*. These instances were then manually checked for parsing accuracy.

19. The mean rank is a figure for the mean rank of a given semantic group according to the ranked frequency table. In the case of Homer, these ranks are given in Table 2.

20. For a full analysis of agent expression in Ancient Greek, see George (2005). For the linking of the use of the dative to denote the agent of a perfect predicate in Archaic Greek with its stative value, see George (2005: 78).

Table 2. (continued)

Rank	Lemma	Gloss	Sem. type	Instances
=	<i>baínw</i>	“go”	COS	44
10	<i>órnumi</i>	‘raise’	cCOS	43
11	<i>peit^hō</i>	“persuade”	cCOS	39
12	<i>érk^homai</i>	“come”	COS	32
13	<i>kata^hnéskō</i>	“die”	COS	22
=	<i>tláo</i>	“endure, be(come) bold”	COS	22
15	<i>gégōna</i>	“shout”	NH NCOS (Noise)	17
16	<i>gígnomai</i>	“become”	COS	15
=	<i>mélō</i>	“be an object of care”	Ste	15
=	<i>ep^hístēmi</i>	“set upon”	cCOS	15
19	<i>bállō</i>	“throw”	NH NCOS	13
20	<i>emmémaa</i>	“be eager”	Ste (Df)	12
=	<i>élpō</i>	“cause to hope”	cCOS	12
=	<i>érdō</i>	“do”	NH NCOS	12
=	<i>epéoika</i>	“be like, suit”	Ste (Df)	12
=	<i>p^húō</i>	“produce, bring forth”	cCOS	12

Table 3. Distribution of the top twenty perfect actives by lexical semantic type: Homer

Sem. type	Sum	%	Mean rank
Ste (Df)	625	49	9.3
cCOS	275	22	12.7
COS	192	15	11.3
NH NCOS	25	2	19.5
NH NCOS (Noise)	152	12	8.5
Sum	1269		

5. Classical

5.1 Continuity with Archaic Greek

The Classical Greek perfect demonstrates considerable continuity and consistency with respect to the perfect in Archaic Greek. As in Archaic Greek, perfects heading one-place homogeneous atelic predicates in Classical Greek describe situations holding at topic time without any necessary reference to a prior state of affairs. The following examples concern such predicates headed by the perfects of *lám্পō* “shine” and *p^húō* “flow” respectively:

- (24) *oud' éti pûr epibómion en Troí|ai t^heoísin*
 nor yet fire.NOM.N.SG on_the_altar.NOM.N.SG in Troy god.DAT.PL
lélam|pen kapnôî t^huódei.
 shine.PRF.IND.ACT.3SG smoke.M.DAT.SG fragrant.M.DAT.SG
 “[a]nd no more **does** the fire **gleam** on the altars of the gods in Troy with its
 fragrant incense.”

(Eur. *Andr.* 1025–27, text Diggle 1984, translation based on Kovacs 1995)

- (25) “But, again, we surely are aware that when in a man the desires incline strongly
 to any one thing, they are weakened for other things. It is as if the stream had
 been diverted into another channel [...]

hôi dè pròs tà mat^hémata kai
 ART.M.DAT.SG PTCL towards ART.ACC.N.PL learning.ACC.N.PL CONJ
pân tò toioûton erruékasin, perì
 all.ACC.N.SG ART.ACC.N.SG such.ACC.N.SG flow.PRF.IND.ACT.3PL about
tèn tês psuk^hês, oîmai,
 ART.ACC.F.SG ART.GEN.F.SG soul.GEN.F.SG think.PRS.IND.ACT.1SG
hēdonēn autēs kat^h hautēn
 pleasure.F.ACC.SG PRON.F.GEN.SG according_to self.F.ACC.SG
eien án
 be.PRS.OPT.3PL PTCL

For the one whose [desires] **are in flow** towards learning and all that kind of
 thing, I believe they will be concerned for the pleasures of the soul for itself”

(Pl. *Rep.* 6 485d, text Slings 2003, translation based on Shorey 1969–1970)

Similarly, the perfect of mental state verb *nomízō* “consider, hold, believe” describes
 a state:

- (26) (In a discussion of why the Nile floods in summer)
houútō tôn hēlion nenómika toútōn
 so ART.M.ACC.SG sun.M.ACC.SG consider.PRF.IND.ACT.1SG this.GEN.PL
aítion eínai.
 responsible.NOM.N.SG be.INF

“I **am convinced**, therefore, that the sun is the cause of this phenomenon.”

(Hdt. 2.26.1, text & translation Godley 1920–1925)

As in Archaic Greek, the presence of a direct object does not necessarily change the
 temporal denotation of the predicate, provided that the predicate still describes an
 atelic and homogeneous situation:

- (27) *stégai* *kekeúth^has'* *haíde*
 dwelling.NOM.F.PL hide.PRF.IND.ACT.3PL DEM.NOM.F.PL
Troiádōn *ók^hlon*.
 Trojan_woman.GEN.F.PL crowd.ACC.M.SG
 “These tents **keep hidden** a crowd of Trojan women.” (Eur. *Hec.* 880, text
 Diggle 1984, translation based on suggestions from S. Schumacher, p.c.)

Causative COS predicates headed by perfects behave much as they do in Archaic Greek, heading anticausative predicates often without any apparent reference to any prior event of change by which the state comes about. In the following example the perfect describes the sense of surprise felt on listening, not on any prior event that might have lead to that:

- (28) “so that I myself, Menexenus, when thus praised by them feel mightily ennobled
kaí hekástote exéstēka *akroómenos*
 and every_time amaze.PRF.IND.ACT.1SG listen.PRS.PTCP.NACT.M.NOM.SG
 and every time I **am amazed** as I listen”
 (Pl. *Menex.* 235a–b, text Bury 1929, translation based on Bury)

By contrast, where the perfect heads non-homogeneous non-COS predicates the perfect carries anterior denotation in the active, much as it would in Archaic Greek. Consider the following examples from verbs that we have seen there:

- (29) cf. (18)
kaí nē Dī *andreíōn* *ge pánu*
 and by Zeus.ACC.M.SG courageous.ACC.M.SG PTCL very
nomízomen, *hòs* *àn peplégēi*
 consider.PRS.IND.ACT.1PL REL.NOM.M.SG PTCL strike.PRF.SBJV.ACT.3SG
tòn *patéra* *neottòs* *ón*.
 ART.ACC.M.SG father.ACC.M.SG chick.NOM.M.SG be.PRS.PTCP.NOM.SG
 “And by Zeus we consider anyone very courageous, who **has struck his father**
 while still a chick” (Ar. *Av.* 1349–50, text Hall & Geldart 1907)
- (30) cf. (3)
hòs *ōp^hélēse* *mén kō Pérsas* *oudén*,
 REL.NOM.M.SG help.AOR.IND.ACT.3SG PTCL yet Persian.ACC.M.PL in_no_way
kakà *dè megála* *éorge*
 evil.ACC.N.PL PTCL great.ACC.N.PL do.PRF.IND.ACT.3SG
 “who has not to this point helped the Persians in any way, but **has wrought**
 great evils” (Hdt. 3.127, text Godley 1920–1925)

Finally, as in the earlier stage of the language, the non-active is often indeterminate between resultative and anterior denotation:

(31) cf. (22)

ōmoi péplēgmai *kairían* *plēgēn* *ésō*
 alas strike.PRF.IND.NACT.1SG mortal.ACC.F.SG blow.ACC.F.SG inside

“I am / have been struck deep with a mortal blow!”

(Aesch. Ag. 1343, text Page 1972, translation based on Smyth 1926)

Despite these similarities, there are some important developments in this period, including:

- Expansion of the perfect and paradigmatisation of the active ~ non-active opposition;
- The development of specialised transitivising and detransitivising perfect active stems;
- Participation of the perfect of certain verbs in the causative alternation;
- Change in the felicity conditions of the perfect.

5.2 Paradigmatisation: Expansion of the active ~ non-active opposition in the perfect

A major difference between the perfect in epic and in the Classical language lies simply in the number and type of verbs to which the perfect active may be formed: the Classical period witnesses an expansion of the perfect active, especially in transitive accomplishment and achievement predicates (Bentein 2016: 115, citing Haspelmath 1992: 212–213). A comparison of the distribution of the perfect active by lexical semantic type in Homer (Table 2 above) with that in Classical Greek (Table 4), comprising data from the historians Herodotus, Thucydides and Xenophon, demonstrates that the perfect in this period has undergone significant change.²¹ In particular, it is striking that verbs introducing non-homogeneous non-COS predicates figure more prominently in the top twenty most frequently occurring perfect actives. In Homer only two such verbs occurred in the top twenty, at places 19 and 20=²² (the noise verbs *ánōga*,²³ “command” and *gégōna* “shout” should be regarded separately, for the reasons already given at 4.1, n. 9). By contrast, in the Classical language three such verbs occur in the top twenty, at places 10, 14,

21. Figures do not include the perfect imperative.

22. i.e. ‘equal twentieth place’

23. All forms that formally matched the perfect or pluperfect active of this verb were taken as such, cf., differently, Willi (2018: 223, 238).

Table 4. Top twenty perfect active stems by lexical verb in Classical historians Herodotus, Thucydides and Xenophon

Rank	Lemma	Gloss	Sem. type	Instances
1	<i>oída</i>	“know”	Ste (Df)	335
2	<i>éoika</i>	“be like, seem”	Ste (Df)	211
3	<i>gígnomai</i>	“become”	COS	150
4	<i>kat^hístēmi</i>	“set up, establish”	Ste (Df)	88
5	<i>hístēmi</i>	“set up”	cCOS	75
6	<i>dédoika</i>	“fear”	Ste (Df)	72
7	<i>éōt^ha</i>	“be accustomed”	Ste (Df)	69
8	<i>t^hnēskō</i>	“die”	COS	63
9	<i>ap^hístēmi</i>	“set apart from”	cCOS	49
10	<i>poiéo</i>	“do”	NH NCOS	39
11	<i>pásk^hō</i>	“suffer”	NH NCOS / Ste	31
12	<i>proístēmi</i>	“set before”	cCOS	26
=	<i>súnoida</i>	“be conscious, aware”	Ste (Df)	26
14	<i>nikáo</i>	“defeat”	NH NCOS	25
=	<i>sunístēmi</i>	“set up”	cCOS	25
16	<i>phúō</i>	“cause to grow”	cCOS	24
17	<i>akouío</i>	“hear”	NH NCOS / Ste	22
=	<i>légō</i>	“say”	NH NCOS	22
19	<i>halískomai</i>	“be caught”	COS	21
20	<i>apóllumi (root)</i>	“destroy; lose”	cCOS	20

and 17=. This development may be seen clearly by considering Table 7: while the mean rank of cCOS and COS verbs remains broadly the same between the Archaic and Classical periods, non-homogeneous non-COS verbs move from 19.5 to 14.5, a considerable jump.²⁴

The development seems, however, not to have greatly affected the weighting of perfects among verbs of different semantic type. Table 6, which looks at the overall distribution of perfect actives by lexical semantic type, reveals that there is relatively little change between Homer and the Classical period. The exception is again in the case of non-homogeneous non-COS verbs, which in Homer comprise only 2% of the instances of the top twenty perfects, while in the Classical period this has climbed to 8%, a strongly statistically significant change.²⁵

24. It is interesting that defective state verbs also see a rise in mean rank, from 9.3 to 5.6, although it is not immediately apparent what might have brought this about.

25. Yielding a chi-squared value, from a 2x2 contingency table of non-homogeneous non-COS vs. other verbs, of 45.577 with 1 degree of freedom. P-value < 0.0001, using R's chi-squared function (R Core Team 2018).

Table 5. Distribution of the top twenty perfect actives by lexical semantic type: Classical historians Herodotus, Thucydides and Xenophon

Sem. type	Sum	%	Mean rank
Ste (Df)	713	51	5.6
cCOS	307	22	11.4
COS	234	17	10.0
NH NCOS	108	8	14.5
NH NCOS / Ste	31	2	11.0
Sum	1393		

Table 6. Distribution of instances of the top twenty perfect actives by lexical semantic type: Archaic (A) and Classical (C) Greek

Sem. type	A(%)	C (%)
Ste (Df)	49	51
cCOS	22	22
COS	15	17
NH NCOS	2	8
NH NCOS (Noise)	12	–
NH NCOS / Ste	–	2

Table 7. Mean rank of the top twenty perfect active by lexical semantic type: Archaic (A) and Classical (C) Greek

Sem. Type	A	C
Ste (Df)	9.3	5.6
cCOS	12.7	11.4
COS	11.3	10.0
NH NCOS	19.5	14.5
NH NCOS (Noise)	8.5	–
NH NCOS / Ste	–	11.0

It is in this stage of the language normal for e.g. a verb introducing an accomplishment verb to have both active and non-active perfects, and for this opposition to denote the active ~ passive opposition.²⁶ Consider the following pair of examples involving *oikodoméō* “build”.

26. On the role of paradigmaticity in the semantic change of the Greek perfect, see Haug (2008).

- (32) “In what, then, consist his splendor, his public services and his lordly expenditure? I cannot for the life of me see, unless one fixes one’s attention on these facts.

oikían *ōikodómēken* *Eleusīni* *tosaútēn*
house.ACC.F.SG build.PRF.IND.ACT.3SG Eleusis.DAT.SG so_great.ACC.F.SG

He has built at Eleusis **a mansion** huge enough [to overshadow his neighbours]”

(Dem. 21.158, text Butcher & Rennie 1907–1931, translation Vince 1935)

Not only this, but while in Homer the number of verbs with a paradigmatic opposition between active and non-active perfects is very low, in Classical Greek this becomes much more normal (Haug 2008). Thus the perfect active of *oikodoméō* in (32) is paradigmatically opposed to medio-passive (i.e. non-active), e.g.:

- (33) “I decided first to show [my wife] the possibilities of our house. For it contains few elaborate decorations, Socrates;

allà tà *oikémata* *ōikodómētai* *pròs*
but ART.NOM.N.PL room.NOM.N.PL build.PRF.IND.NACT.3SG for
autò *toûto* *eskemména*

PRON.ACC.N.SG DEM.ACC.N.SG consider.PRF.PTCP.NACT.NOM.N.PL

but the rooms **are / have been built** with consideration for exactly this [namely ...]”

(Xen. *Oec.* 9.2, text Marchant 1971[1921], translation based on Marchant 1979[1923])

It is primarily the expansion of the perfect among verbs of this kind that gives rise to the overall different ‘feel’ of the perfect in this period, which in many cases accords closely with the sense of the NEng perfect.

Nevertheless, the process of paradigmatisation is not complete in this period, with suppletion playing a role in some verbs. Thus *apokteínō* “kill” is not attested with a perfect medio-passive until Polybius (7.7.4) and the Septuagint (1 Maccabees 5.51; 2 Maccabees 4.36), according to a search of the TLG. In literary sources of the Classical period, at least, the perfect of the 1-place verb *thnēiskō* “die” provides the perfect passive:

- (34) “If the man had died immediately of his wounds,

hup’ emoû *mèn dikaíōs d’* *àn etet^hnēkei*.

by PRON.GEN.1SG PTCL justly PTCL PTCL die.PRF.PST.IND.ACT.3SG

he would **have been** justly **killed** [*lit.* died] by me.”

(Antiph. *3rd Tetralogy* II.3, text Maidment 1941)

5.3 Specialised transitivity and detransitivising perfect active stems

For the most part Classical Greek follows Archaic Greek in only according anticausative sense to the perfect active of verbs introducing causative COS predicates, e.g. *hístēmi* “I set up”, *héstēka* “I am set up”. There is for these verbs no causative perfect active stem, although some such verbs show lability in the active (for which see next subsection). In the post-Classical literary language, as we shall see, there develops for a certain class of these verbs which do not demonstrate full lability a dedicated causative stem separate from the historic perfect active stem which is used for the anticausative. While in Classical Greek this system has not yet developed, at least two verbs, namely *apóllumi* “lose, destroy” and *peítō* “persuade”, do show two perfect active stems, one transitivity, the other detransitivising, as well as a non-active stem:

- (35) a. “[S]ome thought they would get the right to challenge [the charge of treason],
kai dē k^hrémasi epepoít^hesan
 and indeed money.DAT.PL persuade.PRF.PST.IND.ACT.3PL
diót^héesthai
 repulse.PRS.INF.NACT
 and indeed they **were confident** that they would escape it through bribery”
 (Hdt. 9.88.1, text Godley 1920–1925)
- b. “And some dared to say that Xenophon, wanting to settle the area,
pépeike tón mántin légein
 persuade.PRF.IND.ACT.3SG ART.M.SG.ACC seer.ACC.M.SG say.PRS.INF.ACT
had persuaded the seer to say” (Xen. *Anab.* 6.4.14, text Marchant 1961[1904])
- c. *toûs gár Boiôtoûs ôíonto*
 ART.ACC.M.PL PTCL Boeotian.M.ACC.PL think.IPRF.IND.NACT.3PL
pepeíst^hai hupò Lakedaimoníon
 persuade.PRF.INF.NACT by Spartan.M.GEN.PL
 “They thought that the Boeotians **had been persuaded by the Spartans**”
 (Thu. 5.40.2, text Jones & Powell 1942)

Note that in (35c) the non-active stem presents the subject as undergoing an action performed by an external argument, optionally reintroduced with the *hupó* phrase. By contrast, in the case of the detransitivising root active stem in (35a) there is no third party in view, and the action is presented as arising from the subject participants themselves, although not through a fully conscious process.²⁷

27. Some perfect actives change diathetical orientation from detransitivising to transitivity in the Classical period. Thus *diép^ht^hora* from *diap^ht^heírō* “destroy” is detransitivising in Archaic

5.4 Lability in the perfect system

The Classical language witnesses the rise of fully labile COS predicates headed by perfects, as elsewhere in the verb system.²⁸ Compounds of *bállō* “throw”, e.g. *metabállō* “change” are particularly notable in this behaviour. Consider the following pair of examples:

- (36) a. *k^hōlōs* *dè* *kai* *ho* *tanantía* *toútou*
 lame.NOM.M.SG PTCL also ART.NOM.M.SG opposite.N.PL.DEF DEM.GEN.SG
metabēlēkōs *tēn* *phīloponían*.
 change.PRF.PTCP.ACT.NOM.M.SG ART.ACC.F.SG love_of_industry.ACC.F.SG
 “He is also lame who, in the opposite way, **has switched round** his love of industry [i.e. so that he loves learning, but hates physical pursuits].”
 (Pl. *Rep.* 7 535d, text Slings 2003)
- b. “In the past they would depose tyrants [...]”
nūn *dè* *tosōuton* *metabēlēkasin*, *hōste* *taīs*
 now PTCL such.ACC.N.SG change.PRF.IND.ACT.3PL so_that ART.DAT.F.PL
mēn *politeiais* *polemoûsin*
 PTCL republican_government.DAT.F.PL wage_war.PRS.IND.ACT.3PL
 but now **they have changed** to such a point that they wage war against republican government”
 (Isoc. 4.125, text Norlin 1928)

The non-active, where it exists,²⁹ is used with the same argument structure, but describes a situation with more active participation on the part of the subject, as in the case of this verb, the sense of “to change one’s mind”:

- (37) *epeidē* *d’* *hupō* *tōn* *parà* *toútōn* *lōgōn*
 since PTCL under ART.GEN.PL from DEM.GEN.PL word.GEN.PL
metabēlēst^hai *moí* *tines* *dokoûsin*
 change.PRF.INF.NACT PRON.DAT.1SG INDF.NOM.PL seem.PRS.IND.ACT.3PL
 “But since some seem **to have changed [their minds]** on the strength of the words of these men” (Dem. *Exord.* 34.3, text Butcher & Rennie 1907–1931)

Greek, “(have) be(en) destroyed”, but transitivity in the Classical period, “have destroyed”. Haug (2008) has argued this to be a result of paradigmatisation whereby each active form is increasingly matched by a non-active form. However, the fact that in the post-Classical literary language the role of the detransitivising active form is expanded (on which see below), shows that this tendency is at least paused in some varieties.

28. For this lability outside the perfect, see Lavidas (2009: 92).

29. The perfect of *eisbállō* is not attested in the non-active until well into the medieval period, according to a search of the TLG.

On occasion, however, the non-active is used in a resultative sense that is not far from a passive interpretation:

- (38) “Concerning sleep, just as it is customary by nature, we should sleep during the day, and sleep at night.

èn dè eîē toûto

if PTCL be.PRS.OPT.ACT.3SG DEM.NOM.N.SG

metabeblēménon, kakíon

change.PRF.PTCP.NACT.NOM.N.SG worse.NOM.N.SG

But if this [pattern] **should be changed**, it is for the worse.”

(Hipp. *Prognosticon* 10.3, text Littré 1840)

Nevertheless, at least for these verbs, it is difficult to find instances of straight passive interpretation. This is a development which is seen in the post-Classical language.

5.5 Felicity conditions

In English the perfect is well known to be infelicitous with no-longer-living animate subjects, as well as definite time adverbial modification. Unlike its modern English counterpart, however, the Greek perfect is felicitous with human subjects who have passed away:³⁰

- (39) *ou mèn oudè barbárous eírēke*

NEG PTCL not_even barbarian.ACC.M.PL say.PRF.IND.ACT.3SG

“(Homer) **did / does not say** [*lit.* has not said] even ‘barbarian’”

(Thu. 1.3, text Jones & Powell 1942)

However, for the most part the Classical Greek perfect functions similarly to the NEng perfect in rejecting definite time adverbial modification. There are, nevertheless isolated examples towards the end of the period which appear to test this (cf. Gerö & von Stechow 2003: 271–272). In the following example, the perfect is modified by a past definite time adverbial, albeit broadly in the temporal frame of ‘now’ by virtue of the deictic *taútēs* (for example see also Bentein 2016: 40):

30. It is possible that there is a felicity condition in this example, that although the subject may no longer be living, the result of their action (in this case Homer’s poem) must be extant or accessible. This, however, needs further investigation to establish.

- (40) *tekmaíromai* *dè ék tinos enupníou hò*
 judge.PRS.IND.ACT.1SG PTCL from INDE.GEN.SG dream.GEN.N.SG REL.N.SG
heóranka *olígon próteron taútēs* *tēs*
 see.PRF.IND.ACT.1SG a_little earlier DEM.GEN.F.SG ART.GEN.F.SG
nuktós
 night.GEN.F.SG

“I make this judgement (namely that the ship will not come into today, but tomorrow) on the basis of a dream which I saw a little earlier this night”

(Pl. *Crito* 44a, text Burnet 1967[1900])

In the next example, the adverbial modification is most definitely in a past temporal frame:

- (41) “You aren’t even going to get near the gods. They’re gone;
ek^ht^hés *eisin* *exōikisménoi*
 yesterday be.PRS.IND.ACT.3PL move_out.PRF.PTCP.NACT.M.NOM.PL
 they moved out yesterday.”

(Ar. *Pax* 195–197, text & translation provided from Bentein 2016: 145)

As we will see from the post-Classical documentary material, it is definite past time adverbial modification that is the first sign of the gradual encroachment of the perfect on the semantic space of the aorist, denoting the past perfective.

5.6 Summary of the semantics of the perfect in Classical Greek

The perfect in Classical Greek may be described in functional and semantic terms in much the same way as that in Archaic Greek (see above §4.5). This is to say that the perfect continues to derive a homogeneous atelic eventuality from a predicate and ascribe this to the subject. The main development is not in terms of the semantics but rather in the level of paradigmatisation and integration of the perfect into the rest of the verbal paradigm: many more verbal roots accept perfects in this period, and the paradigmatic opposition between active and non-active is regularised. This said, there are indications that the system lacks stability, given the attestation of definite past time adverbial modification, something that becomes frequent in the post-Classical documentary material.

6. Post-Classical Greek

6.1 Overview

It is commonly suggested that after the Classical period, the perfect as a category starts to disintegrate, in advance of its eventual merger with the aorist (perfective) and subsequent disappearance,³¹ fitting into a broader narrative of the simplification of the verb system as a whole (e.g. Bentein 2016: 153, citing Dickey 2009: 154–157; Evans 2001: 54). While the fact of this development is not in doubt, the exact date when it occurred has been the subject of some controversy, with proposals for the start of this development ranging from the Classical period to as late as C4th or C5th CE (see Bentein 2016: 153 for overview and references). The disagreement may be in part due to the increasingly diglossic nature of Greek in this period (for which see Horrocks 2010: 135). As such in the perfect we see a bifurcation in its function and semantics along diglossic lines, whereby the perfect in lower-register varieties does indeed show clear signs of merging with the aorist from at least the early Hellenistic period. By contrast, the perfect in the literary language shows some of these developments, but for the most part demonstrates continuity and even productivity and complexification of the perfect category with respect to that seen in the Classical period.³² This is consistent with the view that the literary language of the post-Classical period, especially in the Roman period, is best seen as a “learned, and learned, ‘living’ language” (Horrocks 2010: 141) as opposed to a dead one based entirely on Classical models, one of whose hallmarks is the use of the monolectic perfect in stative/present as opposed to perfective senses (Horrocks 2010: 138). In the first subsection we survey the use of the perfect in the literary language, before looking at lower-register material in the section following.

6.2 Literary language: Distributional trends with respect to earlier periods

The overview given in Tables 10 and 11 allow comparison in the distribution of instances of the perfect among the different semantic groups across different periods. Here we may see that the perfect in literary post-Classical Greek demonstrates considerable continuity with that in the Classical language. This is shown by the similarity in the most common verbs forming perfects in post-Classical historians by

31. Thus Haug (2008: 302) states that, “the category does not have a unified semantics in fourth century Greek”.

32. This represents a counterpoint to the view that the original ‘secondary’ function of the perfect, i.e. to denote anteriority, straightforwardly became primary (Berrettoni 1972: 166). Cf. also Goldberg’s (1997) analysis of the perfect in Menander.

comparison with their Classical counterparts (cf. Table 8).³³ Table 11 shows a broadly similar mean rank for the four main semantic groups. Non-homogeneous non-COS verbs have a marginally higher mean rank vis-a-vis their Classical counterparts (13.4 vs. 14.5), continuing the trend seen between Archaic and Classical varieties, while Ste (Df) and cCOS verbs have marginally lower rankings. COS verbs appear to increase in mean rank, although is due entirely to the prominence of *gínomai* “become”, a development which deserves its own investigation. Once is taken out of the equation, COS verbs are broadly flat with respect to the Classical language.

These trends in mean rank are echoed in the proportional data. Thus non-homogeneous non-COS perfects increase as a proportion of perfect instances, now making up 12% of the top twenty perfect actives, compared to 8% in the Classical period. The biggest change, however, is apparently in the distribution of predicates involving states: defective state verbs are much less frequent, down to 34% from 51%, as are causative COS verbs. By contrast COS verbs are much more frequent. This is almost entirely due to the aforementioned dramatic increase in the use of the perfect active of *gínomai*. Once the effects of this are stripped out, as seen in the far right column of Table 10, however, the important change remaining is the increase in the proportion of non-homogeneous non-COS perfect actives, on this measure up to 16%, matched by a concomitant decrease in causative COS verbs.³⁴ This picture fits well with the pattern of increasing paradigmatisation and grammaticalisation of the perfect that we saw starting in the Classical period.

6.3 Semantic continuity with earlier periods

As in the Classical language, the perfect active heading accomplishment predicates carries anterior denotation, while the medio-passive has resultative or anterior force. Compare the following with (32) above:

- (42) a. *hóti nê Día tàs stoàs epì*
 because by Zeus.ACC.SG ART.ACC.F.PL colonnade.ACC.F.PL over
tôn t^hermôn ōikodómēka kai ergastéria
 ART.GEN.PL bath.GEN.PL build.PRF.IND.ACT.1SG and shop.ACC.N.PL
 “For I have by Zeus built a colonnade over the hot baths as well as shops”
 (Dio Chrys. *Orat.* 46.9, text von Arnim 1962[1891–1896])

33. For the exact corpus used from Polybius, Josephus and Plutarch, see Crellin (2012: 72) or Crellin (2016b: 19).

34. The difference between the Classical and Post-Classical periods is again strongly statistically significant: chi-squared figure of 51.063 with 1 degree of freedom. $P < 0.0001$. using R's chi-squared function (R Core Team 2018).

- b. “In that place stands Zeus called the deliverer [...] *stoà dè ópist^hen ōikodómētai*
colonnade.NOM.F.SG PTCL opposite build.PRF.IND.ACT.3SG
And opposite a colonnade **has been built**” (Paus. 1.3.3, text Spiro 1903)

Table 8. Top twenty perfect active stems by lexical verb in post-Classical historians Polybius, Plutarch and Josephus

Rank	Lemma	Gloss	Sem. type	Instances
1	<i>gígnomai</i>	“become”	COS	606
2	<i>oída</i>	“know”	Ste (Df)	267
3	<i>éoika</i>	“be like, seem”	Ste (Df)	217
4	<i>dédoika</i>	“fear”	Ste (Df)	175
5	<i>t^hnés^{kō}</i>	“die”	COS	103
6	<i>sumbaínō</i>	“happen, come to pass”	COS	95
7	<i>apóllumi (root)</i>	“destroy; lose”	cCOS	83
8	<i>proístēmi</i>	“set before”	cCOS	69
9	<i>poiéō</i>	“do, make”	NH NCOS	67
10	<i>pásk^hō</i>	“suffer”	NH NCOS / Ste	63
11	<i>éōt^ha</i>	“be accustomed”	Ste (Df)	55
12	<i>dēlōō</i>	“show, make clear”	NH NCOS	54
13	<i>lego</i>	“say”	NH NCOS	51
14	<i>lambánō</i>	“take”	COS	50
15	<i>prolēgō</i>	“say previously”	NH NCOS	49
16	<i>súnoida</i>	“be aware, conscious”	Ste (Df)	47
17	<i>diagignóskō</i>	“decide; discern”	COS	45
18	<i>didōmi</i>	“give”	NH NCOS	44
19	<i>enístēmi</i>	“set in”	cCOS	42
20	<i>peít^hō</i>	“persuade”	cCOS	36

Table 9. Mean rank of the top twenty perfect actives by lexical semantic type: Post-Classical historians Polybius, Josephus and Plutarch

Sem. type	Sum	%	Mean rank
Ste (Df)	761	34	7.2
cCOS	230	10	13.5
COS	899	41	10.5
NH NCOS	265	12	13.4
NH NCOS / Ste	63	3	10.0
Sum	2218		

Table 10. Distribution of instances of the top twenty perfect actives by lexical semantic type: Archaic (A), Classical (C) and Post-Classical (PC) Greek

Sem. type	A (%)	C (%)	PC (%)	PC (%) (no <i>gígnomai</i>)
Ste (Df)	49	51	34	47
cCOS	22	22	10	14
COS	15	17	41	18
NH NCOS	2	8	12	16
NH NCOS (Noise)	12	–	–	–
NH NCOS / Ste	–	2	3	4

Table 11. Mean rank of the perfect active by lexical semantic type in Archaic (A), Classical (C) and Post-Classical (PC) Greek

Sem. Type	A	C	PC	PC (no <i>gígnomai</i>)
Ste (Df)	9.3	5.6	7.2	6.2
cCOS	12.7	11.4	13.5	12.5
COS	11.3	10.0	8.6	9.5
NH NCOS	19.5	14.5	13.4	12.4
NH NCOS (Noise)	8.5	–	–	–
NH NCOS / Ste	–	11.0	10.0	9.0

Also as in the Classical language, the perfect of this kind of verb may be predicated of subjects no longer alive at utterance time:

- (43) *hèn gār ho tēs Thēseĩdōs*
 PRON.ACC.F.SG PTCL ART.NOM.M.SG ART.GEN.F.SG Theseid.GEN.SG
poiētēs Amazónōn epanástasin
 author.NOM.M.SG Amazon.GEN.PL insurrection.ACC.F.SG
gégraphē
 write.PRF.IND.ACT.3SG
 “For the author of the Theseid **wrote** [*lit.* has written] *The insurrection of the Amazons*” (Plu. *Thes.* 28.1, text & translation provided from Crellin 2016b: 1)

Finally, we noted above at §4.3 that in Homer not all predicates need be predicates of time, but may be predicates of extent, in which case there is no denotation or implication of an event terminating prior to reference / topic time. Rather the perfect simply expresses a logical relation of distance. This use is paralleled in the literary Koine material, e.g.:

- (44) *tòn* *Rhíazona* [...] *polismátion* [...]
 ART.ACC.M.SG Rhizon.ACC.M.SG town.ACC.N.SG
anakek^hōrēkòs *mèn apò tēs* *t^haláttēs*
 withdraw.PRF.PTCP.ACT.ACC.N.SG PTCL from ART.GEN.F.SG sea.F.GEN.SG
 “Rhizon [...] a small town [...] **withdrawn** from the sea”
 (Plb. 2.11.16, text Büttner-Wobst 1962–1967)

The semantics of the perfect in literary post-Classical Greek are not exactly the same as those seen in the Classical language, however. Notable developments include the following, which will be discussed in turn:

- Systematisation of the perfect vis-a-vis the rest of the verbal paradigm deepens in this period, with:
 - Full lability extended in the perfect active system for verbs describing conscious changes of state or position;
 - The opening up of a full three-way opposition causative ~ anticausative ~ non-active/passive in causative COS predicates describing non-conscious processes;
- The perfect is seen heading bounded, that is, in aspectual terms arbitrarily delimited, homogeneous atelic predicates.

6.3.1 Further paradigmatisation: COS predicates

We saw earlier that verbs introducing causative COS predicates show lability in two different ways. On the one hand at §5.3 we saw that some verbs, e.g. *apóllumi* “lose, destroy” and *peíthō* “persuade” have two active stems, one transitivity, the other detransitivising, and one non-active stem. On the other hand at §5.4 we saw that some perfect active stems are fully labile in the Classical period, with transitive and intransitive meanings both expressed by a single form.

While formerly the presence of the detransitivising active stem has been seen largely as the mere persistence of an archaism (e.g. Chantraine 1927: 106–118), we can instead see their persistence into the post-Classical literary language as part of a principled distinction between two kinds of COS predicates: those on the one hand describing eventualities where the internal argument, realised as subject in intransitive constructions, may be seen to cause the event consciously or independently (type *metabdllo* “change”), and on the other those where the event might arise spontaneously from the internal argument, but without that event necessarily being controlled by the internal argument (type *peíthō* “persuade”). The former are labile throughout the verb system, including in the perfect, and have one active and one medio-passive stem, while the latter show a three-way alternation: two active stems, one with active-transitive semantics, the other with intransitive internal

cause semantics, and one medio-passive stem with passive semantics (for discussion see Crellin 2016b: 134–156).

As an example of the first type, consider the verb *katalúō* “dismantle”, which is first attested participating in the causative alternation in the post-Classical language.³⁵ Without changing the morphology, the perfect active of this verb may denote either causative or anticausative, as illustrated in the following pair of examples:

- (45) *Korínthioi* *katalelukótes* *tēn* *en*
 Corinthian.NOM.M.PL disband.PRF.PTCP.ACT.NOM.M.PL ART.ACC.F.SG in
Surakoúsais *turannída*
 Syracuse.DAT.PL tyranny.ACC.F.SG
 “the Corinthians, **having overthrown** the tyranny in Syracuse”
 (Plu. *Timoleon* 23, text & translation provided from Crellin 2016b: 136–137)
- (46) *disk^hilioi* *mèn tôn* *hup^h* *Hērōdēi* *potē*
 two_thousand.NOM.M.PL PTCL ART.GEN.PL under Herod.M.DAT.SG once
strateusaménōn *kai ēdē*
 serve_in_the_army.AOR.PTCP.NACT.GEN.PL and already
katalelukótes
 disband.PRF.IND.ACT.NOM.M.PL
 “[T]wo thousand of those who had once served under Herod, and **who had**
 already **disbanded**”
 (Jos. A.J. 17.270, text & translation provided from Crellin 2016b: 137)

Verbs where this is the case, and where the perfect active is fully labile, include the following:³⁶

- *metabállō* ~ *metabéblēka* “change”
- *prosbállē* ~ *prosbéblēka* “throw at” ~ “put in” (of a boat)
- *hupostéllō* ~ *hupéstalka* “hide”
- *anastrep^hō* ~ *anéstrop^ha* “overturn” ~ “return”

It is this characteristic of the possibility of spontaneous action, that is, without the need of a genuinely external causer, that in principle separates the group of verbs without specialised anticausative stems from those with specialised active stems deriving the anticausative sense.

35. A search of TLG reveals that the active perfect of *katalúō* is only attested as transitive in Classical Greek.

36. For more details and discussion, see Crellin (2016b: 135–138).

The following examples give active-transitive and anticausative instances, respectively, of the perfect of *pléssō* “strike”:

- (47) *ekdikeíst^hō* *tautòn* *pat^hóntos*
 avenge.PRS.IMP.NACT.3SG same.ACC.N.SG suffer.AOR.PTCP.ACT.GEN.M.SG
toû *peplēk^hótos*
 ART.GEN.SG strike.PRF.PTCP.ACT.GEN.M.SG
 “let him be avenged by the one **who has done the striking** suffering in the same way”
 (Jos. A.J. 4.277, text provided from Crellin 2016b: 139)
- (48) *toû* *Nikíou* [...] *ák^hei* *kaí t^haumati*
 ART.GEN.M.SG Nikias.GEN.M.SG distress. DAT.SG and wonder.DAT.SG
peplēgótos
 strike.PRF.PTCP.ACT.GEN.M.SG
 “while Nikias [...] **was struck** with distress and wonder”
 (Plu. *Nic.* 10.6, text & translation provided from Crellin 2016b: 141)

Comparison of these examples with (29) and (31) above shows that a realignment has taken place, with the newly formed stem in *peplēk^h-* taking over the active-transitive function of the root stem *peplēg-*, with this stem now reserved for active-anticausative function.

In the case of both classes of verb, passive sense, that is, where the subject is a patient rather than an internal causer, is rendered by the morphological non-active:³⁷

- (49) *kai oudèn* *katalélutai* *dià* *tèn*
 and in_no_way break.PRF.IND.NACT.3SG because_of ART.ACC.F.SG
emèn *epieíkeian* *oúte nómos* *out^h hórkos*;
 my.ACC.F.SG fairness.ACC.F.SG neither law.M.NOM.SG nor oath.NOM.M.SG
 “And in no way **has** either law or oath **been broken** on account of my fairness.”
 (Dion. Hal. *Ant. Rom.* 5.10.4, text Jacoby 1967[1885–1905])
- (50) *áp^hnō* *dè hósper hupó tinos* *plēgēs* *isk^hurós*
 suddenly PTCL as_if by INDEF.GEN.SG blow.GEN.F.SG strong.GEN.F.SG
peplēgménos
 strike.PRF.PTCP.NACT.NOM.M.SG
 “[H]e suddenly let out a groan as if **he had been struck** by a hefty blow”
 (Diod. Sic. 17.117.2, text provided from Crellin 2016b: 154,
 translation based on Crellin)

37. For discussion, see Crellin (2016b: 148–156). Comparable to *katalélutai* in (49) is Strabo 9.5.10 *metabeblēménas* [change.PRF.PTCP.NACT.F.PL], describing administrative divisions (*diatáxeis*), (text per Jones 1927) which, insofar as they are products of human institutions, perform a patient role in this context. It should be noted that (49) does not include explicit marking of the agent, unlike (50). It is difficult to find explicit agent marking for the perfect of verbs describing entirely spontaneous action.

6.3.2 Bounded homogeneous atelic predicates

A significant change is seen in the handling of atelic state / homogeneous predicates. On the one hand, the perfect continues to be able to derive secondary pure state predicates from predicates of this kind. Consider the following example:

- (51) “Mariam [...] was grieved by the fact that,
mēd ei pásk^hoi ti deinòn
 not_even if suffer.AOR.OPT.ACT.3SG INDF.ACC.N.SG terrible.ACC.N.SG
ekeínos elpída toú biósest^hai di'
 DEM.NOM.M.SG hope.ACC.SG ART.GEN.N.SG live.FUT.INF.NACT through
autòn esk^hékénai
 PRON.ACC.M.SG have.PRF.INF.ACT
 even if he should suffer some terrible thing, **she did not have the hope** of living
 through him” (Jos. A.J. 15.204, text provided from Crellin 2016b: 52,
 translation based on Crellin)

Indeed, this type interaction of the perfect with its predicate appears to be productive on the basis that a stative perfect is developed for the verb *elpízō* “hope” in this period (see e.g. 1 Timothy 6.17).³⁸ However, a key development is the capacity of the perfect to head arbitrarily bounded homogeneous predicates. Compare (51) with the following example:

- (52) “In addition to these Phregellai [...] which is now a village, but was once an important city and
tàs pollàs tòn árti
 ART.ACC.F.PL many.ACC.F.PL ART.F.GEN.PL just_now
lek^ht^heisôn perioikídas próteron
 say.AOR.PTCP.NACT.F.GEN.PL dependent_town.F.ACC.PL previously
esk^hēkuía
 have.PRF.PTCP.NOM.F.SG
 previously **had** the majority of the places just mentioned as dependent towns”
 (Strabo 5.3.10, text Jones 1923, translation based on Crellin 2016b: 236)

For possible derivations of such results, see Haug (2004: 409–410) and Crellin (2016b: 235–237).

Although much has been made in the literature of the importance of the growth of active transitive perfects for the presumed merger with the aorist and subsequent category loss, the capacity to be indeterminate regarding the boundedness of homogeneous predicates may be a critical development, since it is this capacity which is crucially shared with the aorist qua perfective (cf. Haug 2004: 410; Speyer 2003). There is also evidence that bounded interpretations become available for causative

38. For discussion, see Crellin (2014).

COS predicates (for which see Crellin 2016b: 238–239). This development has the potential to account for the ‘aoristic’ use of the perfect of e.g. state verbs such as *ék^hō* ‘have’ in documentary texts of this period (see below).

6.4 Documentary texts

6.4.1 Continuity with earlier stages and the literary language

Despite the fact that the perfect in documentary Greek in the Post-Classical period shows considerable divergences from earlier usage, as well as from the contemporary usage in the literary language, elements of residual continuity may be found. Resultative / stative perfects of causative change of state perfects may be found apparently displaying very similar semantics to those seen elsewhere. Consider the following example of *pépoitha*, from *peíthō* “persuade”, comparing with, e.g., (35) above:³⁹

- (53) *pépoit^ha* *gàr hōs dià tòn*
 persuade.PRF.IND.ACT.1SG PTCL that through ART.GEN.PL
hagiotátōn | *sou euk^hôn* [...]
 holy.SUPERL.GEN.F.PL PRON.GEN.2SG prayer.GEN.F.PL
eleut^herōt^hēnai *kai epanel^hein* *pròs [hu]màs*.
 free.AOR.INF.NACT and return.AOR.INF.NACT to PRON.ACC.2PL
 “I am confident that through your most holy prayers [...] I will be freed and
 will return to you.” (P.Herm. 8.14–17, 375–399 CE)

Many of these stative uses of the perfect in the documentary texts have the hallmarks of fossilised / lexicalised expressions. Given the preceding, it is clear that the stative semantics have a derivation which is clear from a historical perspective. As another example, the standard expression for ‘being well’ is denoted by *érrōmai*, non-active perfect of *r^hónnumi* ‘strengthen’ in the papyri, e.g. P.Petr. 2.11, 260–246 BCE. However, it is unclear how productive this process of derivation was for the writers concerned (cf. the situation for writers of literary material). Doubt is particularly sown by examples of the perfect of stative and COS predicates, which in earlier and contemporary literary writing refer to reference / topic time, but which in the documentary texts function as past tense forms, for which see subsections immediately below.

In general, however, the use of the perfect in the documentary material is characterised by considerable discontinuity with respect both to earlier periods, and to contemporary literary material. We see this in terms of:

39. Abbreviations of papyri are standard abbreviations for the publications cited for each source. For more information, see <http://papyri.info/docs/checklist>.

- Paradigm loss, whereby the function of the detransitivising perfect active stem is taken over by the non-active paradigm;
- Competition with the aorist in terms of:
 - Collocation with definite past time adverbials;
 - Use of the perfect in past narrative.

I address each of these in turn.

6.4.2 *Paradigm loss: expression of the anticausative by non-active morphology*

At § 6.3.1 above we saw that in literary varieties a three-way opposition opens up in some verbs between active-causative, active-anticausative and passive.

In the papyri, however, the causative and anticausative distinction appears to be lost:⁴⁰

- (54) *epei oûn kinduneúō toû | biou*
 since therefore run_risk.PRS.IND.ACT.1SG ART.GEN.SG life.GEN.SG
hoîs [i.e. haîs] péplēga plēgaîs
 PRON.M/N.PL PRON.F.PL strike.PRF.IND.ACT.1SG blow.DAT.F.PL
 “As therefore my life is in danger owing to [*lit. by*] **the blows** with which I was struck” (P.Tebt. 3.1.798.23–24, C2nd BCE, translation based on APIS)
- (55) “one held his hands, another hit my son with a stone, another kicked [him].
hólon tò sôma
 whole.NOM.N.SG ART.NOM.N.SG body.NOM.N.SG
peplēgménon estin.
 strike.PRF.PTCP.NACT.NOM.N.SG be.PRS.IND.3SG
 The whole body **is/was beaten**” (P.Lips. 1.40.3.3, C4th CE)

While in the literary language, the active root formation is reserved for forms of being struck in which the subject acts as an internal cause, i.e. “being struck (mentally)”, here it is used in a physical sense, and as such does not contrast with the non-active.

6.4.3 *Competition with the aorist: Definite past time adverbial modification and use of the perfect in past narrative*

It is in the post-Classical language of the documentary texts that we see the clearest signs of competition with the aorist, in advance of the perfect’s eventual elimination and loss. Definite past time adverbial modification is in earlier stages of the language the preserve of the aorist. However, we saw in the later stages of the Classical

40. In this example, the pronoun *hoîs* is irregular, with the expected form following in square brackets.

language occasional examples of definite past time adverbial modification with the perfect. It is difficult to find collocation of the perfect with definite past time adverbials in literary Koine Greek, but in the documentary material examples are relatively easy to come by. Indeed they start early, the earliest cited by Mandilaras being from 221 BCE. The following example is from 113 BCE:⁴¹

- (56) *têi* *κ* *toû* *Phaôph^hi* *toû* *ε* (*étous*) |
 ART.DAT.F.SG 20 ART.GEN.SG Phaophi ART.GEN.SG 5 year.GEN.N.SG
Níkōnos *toû* *Amennéōs* [...] *t[à]* *en*
 Nikon.NOM.M.SG ART.M.GEN.SG Amenneus.GEN.SG ART.ACC.N.PL in
têi *heautoû* *gêi* *húdata* |
 ART.DAT.F.SG self.GEN.M.SG land.F.DAT.SG water.N.ACC.PL
katakékluken *apò* *tês* | *hupark^hoúsēs*
 flood.PRF.IND.ACT.3SG from ART.F.GEN.SG belong.PRS.PTCP.ACT.GEN.F.SG
moi *basilikês* | *gês* *eis* (*arouras*) *β* *δ'*
 PRON.DAT.1SG royal.GEN.F.SG land.GEN.F.SG to aroura.ACC.F.PL 2 1/4
 “On the 20th of Phaophi in the 5th year Nikon son of Amenneus [...] let
 out the water on his own land and **flooded** 2 1/4 arouras of the Crown land
 belonging to me” (P.Tebt. 1.49.4–10, 113 BCE, translation APIS)

Another prime indicator of encroachment on the semantic territory of the aorist is the use of the perfect in narrative sequences. Examples of this start a little later than those with definite past time adverbial modification, but occur with some regularity from the Roman period, and as Mandilaras (1973) notes, become particularly frequent in letters of C2nd CE. Consider one such example from early in that century, along with (4) given above in the introduction:⁴²

- (57) [*ka*]i *kat[é]bēn* *is* [*Al*]exán[d]reian *metá*
 and go_down.AOR.IND.ACT.1SG to Alexandria.ACC.F.SG with
[to]û *huioû* *mou.* *[toû]tou* *k^há[r]in*
 ART.GEN.M.SG son.GEN.M.SG PRON.GEN.1SG DEM.GEN.N.SG because_of
m[a]nía *autòn* *[és]k^hēken*
 madness.NOM.SG PRON.ACC.M.SG have.PRF.IND.ACT.3SG
 “And I went down to Alexandria with my son. For this reason a madness **took**
 hold of him” (P.Mich. 8.473.19–20, translation APIS)

41. This example is discussed by McKay (1980: 31). For discussion of the occurrence of definite past time adverbials in the literary post-Classical language, see Crellin (2016b: 240–45). For a framework for understanding why this restriction exists in the perfect, see Klein (1992).

42. This example is discussed by McKay (1980: 33).

After this date perfects in narrative become easy to find. The following example comes from late C4th:⁴³

- (58) “Very late one evening I heard [*ékousa* hear.AOR.IND.ACT.1SG] a noise as I happened to come to my house
kaí épem̐psa *toùs* *paídás* *mou* *hóstē*
 and send.AOR.IND.ACT.1SG ART.ACC.M.PL child.ACC.PL PRON.GEN.1SG so_that
gnônai *tèn* *aitían.* *exêlth̐on*
 know.AOR.INF.ACT ART.ACC.F.SG reason.ACC.F.SG come.AOR.IND.ACT.3PL
kai̐ heurékasi *toúton* *⟨tòn⟩* *Asunkritíon*
 and find.PRF.IND.ACT.3PL DEM.ACC.SG ART.ACC.M.SG Asunkritios.ACC.M.SG
 and I sent my children to find out the cause. They came out and found this
 man, Asunkritios” (P.Lips. 1.40.2.9–11)

A particularly interesting example is the following, where *exéstēka*, formally a perfect of the kind from Plato seen above at (28), not only occurs in narrative, but also in a transitive context, as opposed to the anticausative seen in the Plato example.

- (59) “But others came [*êlth̐an* come.AOR.IND.ACT.3PL] to me saying, ‘We are going to the field to sit until you bring forth the word today straightaway’
akoúsas *taúta* *exéstēka*
 hear.AOR.PTCP.ACT.M.SG this.DEM.ACC.N.PL surprise.PRF.IND.ACT.1SG
toùs | *ant̐hrópous* *kai̐ exêlth̐on* *dian.....* |
 ART.ACC.M.PL person.ACC.M.PL and go_out.AOR.IND.ACT.1SG
ergázesthai *en tōi klérōi.*
 work.PRS.INF.ACT in the field.DAT.SG
 When I heard this I **surprised** the people and went out ... to work in the field.”
 (PSI 7.822.10–16, 130–199 CE)

Nevertheless, it is still possible to find uses of the perfect at a very late stage that apparently correspond well to the literary Koine as well as Classical usages. The following example is from C4th CE:

- (60) “don’t make the morsels,
ep[e]ì gàr heurékamen *hōde pepoiēmēna* |
 for PTCL find.PRF.IND.ACT.1PL here make.PRF.PTCP.NACT.ACC.N.PL
psōmía
 morsel.ACC.N.PL
 for we have found morsels [already] made here” (P.Oxy. 12 1591.4–7)

43. Parallel from a similar kind of narrative: *heurékamen* P.Haun. 2.25, from C4th or C5th CE, <http://papyri.info/ddbdp/p.haun;2;25> (Accessed June 18, 2018).

However, in the absence of a comprehensive study of the aorist ~ perfect opposition in these very late documents, it is *a priori* difficult to determine whether the perfect in these examples is simply being used as a perfective, with anterior implicatures arising from its use in context, or with a distinct value. This awaits future research.

The fact that the perfect occurs with definite past time adverbial modification before it occurs in narrative suggests a rationale for the development, namely progressively weakening semantic association between the post-situation and topic time (cf. Crellin 2016a: 453; McKay 1965: 11). This is to say that in early and Classical Greek, and in the literary post-Classical material, the perfect strongly encodes that the post-situation described by the predicate holds at topic time, so that it is infelicitous to collocate a definite past time adverbial with the perfect. In the Hellenistic post-Classical documentary texts, this has weakened to an implicature, so that while the perfect implies that the post-situation holds at topic time, this may be cancelled by the explicit denotation of a definite past time adverbial. By the Roman period this has weakened further, so that there is no implicature that the post-situation holds at topic time, and the perfect is able to collocate with aorists in narrative sequences. It is interesting to note, however, as Haug (2008) points out, also in the context of the Greek perfect, but regarding a slightly earlier stage in the development, that this direction of development goes against Traugott & Dasher's (2005) proposal that all semantic change is motivated by strengthening, not weakening implicatures.

6.5 Semantics of the perfect in post-Classical Greek

We have seen that the picture of the function and semantics of the perfect in the post-Classical period is somewhat more complicated than is often supposed. On the one hand, the consistency of the use in literary post-Classical Greek shows that at least for some speakers (and writers) the perfect had a well defined and productive semantic value until at least C3rd CE, one not far removed from the definition given for early and Classical Greek. For some writers of the documentary material the same must have been the case. However, for most writers of low-register varieties, the perfect's original denotation that a homogeneous atelic eventuality derived from the predicate holds at topic time was progressively weakened, first collocating with definite time adverbials by C3rd BCE before being used in full-blown narrative by C2nd CE. The result was increasing overlap with the aorist, and the consequent eventual demise of the perfect.

7. Conclusion

For the Greek perfect in all periods except in low-register post-Classical material, where functional merger with the aorist (functionally perfective) is underway, the tense-aspect of the perfect can be seen to behave as follows.

1. If the predicate describes a telic event of change, whether a change of state or some other kind of change, whereby it is the subject which changes, the predicate will likely be read as resultative, via the causative alternation if describing a causative COS eventuality.
2. On the other hand, if no change is described, i.e. the predicate describes a state, the perfect will simply derive another atelic homogeneous eventuality from the predicate. In the post-Classical language the perfect additionally has the option of being interpreted as an anterior.
3. If the predicate describes a non-COS non-homogeneous eventuality, the perfect derives a secondary homogeneous atelic eventuality which follows from the event having run to completion, and predicates this of the subject.

This behaviour may be captured under the following general definition:⁴⁴

The Greek perfect derives a homogeneous atelic eventuality from a predicate, predicates this eventuality of the subject, and includes the eventuality in topic time.

Within the documentary post-Classical material there are writers who use the perfect in a similar way. However, in general, the function and semantics of the perfect here is quite different, so that by the end of the period it is difficult to detect the semantic or functional difference with the aorist. Notable features of overlap include:

1. Felicitous modification by definite past time adverbial phrases;
2. Formerly detransitivising active stem forms are used as transitives;
3. The capacity of the perfect to head bounded homogeneous atelic predicates;
4. Felicitous collocation with the aorist in narrative.

It may be important that modification by definite past time adverbials occurs before collocation with the aorist in narrative, in that it could indicate a process of a weakening in the perfect's denotation that the post-situation is included in topic time.

⁴⁴ Formulation adapted from Crellin (2016b: 252).

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Abbreviations

A	Archaic
APIS	Advanced Papyrological Information System (see http://papyri.info/)
C	Classical
NA28	Nestle et al. (2012)
PC	Post-Classical
PSI 7	Vitelli & Norsa 1925
P.Haun. 2	Bülow-Jacobsen (1981)
P.Herm. 8	Rees (1964)
P.Lips. 1	Mitteis (1906)
P.Mich. 8	Youtie & Winter (1951)
P.Oxy. 12	Grenfell & Hunt (1916)
P.Petr. 2	Mahaffy (1893)
P.Tebt. 1	Grenfell, Hunt & Smyly (1902)
P.Tebt. 3	Hunt & Smyly (1933)
TLG	<i>Thesaurus Linguae Graecae</i> * Digital Library, see Pantella (ed.)

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The perfect in Medieval and Modern Greek

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The present-anterior/stative function of the ancient perfect placed it outside the core verbal system, which was organised around a binary (perfective/imperfective) aspectual opposition. By the early middle ages the increasingly marginal perfect had disappeared as a functionally discrete category, its role subsumed by the aorist (past perfective), and the notion of continuing relevance determined contextually. The rare pluperfect was also abandoned, though periphrastic replacements continued the overt, if optional, expression of relative-past meaning, a function later strengthened by contact with Romance. A perfect counterpart appeared only in modern times, however, functioning as a past perfective with a compulsory current-relevance reading, but remaining optional in that the aorist still carries present-anterior implications in appropriate contexts. Other periphrases were introduced in later antiquity specifically to express stativity. Most have continued in stative function into Modern Greek, though intense contact with Latin/Romance also encouraged present-anterior and relative-past functions locally at various times.

Keywords: anteriority, current relevance, loss and renewal, periphrases, Romance influence, stativity

1. The inheritance from antiquity

It is notoriously difficult to draw a convincing line between late antiquity and the early middle ages. Klaas Bentein in his recent monograph on HAVE- and BE-periphrases in ancient Greek (Bentein 2016) continues his analysis down to the 8th century CE, which would in principle be as good a place as any to start this chapter. Since, however, the evidence for the development of Greek over the following two to three centuries is meagre, detailed research based on the examination of large-scale literary and documentary corpora can in practice only begin after c. 1,000 CE.

But before presenting an account of the perfect in medieval Greek, a brief summary of the situation in late antiquity will be helpful in setting the scene; for a full account see Robert Crellin on ancient Greek in this volume. Already in classical times (5th-4th centuries BCE) use of the perfect and pluperfect forms of regular verbs (i.e. those with complete paradigms in which perfects/pluperfects contrasted with other tense forms) was comparatively rare; there are few if any contexts, for example, in which perfects or pluperfects are grammatically required, nor is the pluperfect normally used as a 'past of the past' in subordinate clauses denoting events that took place prior to the eventuality described in the main clause. Verb paradigms were organised first and foremost on the basis of a grammaticalised opposition between perfective ('aorist') and imperfective ('present') aspect stems, denoting, respectively, eventualities conceived by speakers as complete wholes, i.e. with bounds, and eventualities conceived as open-ended, i.e. with no such bounds; the main exception, the future, was progressively brought into the aspectual fold in early medieval Greek (see Markopoulos 2009; Lucas 2012). The use of any non-future verb form, therefore, whether finite or non-finite, regardless of its time reference (a property only of indicatives), mood or voice, *required* a speaker to select one of the two fully grammaticalised aspect stems according to his/her subjective 'viewpoint' with regard to a given situation.

Within this framework the perfect was not an aspect *sensu stricto*, since grammaticalised aspectual systems of the Greek type are inherently binary. Rather it was a facultative option available to make explicit an 'aspectual property' that could in principle be implied in context by the corresponding perfective forms. Specifically, the perfect highlighted the continuing relevance of a prior event up to and including the present moment (= a present anterior): e.g. if 'I have run a marathon' then I ran a marathon at some point in the past and that experience has remained a part of what characterises me until 'now', a temporal reference point in perpetual progression. It follows from the foregoing that the perfect does not simply or necessarily express the duration of a state or a habitual activity from its starting point to the present (e.g. 'I have played chess since 1966' would require a present indicative/imperfective present in Greek). Note, however, that the Greek perfect, unlike its English counterpart, was not normally used of the immediate past ('she has just arrived': aorist indicative/perfective past in Greek).

The pluperfect was in principle simply the 'past of the perfect', i.e. a form with a past-time reference point to delimit the continuing relevance of an earlier eventuality (= a past anterior); but in practice it was also used as an alternative to a simple past, usually the aorist/perfective past, in contexts where it was desirable to emphasise the temporal priority of some eventuality *vis-à-vis* a given past-time marker, i.e. with no particular insistence on its continuing relevance at that time (=

a relative/remote past). In the following example the conjunction ἐπεὶ [epé:] could mean “when” or “after”. Since ‘when’ is compatible with virtual simultaneity (cf. ‘what happened at that time when they deceived you?’), the pluperfect is used in the subordinate clause to make it clear that we are dealing here with a true sequence of events in the past:

- (1) ἐπειδὴ ἐξηπάτησθε μὲν ὑμεῖς [...], ἐξηπάτηντο δ’ οἱ [...] Φωκεῖς καὶ ἀνήρηνθ’ αἱ πόλεις αὐτῶν, τί ἐγένετο;
 epe:dè: ekse:páte:sthe mèn hy:mê:s, ekse:páte:nto d’
 when deceive.PPRF.PASS.2PL PTCL you.PL deceive.PPRF.PASS.3PL PTCL
 hoi pho:kê:s kai ané:ire:nti hai póle:s autò:n, tí
 the Phocians and destroy.PPRF.PASS.3PL the cities they.GEN.PL what
 egéneto?
 happen.PFV.PST.3SG
 “after not only you had been deceived [...], but the Phocians had been deceived and their cities had been destroyed, what happened (next)?”

Demosthenes *De Corona* 42

The lexical properties of individual verbs may support a stative reading of the notion of current relevance, cf. ‘she has come’ (and is now in a state of presence), ‘he has made a model’ (which is now in a state of existence), or an experiential one, cf. ‘she has read *War and Peace*’ (an event that is now part of her experience of life); and in some cases the notion of a prior event may be downgraded relative to an associated current state, which is then less likely to be understood as a result, cf. ‘she has lost all hope’ (i.e. is now in a state of hopelessness), where little or no attention is drawn to the time when hope was lost. In the case of ancient Greek I take such differences to be a by-product of the progressive extension of perfect formations to further verb classes in earlier periods, a development that resulted in a rather abstract overall conception of perfectness (along with the preservation of a few residual oddities from the past).

In a process replicated in the history of many other Indo-European languages (see e.g. Crellin’s account of Latin, this volume), the two sets of ancient Greek verb forms that referred to past events, whether directly (the aorist indicative/perfective past) or obliquely (the perfect indicative/present anterior), began to merge functionally in the role of past-time perfectives. This development began in early post-classical times and the rivalry was mostly resolved in favour of the aorist forms, which retained their capacity to convey by implication the property of continuing/current relevance. By the 6th century CE monolectic perfects were used only in perfective function in alternation with aorists, and the monolectic pluperfect was moribund. A few ancient perfect stems were, however, standardised

as aorists, often as replacements for anomalous ancient forms. By later Byzantine times (12th century CE onwards), only authors of ‘classicising’ literature still made regular use of the full array of ancient monoleptic perfects, and even then only as stylistically elevated variants of their aorist equivalents (see Horrocks 2010: 264–268; Hinterberger 2014).

That said, the classical language had also developed a number of perfect ‘periphrases’. The motivation for these and the extent to which any had been grammaticalised are still matters of debate. Three in particular remained in use in late antiquity to provide ways of emphasising certain features of ‘perfectness’ in a period when the monoleptic perfect was merging functionally with the aorist and the pluperfect had been largely abandoned (see Bentein 2016 for a thorough treatment). All three make use of εἰμί [e:mí] “be” or ἔχω [ékʰo:] “have” as auxiliaries; the past tense of both is imperfect in form, with no contrasting aorist (perfective).

First, the present and past of the verb εἰμί “be” were widely used with a perfect passive participle (the term is used here to define a morphological category with characterising formative -μένο- [-méno-]) in agreement with the subject to denote a state of the latter; the earlier parallel function of this periphrasis as a present/past anterior had by then fallen out of use. This construction, illustrated with a classical example in (2), continued strongly throughout the medieval period and has passed into Modern Greek (see §2.1 and §3):

- (2) οὐτε [...] ἦν πρεσβεία [...] ἀπεσταλμένη τότε
 ú:te ε:n presbé:a: apestalméne: tóte
 nor be.PST.3SG embassy send.PRF.PASS.PTCP then
 “nor was there any embassy on a mission at that time”

Demosthenes, *De Corona* 23

A further stative periphrasis, sporadically attested in low-middle registers of classical Greek but greatly extended during the period of Roman domination in the eastern Mediterranean (especially from the 1st century CE), employed the present or past of ἔχω “have” with a perfect passive participle in agreement with its direct object. This construction had not developed a parallel anterior function in classical times, perhaps because of its low frequency, and simply continued to express a state of the object in late antiquity. The formal correspondence with the Latin perfect periphrasis, developing in similar registers in the same period, is surely a non-coincidental factor in its revival during a time of intense Greco-Roman interaction and widespread bilingualism. The example in (3), from the Roman imperial period, is from the biographer and essayist Plutarch (c. 46–120 CE):

- (3) τὴν οἰκίαν [...] ἐξόδοις ἑπτὰ καταγείοις συντετρημένην [...] εἶχεν
 tè:n oikía:n eksódois heptà katageíois syntetre:méne:n
 the.F.ACC house.F.ACC exit.DAT.PL seven bore.PRF.PASS.F.ACC.SG
 ê:khen
 have.PST.3SG
 “he kept his house drilled through with 7 underground exits”

Plutarch *Titus Flamininus* 20.4

This option declined rapidly in the early middle ages but underwent a significant revival as a ‘true’ perfect, i.e. expressing the current relevance of a prior event, some centuries after the Fourth Crusade and the sack of Constantinople (1204), when large parts of the Greek-speaking world had again fallen under western control and Greek-Romance contact was widespread; see §2.1, and Drinka (this volume).

Finally, the present and past tenses of ‘be’ could also be used with active or passive aorist participles to form perfects and pluperfects. This was a restricted option in classical Greek, with the perfect serving chiefly as a ‘present anterior’, and the pluperfect as a ‘relative past’, regularly with a perfective-like reading; since this form, like the aorist, naturally allowed for implications of continuing relevance at a subsequent reference point, the relative past and past-anterior functions were effectively merged. The perfect seems to have had a very limited afterlife, but the pluperfect became a notable characteristic of low- to middle-register writing in later antiquity; it is still debated whether this represents a direct continuation of the earlier construction or an innovation motivated by the parallel existence of ‘progressive’/imperfective periphrases formed with ‘be’ and a present participle. The examples in (4), from the 6th-century *Chronicle* of Ioannes Malalas, are typical (note that, for convenience and uniformity of transcription, a medieval/Byzantine pronunciation is assumed from the 6th century onwards):

- (4) a. ἦσαν [...] τῷ χρόνῳ φθαρέντες
 ’isan to ’xrono ftha’rendes
 be.PST.3PL the.DAT time.DAT destroy.AOR.PASS.M.NOM.PL
 “they had been destroyed by time” Malalas 18.5.3
- b. ἦσαν [...] ποιήσαντες [...] ἐπίσκοπον
 ’isan py’isandes e’piskopon
 be.PST.3PL make.AOR.ACT.M.NOM.PL bishop.ACC
 “they had appointed a bishop” Malalas 18.30.3

This pluperfect construction continued into the middle ages in modified form but was eventually replaced *in toto* by an innovative formation which has now become the modern standard (see §2.2 and §3).

2. Perfect and pluperfect in Medieval Greek¹

2.1 Perfects

With the demise of the ancient monoleptic perfect, medieval Greek in fact shows no evidence for any fully systematic/paradigmatic perfect category, despite the use of various perfect-like periphrases in different areas at different times (Janssen 2013). In particular, the stative periphrases formed with ‘be’ or ‘have’ plus perfect passive participle remained essentially adjectival, with little or no suggestion of any anterior force before the 15th century. The evidence for this later development comes initially from areas like Crete and Cyprus, where there had been continuous western rule since the early 13th century and Greek-Romance bilingualism had long been routine; it is noteworthy that the corresponding Romance periphrasis already had anterior function. Anterior readings are then attested alongside stative ones, with some later regional spread. Έχω [‘exo] ‘have’ is the regular active auxiliary and είμαι [‘ime] ‘be’ its passive counterpart, though active unaccusative intransitives now begin to form their perfects with ‘be’ + innovative participles based formally on perfect passive models, on the pattern of the Romance type *je suis allé(e), sono andato/a*, (‘I have gone’) etc, which confirms the impact of the latter. Consider the example in (5) from 16th-century Venice, in which the construction is semantically parallel to cases involving the auxiliary ‘have’ (i.e. these are not simply stative in meaning, contrary to most of the examples with a true perfect passive participle, for which see immediately below):

- (5) εἶναι μισεμένος ᾗ πὺν τῇ Ῥώμῃ
'ine mise'menos pu ti 'romi
 be.PRS.3SG go.PRF.PASS.M.NOM.SG from the.ACC Rome.ACC
 “he has left Rome”
 Cataldi Palau (2003: 9, 482.3)

Stative examples with 'be', typically denoting result states, are well attested from ancient times (cf. (2) above), and remain common throughout the medieval period in all registers. The example in (6) is taken from the 10th-century Byzantine emperor Constantine Porphyrogenitus:

1. The data analysed in this section are largely drawn from the Verb Morphology volume of Holton et al. (2019), *Cambridge Grammar of Medieval and early Modern Greek*.

- (6) κατάρα [...] ἐστὶν ἐν τῇ ἁγίᾳ ταύτῃ τραπέζῃ [...] ἐγγεγραμμένη
 ka'tara estin en di a'jia 'tafth tra'pezi
 curse.F.NOM be.PRS.3SG in the.DAT holy.DAT this.DAT altar
 enjegra'meni
 inscribe.PRF.PASS.F.NOM.SG
 “a curse is inscribed on this holy altar”

Constantine Porphyrogenitus *On the Administration of the Empire* 13.50

By contrast, examples with ‘have’ are rare before the 15th/16th centuries; consider (7), taken from the 16th-century rhymed version of the *Tale of Alexander*:

- (7) εἶπε του τὴν θιβολή, νὰ τό 'χη ξηγημένο
 'ipe tu ti θivo'li, na 'to
 tell.PST.PFV.3SG he.GEN the.ACC story.ACC PTCL.FUT/MOD it.N.ACC.SG
 çi ksiji'meno
 have.PRS.SBJV.3SG explain.PRF.PASS.N.ACC.SG
 “he told him the story [of his dream], to have it explained”

Tale of Alexander (rhymed version) 166

The example in (8), which comes from an 11th-century south Italian legal text, is unique in already having an anterior sense:

- (8) (τὸ χωράφιον) τὸ ἄπερ [...] ἔχω ἀγορασμένον
 (to xo'rafio(n)) to 'aper 'exo
 (the.N field.N) the.N.ACC which.INDECL have.PRS.1SG
 agoraz'meno(n)
 buy.PRF.PASS.N.ACC.SG
 “(the field) that I have bought”

Trinchera (1865: 13, 13.13–14)

It is significant therefore that this isolated early instance should come from the only region where Greek had been in continuous contact with Latin/Italo-Romance since early antiquity.

Later examples of the ἔχω-periphrasis are more frequent, as noted, and both the ἔχω and εἶμαι periphrases, functioning now as active and passive/unaccusative partners, may be interpreted as perfects with present anterior force. (9a) comes from a famous Cypriot legal text, the *Assizes* (15th-century manuscript), and (9b) from a business letter written in Thessaloniki in 1697:

- (9) a. ἐὰν [...] ἔνι εἰς τὸ σκολεῖον σταλμένος
 e'an 'eni is to skol'io(n) stal'menos
 if be.PRS.3SG to the.N.ACC school.N.ACC send.PRF.PASS.M.NOM.SG
 “if [...] he has been sent to school”

Assizes B 412.5–6

- b. τοὺς ἔχει [...] τόσα ἄσπρα φαγωμένα
tus 'eçi 'tos(a) 'aspra
 they.M.GEN.PL have.PRS.3SG so_many.N.ACC.PL coin.N.ACC.PL
faɣo'mena
 eat.PRF.PASS.N.ACC.PL
 “he has ‘eaten’ so much of their money/cheated them out of so much
 money”
 Mertzios (1947a: 46, 232.56)

Despite clear anterior uses becoming routine in the areas in which they first originated, and common enough elsewhere over time, these periphrastic formations have survived in standard Modern Greek with a somewhat restricted distribution and with stative force only. Since the participle once again functions ‘adjectivally’ as a predicative subject complement (εἶμαι-periphrasis) or object complement (ἔχω-periphrasis), the two constructions are not treated as paradigmatic ‘perfect formations’ (Moser 1988). This swift reversion to the late antique and early medieval state of affairs was driven by the emergence of a rival perfect formation, which first developed in the early modern period and systematically replaced its earlier rival in the expression of anteriority (see §3).

For most of the medieval period, therefore, present anteriority was regularly expressed by use of the aorist (perfective past), sometimes with the support of a suitably discriminating temporal adverbial. The example in (10) is taken from the late medieval/early modern *Life of Aesop* (transmitted in various versions dating from the 15th–17th centuries CE):

- (10) νὰ ἰδῇς εὐμορφίαν ὅπου δὲν τὴν εἶδες ποτέ σου
na iðis evmor'fian opu ðen din
 PTCL.FUT/MOD see.PFV.SBJV.2SG beauty.F.ACC that.REL not it.F.ACC
'ides po'te su
 see.PFV.PST.2SG ever you.GEN
 “you will see a beauty that you have never (before) seen in your life”
Life of Aesop I 256.6–7

This function of the aorist continued throughout the period when the participial periphrases had acquired an anterior function and is still routine in Modern Greek, where the use of the perfect remains essentially optional (see §3).

2.2 Pluperfects

The ancient monolectic pluperfect continued to be used in higher-register written texts throughout the middle ages, but regularly as the equivalent of a simple past-tense indicative, normally the aorist (perfective past), which was the default

option for the location of an event in the past relative to another past-time eventuality. This ‘past of a past’ reading often has to be inferred from the overall context, as in the following 16th-century example:

- (11) ἔγινεν ἔτσι ὡς καθὼς εἶπεν καὶ ἐπροφήτευσεν
 'ejinen 'etsi os ka'θos 'ipe(n) ke epro'fitefse(n)
 happen.PFV.PST.3SG thus as just_as say.PFV.PST.3SG and predict.PFV.PST.3SG
 “it happened just as she (had) described and predicted”
 Kartanos, *Old and New Testaments* 334.9–10

But it may also be overtly supported by a suitable adverbial or adjectival modifier. Consider the second of the two instances of ἦτον ['iton] “was” in (12), taken from the 14th-century *Chronicle of the Morea* (Copenhagen/H[avniensis] manuscript), which describes in verse (line breaks are marked |) the capture of Constantinople and the subsequent rule of the Peloponnese by the de Villehardouin family. The author is often taken to be a bilingual Frank, given the generally anti-Greek sentiments of the narrative:

- (12) πέθανε [...] τοῦ κόντου ντὲ Μπριένε ἡ γυνὴ ὅπου ἦτον αὐταδέλφη | τοῦ
 δοῦκα [...] τῶν Ἀθηνῶν [...], | ἐνῶ ἦτον πρώτη σύμβια [...] | τοῦ ἀφέντη τῆς
 Καρύταινας
 'pethane tu 'kondu de br'jene i ji'ni
 die.PFV.PST.3SG the.GEN count.GEN de Brienne the.F.NOM wife.F.NOM
 pu 'iton afta'delfi tu 'duka ton
 that.REL be.PST.3SG full_sister.F.NOM the.GEN duke.GEN the.GEN
 Athi'non, e'no 'iton 'proti 'simvia tu
 Athens.GEN whereas be.PST.3SG first.F.NOM.SG spouse.F.NOM.SG the.GEN
 a'fendi tis Ka'ritenas
 lord.GEN the.GEN Karytaina.GEN
 “the wife of count de Brienne died who was the sister of the duke of Athens,
 though she was (i.e. had been) first the spouse of the lord of Karytaina”
Chronicle of the Morea (H) 8001–5

Though the ancient pluperfect had disappeared from the ordinary spoken language in late antiquity, the periphrasis comprising the past tense of ‘be’ + aorist participle (mostly now active) was still available to mark relative past time overtly. When inflected participles other than the perfect passive were abandoned in more informal registers – they were residual well before 1000 CE – the indeclinable aorist active gerund in -(σ)οντα(ς) was substituted, though this too dropped out of use in the later middle ages, taking this pluperfect periphrasis with it. The majority of early examples come from south Italy and many later ones are from the Peloponnese and adjacent islands such as Kythera. The example in (13) is again taken from the

Chronicle of the Morea. Note that the formal pluperfect is conjoined with an aorist (perfective past) in identical relative-past function:

- (13) ἦτον θλιμμένος, [...] | [...] διὰ τὸ πασσάτζο | ἐκεῖνο ὅπου ἦσαν καταπιάσοντα
 κι ἀρτίως ἐσκανταλίστη
'iton thli'menos ðja to pa'sadzo
 be.PST.3SG depress.PRF.PASS.M.NOM.SG because_of the.ACC expedition.ACC
e'kin opu 'isan kata'pjasonda kj ar'tios
 that.ACC that.REL be.PST.3PL undertake.PFV.GERUND and recently
eskanda'listi
 confound.PFV.PST.PASS.3SG
 “he was depressed because of that expedition that they had undertaken and
 (which) had recently been confounded” *Chronicle of the Morea* (H) 185–7

There was no routine passive equivalent, since the aorist passive gerund was at best a marginal category in medieval Greek; the relatively few attested examples are built on the aorist passive stem with the addition of the active ending and have a somewhat ‘provisional’ look: e.g. ἦσαν ἀποσταθ-όντα (*Chronicle of the Morea* (H) 9090) “were/had been exhausted”, from ἀποστέκω “exhaust”, aorist ἀπεστάθ-η(ν). But the periphrases with a perfect passive participle could always be used as past-time statives, as expected. For the former, see the first line of (13); an example of the latter, taken from the probably 12th-century tale of the eastern border guard Digenes Akrites (E(scorial) manuscript) is:

- (14) τὸν γρόθον του εἰς τὸ μάγουλον εἶχεν ἀκουμπισμένον
to(n) 'grothon du s to 'magulo(n) 'icen
 the.M.ACC fist.M.ACC he.GEN ON the.ACC cheek.ACC have.PST.3SG
akumbiz'meno(n)
 rest.PRF.PASS.M.ACC.SG
 “he had his fist rested against his cheek” *Digenes Akrites* (E) 418

The advent of anterior (true perfect) uses of the periphrases employing the present tense of ἔχω ['exo] and εἶμαι ['ime] after the 15th century (see § 2.1) naturally opened the door to pluperfect equivalents, albeit with relative-past rather than strictly past-anterior meaning. The example in (15) comes from the 17th-century *Chronicle of the Turkish Sultans*:

- (15) [...] ὅπου ἦτονε πρωτότερα τυφλωμένος
opu 'itone pro'titera tiflo'menos
 that.INDECL be.PST.3SG earlier blind.PRF.PASS.M.NOM.SG
 “[...] who had previously been blinded”

Chronicle of the Turkish Sultans 29.27–28

These, like their perfect counterparts and active partners formed with ἔχω, were relatively short-lived, being eclipsed in turn (in other than stative function) by a novel pluperfect periphrasis, to which we now turn.

Ancient Greek made regular use of a periphrasis consisting of ἔχω “have” with a (normally aorist) infinitive in the sense ‘be able to X’. By late antiquity this had evolved in colloquial registers into a future/conditional meaning ‘I shall/will’ (with present-tense ἔχω), ‘I should/would (have)’ (with past-tense εἶχον/εἶχα). The latter, which was originally used in the apodoses of hypothetical/counterfactual conditional sentences, particularly those exploring ‘alternative’ versions of the past, eventually came to be used also in the associated protases, cf. ‘if I would have ...’ as an alternative to ‘if I had ...’ in some English varieties (a similar development can also be seen in the standard German type *wenn ich das gewusst hätte* ...). During the earlier part of the medieval period the future ἔχω-periphrasis was replaced in lower registers by a corresponding construction with auxiliary θέλω (lexically = “wish/want”), and the past form of this, ἤθελον/ἤθελα + infinitive, began to be used in conditional apodoses. But the fact that the past of the ἔχω-periphrasis persisted in protases suggests that it was reanalysed there as a marker of the logical anteriority of the hypothetical eventuality described in the protasis *vis-à-vis* the equally hypothetical, but logically consequential, eventuality described in the apodosis. In other words, the sense shifted from ‘if I would have X ..., I would have Y ...’ to ‘if I had (first) ..., I would (then) have ...’. An important factor in this process may once again have been western conquest after the Fourth Crusade and the subsequent exposure of Greek to Romance, where pluperfect indicatives were also used as auxiliaries in such hypothetical/counterfactual conditional clauses alongside overtly modal formations in the same function (cf. *si j’avais eu le temps* ... beside *si j’eusse eu le temps* ... “if I had had the time ...”, etc.). Despite the contrast in the form of the verb following the auxiliary (aorist infinitive in Greek versus ‘past participle’ in Romance), it is surely significant that many of the earliest examples of infinitival pluperfects come from areas under long-term western occupation (e.g. the Ionian islands, the Peloponnese, Crete, Cyprus) and that the construction is absent from Pontus (Black Sea coast) and Turkish controlled areas of Asia Minor. From here it was a relatively simple step to extend the use of the infinitival pluperfect from counterfactual situations of purely logical anteriority to real-world situations of actual temporal anteriority, i.e. to use it to denote events that had taken place before other events took place, thereby creating a new pluperfect (Chatzidakis 1905: 598–609, Aerts 1965; Moser 1988; Horrocks 1996: 169–170 and 2010: 300–301).

As a true pluperfect (relative past, ± implications of continuing relevance) the construction first appears in writing from the 14th c. CE onwards, but already with a frequency and geographical spread that suggest it was well established in many

spoken varieties at an earlier date (a chronological mismatch that makes tracing the earliest stages of its development impossible). The infinitival pluperfect, formed from its earliest attestations almost exclusively with aorist (perfective) infinitives, both active and passive, eventually triumphed over all its potential rivals and is now the standard form in Modern Greek, as well as the only construction in which the infinitive survives (though the form in question is barely recognised as such by speakers with no training in the history of their language). The example in (16) is again taken from the *Chronicle of the Morea*:

- (16) ἀληθινούς ἀνθρώπους, ὅπου ἐκοπίασαν κ' ἔβαλαν τὸν βασιλέαν ἐκεῖνον | εἰς
 τὸ σκαμνὶ τῆς βασιλείας ὅπου τὸ εἶχεν χάσει
aliθi'nus an'thropus, o'pu ko'pjasan k
 true.M.ACC.PL men.M.ACC.PL that.REL labour.PFV.PST.3PL and
'evalan ton vasi'ljan e'kinon is to skam'ni tis
 put.PFV.PST.3PL the.ACC king.ACC that.ACC on the.ACC throne.ACC the.GEN
vasi'ljas o'pu to 'icen 'xasi
 empire.GEN that.REL it.ACC have.PST.3SG lose.PFV.INF
 “true men who laboured to put that king on the throne of the empire that he
 had lost” *Chronicle of the Morea* (H) 621–3

It is important, to repeat, however, that simple aorists were regularly used in exactly the same function and that the choice of a pluperfect was, strictly speaking, a matter of preference in contexts where the writer felt that the temporal anteriority of one past event over another needed to be emphasised (though the form also provided a useful, metrically distinct option in verse texts).

It is equally important to note, despite some earlier claims to the contrary, that there is no trace whatsoever of a corresponding perfect formation in medieval texts (Horrocks 2010: 297, 300f., 387, 425; Janssen 2013). For this we must turn to the modern period.

3. Perfect and pluperfect in Modern Greek

At the beginning of the 20th century the German scholar Albert Thumb was among the first to recognise the existence of perfects formed with ἔχω + aorist infinitive (Thumb 1912: 153–156), but he noted that these were still rare and regionally restricted in the late 19th century vernacular, and suggested they were only just beginning to gain more general currency through wider use in literary texts, especially poetry. In confirmation, the periphrasis is significantly absent from nearly all the early grammars of Modern Greek. Such evidence as we have indicates that it was in origin a late analogical formation introduced to complement the well-established

pluperfect, initially perhaps in the late 17th- or early 18th-centuries as a popular innovation in northern areas, but later adopted, validated and generalised by the more adventurous among literary writers and poets.

Possible early examples, which are very rare indeed, include the following; the first two are from legal texts written in Albania and (Greek) Macedonia respectively, the third is taken from a translation of *Don Quixote* made in 18th century Constantinople/Istanbul:

- (17) a. ἄλλα ἄσπρα ἔχει δώσει διὰ κίρι
 'al(a) 'aspra 'eçi 'ðosi ðja ki'ri
 other.ACC.PL coin.ACC.PL have.PRS.3SG give.PFV.INF for wax.ACC.SG
 "he has paid further money for (candle) wax"
 Mertzios (1947a: 74, 243.15/23) (1697, Dyrrachion)
- b. ἡμεῖς τοῦ δίνομεν ἐκεῖνο τὸ δῶρον ποὺ ἔχομεν συμφωνήσει
 i'mis tu 'ðinomen e'kino to 'ðoro(n) pu
 we.NOM.PL he.GEN.SG give.PRS.1PL that.ACC the.ACC gift.ACC that.REL
 'exome(n) simfo'ni
 have.PRS.1PL agree.PFV.INF
 "we give him that (i.e. annual) gift that we have agreed to"
 Mertzios (1947b: 269.5–6/24) (1706, Siatista)
- c. ἐκεῖνοι ὅπου δικαίως ἔχουν ἀποκτήσει μεγάλην φήμην
 e'kini opu ði'keos 'exun apo'ktisi
 those.NOM.PL that.REL justly have.PRS.3PL acquire.PFV.INF
 me'gali(n) 'fimi(n)
 great.ACC fame.ACC
 "they who have justly obtained great fame" *Don Quixote* 164.13–14

Now well established in Modern Greek as a grammatical pair, the infinitival perfect and pluperfect periphrases are both used to refer to an event that took place prior to a subsequent temporal reference point. In the case of the perfect, however, this reference to the past is always combined with the notion of the continuing relevance of the event in question at the reference point (the time of utterance/'now'), i.e. it functions exclusively as a present anterior. The pluperfect merely denotes an event that occurred in the past relative to a more recent time in the past, i.e. it functions as a 'relative past', normally with a perfective-type reading that may or may not carry contextual implications of continuing relevance at the reference point.

The chief role of the perfect is to disambiguate a potentially ambiguous utterance (see Mackridge 1985: 116–118, Holton, Mackridge & Philippaki-Warbuton 2012: 229–234). In normal circumstances it can generally be replaced by an aorist (perfective past) with no significant change of meaning. For example, the following sentence with an aorist verb form can be interpreted in one of two ways, according

to the needs of the context (henceforth examples from contemporary Greek are given with the standard monotonic accentuation):

- (18) ήρθε στην Αθήνα για να σε δει
'irthe stin a'θina ja na se
 come.PFV.PST.3SG to_the.ACC Athens.ACC for PTCL.MOD you.ACC.2SG
'ði
 see.SBJV.3SG
 a. “s/he came to Athens to see you”
 b. “s/he has come to Athens to see you”

In other words, the sentence may indicate either that s/he came to Athens in the past with no necessary link to the present, or that s/he came to Athens in the past with the specific corollary that s/he is still there at the time of speaking. Substitution of the corresponding perfect, *έχει έρθει* [*'eçi 'erθi*], = have.PRS.3SG come.PFV.INF, would make it clear that the second reading is what is intended. We should note here that the perfect is more common in spoken discourse than written, and that some speakers use it more than others, whether as a matter of personal preference or merely to introduce stylistic variety.

The perfect may be used to describe events that occurred once or any number of times before ‘now’, and repeated occurrences may have continued to the present or ceased some time ago – provided that they continue to have currently relevant consequences. Within these parameters, however, there are some significant differences between Greek and English. In (19) below, for example, the corresponding English perfect can only carry a ‘just now’ reading, i.e. s/he enters the state of ‘being alive’ resulting from the event of ‘being born’ at the reference point ‘now’:

- (19) Έχει γεννηθεί το 1981
'eçi jeni'θi to 1981
 have.PRS.3SG bear.PFV.PASS.INF the.ACC 1981
 “s/he was born in 1981” (‘has been born’ can refer only to the immediate past)

In the specific case of childbirth the moment of transition into the result state of ‘being alive’ is more or less identified with that of the occurrence of the punctual causal event of ‘being born’. It then follows that, if someone was born at time X and as an immediate consequence *is now* alive, X can only be the most recent past conceivable (effectively the present), and that reference to a more distant past is precluded. This is the English reading of ‘current relevance’ in this case. In Greek, however, an immediate-past reading is standardly conveyed by the aorist indicative in combination with μόλις ‘just’ (an unmodified aorist naturally allows for death in the interim): e.g. μόλις γεννήθηκε [just bear.PFV.PST.3SG], ‘s/he has just been

born”. More importantly, the notion of current relevance is understood differently. If someone was born at time X and as an immediate consequence *was then* alive, X too can only be that past time, even though the state entered at that time *has persisted till now*. On this reading the Greek perfect in (19) can allow reference to a more remote past (note the compatibility with a definite temporal adverbial) while simultaneously maintaining the link to the present.

A further difference in the conceptualisation of current relevance can be seen in (20):

- (20) Ο Καζαντζάκης έχει γράψει 10 μυθιστορήματα
 o kazan'dzakis 'eçi 'γρapsi 10 miθisto'rimata
 the.NOM Kazantzakis.NOM have.PRS.3SG write.PFV.INF 10 novel.ACC.PL
 “Kazantzakis wrote ten novels” (‘has written’ implies that he is still alive)

Here, the use of the English perfect would indicate that the author wrote ten novels in the past and is still at the present time the writer of ten novels, i.e. that he is alive and could in principle write some more. But Kazantzakis died in 1957. The Greek perfect in (20) therefore indicates that the author wrote ten novels at various times in the past and that these are still available to be read. By contrast, a sentence such as ‘Kazantzakis is the author of ten novels’, while similarly allowing for the possibility that Kazantzakis is dead even as his work persists, fails to lay comparable emphasis on the past events of composition that led to the creation of the novels in question. The relative emphasis on the past event along with the potential detachment of continuing relevance from the current situation of the subject, as seen in (19) and (20), are perhaps natural consequences of the fact that the Greek perfect shares many of its properties with the aorist (perfective past), by which it can generally be replaced, as noted.

Before turning to the pluperfect, a few words should be said here about the modern continuations of the periphrastic constructions discussed above (see especially §2.1). These comprise an active form consisting of έχω “have” followed by the perfect passive participle, which agrees in number, gender and case with the object, (21a), and its passive counterpart consisting of είμαι ‘be’ with the same participle agreeing with the subject, (21b):

- (21) a. (τον) έχω δεμένο το σκύλο
 (ton) 'exo δε'meno to
 (it.M.ACC) have.PRS.1SG bind.PRF.PASS.M.ACC.SG the.M.ACC.SG
 'skilo
 dog.M.ACC.SG
 “I have the dog tied up”

- b. είναι δεμένος ο σκύλος
'ine de'menos o 'skilos
 be.PRS.1SG bind.PRF.PASS.M.NOM.SG the.M.NOM.SG dog.M.NOM.SG
 "the dog is tied up"

Both of these are present-stative in force, as indicated in the translations, both have past-time equivalents as expected, and neither is regarded as a fully functional perfect formation in the standard modern language. There are, however, some regional/dialectal residues of earlier anterior uses (for which see §2.1, though even in Medieval Greek these constructions routinely emphasise state over action).

The standard pluperfect is formed with the past tense of *έχω* "have", namely *είχα* "had", and the aorist/perfective infinitive, exactly as in Medieval Greek. It may sometimes be used absolutely (in competition with the aorist/perfective past), explicitly to locate some eventuality in a 'remote' past:

- (22) (Το καλοκαίρι του 2000 δεν ήσουν στην Αίγινα;) Όχι, το 2000 είχα πάει/πήγα στην Κρήτη.
(To kalo'keri tu 2000 den 'isuna stin 'Ejina?) 'Oçi,
 the.ACC summer.ACC the.GEN 2000 not be.PST.2SG in_the Aegina? No,
to 2000 'ixa 'pai/'piya stin 'Griti
 the.ACC 2000 have.PST.1SG go.PFV.INF/go.PFV.PST.1SG to_the Crete
 "(Weren't you on Aegina in the summer of 2000?) No, I'd gone/went to Crete."

Usually, however, it describes an eventuality in the past that took place prior to another past time, with or without the implication of continuing relevance at that time, i.e. it functions in this case as a relative past rather than a past anterior. It may again be replaced by an aorist (perfective past) in many cases, especially in main clauses where it is clear that the action in question preceded another eventuality in the past:

- (23) a. Είχα δει /είδα τον αδερφό σου πολλές φορές (πριν να φύγει)
'ixa di/'ida ton ader'fo su
 have.PST.1SG see.PFV.INF/see.PFV.PST.1SG the.ACC brother.ACC you.GEN
po'les fo'res (prin na 'fiji)
 many.ACC.PL time.ACC.PL (before PTCL.MOD leave.PFV.SBJV.3SG)
 'I had seen/saw your brother many times (before he left)'
 b. Πέρσι είχα πάει /πήγα στην Κρήτη
'persi 'ixa 'pai/'piya stin 'Griti
 last_year have.PST.1SG go.PFV.INF/go.PFV.PST to_the.ACC Crete.ACC
 "last year I had gone/went to Crete [and then ...]"

It may also be replaced by an aorist in subordinate clauses describing an action that clearly preceded that of the main clause in past time:

- (24) a. Αφού της είχα φωνάξει /φώναξα, ήρθε αμέσως
a'fu tis 'ixa fo'naksi/'fonaksa,
 because she.GEN have.PST.1SG call.PFV.INF/call.PFV.PST.1SG
'irthe a'mesos
 come.PFV.PST.3SG immediately
 “because I had called/called (to) her, she came at once”
- b. Όταν είχε ολοκληρωθεί /ολοκληρώθηκε η συλλογή των δεδομένων,
 προχωρήσαμε σε ποιοτική και ποσοτική ανάλυση.
'otan 'ice olokliri'ti/olokli'rothike
 when have.PST.3SG complete.PFV.PASS.INF/complete.PFV.PASS.PST.3SG
i silo'ji ton dedo'menon, proxo'risame
 the.NOM collection.NOM the.GEN.PL data.GEN.PL proceed.PFV.PST.1PL
se pioti'ki ke posoti'ki a'nalisi
 to qualitative.ACC and quantitative.ACC analysis.ACC
 “when the collection of the data had been completed/was completed, we
 proceeded to a qualitative and quantitative analysis”

It is, however, more or less obligatory if the verb in question is non-stative and combined with adverbs such as ήδη/κιόλας “already” and (δεν) ... ακόμη “(not) ... yet”:

- (25) Την περασμένη Δευτέρα δεν είχα ακόμη στείλει το γράμμα
tim beraz'meni de'ftera den 'ixa a'komi 'stili
 the.ACC last.ACC Monday.ACC not have.PST.1SG yet send.PFV.INF
to 'grama
 the.ACC letter.ACC
 “last Monday I had not yet sent the letter”

Finally, we may note that in the protases of hypothetical or counterfactual conditional sentences in past time, the pluperfect may replace the usual imperfect (imperfective past), which is in fact temporally neutral, with the meaning, according to context, of any of the following: ‘if X were to happen/were happening/had happened ...’. In this role the pluperfect makes it clear that we are dealing with an ‘alternative/unreal’ past, or at least a supposition about an unknown past: ‘if X had happened (but it didn’t), then Y would have followed (but it didn’t either)’, or ‘if X had happened (I have no idea), then Y would have followed (let’s see if it did)’:

- (26) Αν σου το έλεγε /είχε πει [...]
an su to 'eleje/'ice pi [...]
 if you.GEN it.ACC say.IPFV.PST.3SG/HAVE.PST.3SG say.PFV.INF
 “if s/he had told you [...]”

4. Conclusion

The history of the perfect in Greek is that of a category with a function (present anterior) that consistently fell outside the aspectual core of the verbal system and which, in the middle ages, had effectively ceased to exist, its role being performed by the aorist (past perfective) in contexts that required or supported a present-anterior reading. The ancient pluperfect (in its role as a relative past, with optional past-anterior implications) was likewise abandoned, being once again generally replaceable by the aorist. But in this case, the fact that it was sometimes necessary to mark the prior occurrence of one event relative to another promoted the formation of various periphrastic replacements (initially 'was' + aorist participle/gerund, later 'had' + aorist infinitive, which eclipsed its earlier rival). Only in modern times did the (infinitival) pluperfect acquire a perfect counterpart, though the use of this remains essentially optional (chiefly for clarification) and the aorist continues to be used to express the current relevance of a past event at the time of utterance. It should be noted, however, that the Greek perfect is more of a past tense than its English counterpart, being analogous to a past perfective even as it emphasises the current relevance of a prior occurrence.

There were a number of other periphrastic formations formed with 'be' or 'have' and the perfect passive participle, but it is clear that these were always essentially stative in force and have continued in stative function into the modern language. Only in times of intense contact with Latin, and later Romance, did these show any tendency to develop as true perfects (with anterior function) or pluperfects (with relative past function).

5. Summary

Alternative meanings or forms of expression are separated by a slash, and less common forms (which are often also local in the medieval and modern periods) are placed in parentheses. PPP = perfect passive participle, AP = aorist participle, AG = aorist gerund, AINF = aorist infinitive. It should be born in mind that the principal function of the aorist indicative throughout the history of Greek has been that of a simple past perfective, and that any perfect/pluperfect nuances are contextually conditioned. Equally, explicitly perfect and pluperfect forms should be seen largely as optional forms of expression used to emphasise or clarify situations in which an anterior or relative past meaning is intended:

Meaning	Late antique (7–8c)	Early medieval (9–12c)
present anterior	aorist/(perfect)	aorist
past anterior/relative past	aorist/past 'be' + AP/(pluperfect)	aorist/past 'be' + AP
present stative	present 'be/have' + PPP	present 'be/have' + PPP
past stative	past 'be/have' + PPP	past 'be/have' + PPP
Meaning	Later medieval (13–16c)	Modern (17c – present)
present anterior	aorist/(present 'be/have' + PPP)	aorist/present 'have' + AINF/ (present 'be/have' + PPP)
past anterior/relative past	aorist/past 'be' + AG/ past 'have' + AINF/ (past 'be/have' + PPP)	aorist/past 'have' + AINF/ (past 'be/have' + PPP)
present stative	present 'be/have' + PPP	present 'be/have' + PPP
past stative	past 'be/have' + PPP	past 'be/have' + PPP

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The perfect system of Old Albanian (Geg variety)

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The Old Geg perfect system has a morphology resembling that of neighbouring Romance perfects ('have'/'be' + past participle). It is a major sub-system of the verbal system, using nearly all synthetic forms of the auxiliary. Moreover, there are *surcomposé* forms. The present perfect usually has a resultative or existential reading, other readings being very rare. The past tenses of the perfect system indicate anteriority to a reference point in past time. Among the *surcomposé* forms, there is a pluperfect of the perfect, which indicates a second, deeper layer of anteriority. The non-indicative forms of the perfect system serve as past-tense counterparts to the respective non-indicative categories of the synthetic verbal system. Finally, the Old Geg present perfect gives rise to the so-called admirative, a present expressing the speaker's surprise, disbelief, irony or doubt, or his or her unwillingness to vouch for the truth of the statement given.

Keywords: evidentiality mood, admirative, Old Albanian, Old Geg, 'have'/'be' perfects

*In loving memory of Hermann Ölberg,
who taught me Albanian and much beyond.*

1. General characteristics: Affiliation, areal relationships, attestation, and sources of Albanian

Albanian constitutes one of the eleven major branches of the Indo-European language family. As far as its position within the language family is concerned, there is evidence that it is closely related to Greek and Armenian (Schumacher & Matzinger 2013: 48–49), whereas the fact that it is a satem language (i.e. that it shares certain phonological developments with eastern branches of Indo-European) is less significant. Additionally, it is necessary to mention that Albanian is one of the core languages of the Balkan *Sprachbund* and thus shares many morphological and

syntactic peculiarities with other languages of the area, in particular with Modern Greek, Macedonian, Bulgarian, Aromanian, and Romanian (cf. Friedman 2006). As for the morphology of the perfect in Albanian, this is quite reminiscent of the Balkan Romance languages Romanian and Aromanian and was certainly influenced by them. It must not be forgotten, though, that Albanian was also influenced by the (now extinct) Romance language Dalmatian as well as by Italian, since Venice had intensive trade relations with the coastal cities of the Albanophone area; the cities of Shkodër and Durrës and their hinterland actually belonged to the territory of Venice up to the late 15th century.

Since the beginning of its written attestation, Albanian has been divided into two dialect groups: Geg (northern) and Tosk (southern). Its oldest attestation consists of single words and sentences in non-Albanian contexts in 15th-century CE manuscripts and texts. Its first literary testimonies are printed books, which were produced from the mid-16th century CE onwards. The period from the mid-16th century until the end of the 18th century is conventionally called Old Albanian, and the period from 1800 up to the present is called Modern Albanian. Until the early 20th century, there were no standards, and each author used his own orthography and had to rely on his own dialect or tried to follow prestige dialects such as the dialect of the city of Shkodër (NB: up to the mid-20th century, there was not a single female author). In 1908, a standard orthography suitable for both dialects was developed, but it was only after 1946 (when Albania became a communist state) that a standard language was devised on the basis of Tosk (henceforth called Modern Standard Albanian). – In the following, I investigate the perfect system of Old Albanian, more precisely the system of Old Geg, because Old Geg is not only the earliest well-documented variety of the language but also the variety where the perfect system is most elaborate.

1.1 The most important Old Geg literary sources

There are three major sources of Old Geg, the Catholic theological works of Buzuku, Budi, and Bogdani. Although most of Buzuku's and Budi's texts are translations from Latin and Italian, there is no great disadvantage in this, because we know most of the source texts underlying the translations, which is why we can tell that the translations are not slavish but fully idiomatic. Therefore, what will be said here about the perfect in Old Geg is beyond doubt. In the following, the three authors and their works are enumerated in chronological order:

- a. The so-called 'missal' of Gjon Buzuku¹ (1555 CE; edition used: Ressuli 1958): the main part of this book, whose title page is missing, is an Albanian translation of

1. As was discovered recently, Buzuku was a Franciscan friar in Venice looking after a community of exiles from northern Albania (cf. Nadin 2012: 230–325).

a pre-Tridentine Roman missal² but there are also other religious texts. Hence, the book contains mostly narrative Biblical text passages of all sorts. Most examples in the following will be taken from this. The verbal system used by Buzuku was investigated in a large monograph by Fiedler (2004). Naturally, this paper is indebted to Fiedler, although my conclusions sometimes differ slightly from his.

- b. The post-Tridentine Catholic theological works by Bishop Pjetër Budi (1618–21 CE; 3 vols.: I *Dottrina Christiana*; II *Rituale Romanum*; III *Speculum Confessionis*; henceforth: Budi DC, Budi RR, Budi SC; editions used: Svane 1985; Svane 1986a; Svane 1986b). These are less useful for the purposes of the investigation conducted here, because they contain mostly prescriptive text with rather few perfect forms. However, Budi's works are important for determining the development of the admirative (see §7.3).
- c. The *Cuneus prophetarum* by Bishop Pjetër Bogdani (1685 CE; edition used: Omari 2005): a Catholic eschatological work, mainly consisting of a retold (i.e. not translated) version of the whole Bible, interspersed with learned remarks and anti-Islamic polemics; it contains mostly narrative text and is thus also very useful for collecting perfect forms.

A minor source of Old Albanian referred to in the following is the Latin-Albanian dictionary by Frang Bardhi (1635 CE), whose name is also known in its latinised form Franciscus Blanchus (edition used: Demiraj 2008).

1.2 The transcription system used³

In the following, all examples given have been tacitly transcribed into the orthography of Modern Standard Albanian, and readers should be aware that they are presented with interpretations of differing and altogether deficient orthographies.

2. A Roman missal is a book for saying mass in its Roman Catholic form. As such, it is naturally written in Latin, and the scripture readings are usually taken from the Vulgate.

3. The examples and abbreviations follow the Leipzig Glossing Rules and/or are listed together with the list of abbreviations for the volume as a whole. For convenience, the following abbreviations are also given here: IUP = inverted unverbated perfect (cf. 7.1); non-standard abbreviations used in morphemic glossing: AOR = aorist indicative; CLPP = clipped past participle (cf. 7.1); CVBP = converb-forming particle (creates a converb when placed before the past participle); INFP = infinitive-forming particle (creates an infinitive when placed before the past participle). For the sake of brevity, I will gloss the personal pronoun of the 2sg as *thou* and *thee*, and the possessive pronoun of the 2sg as *thy*. However, in translations I will only use *you* and *your*. Vulgate citations are taken from Weber & Gryson (1994), Greek New Testament citations from Nestle & Aland (2015), King James Version citations from Wright (2010), and citations from Luther's translation from Luther (1534).

While the Old Geg consonant system was virtually identical with the modern system (and can thus be rendered using the modern orthography),⁴ it had a much richer vowel system than Modern Standard Albanian. The additional vowel phonemes and their graphic representations are as follows:

Table 1. The Old Geg long, short-nasal, and long-nasal vowel phonemes

vowel phoneme	/a:/	/e:/	/i:/	/o:/	/u:/	/y:/	/ã:/	/ẽ:/	/ĩ:/	/ũ:/	/ỹ:/	/ã:/	/ẽ:/	/ĩ:/	/ũ:/	/ỹ:/
graphic representation	ā	ē	ī	ō	ū	ȳ	â	ê	î	û	ÿ	ā	ē	ī	ū	ȳ

Furthermore, since the Albanian verb is more complex than modern orthography admits, the various verbal affixes (e.g. negations, non-active affix *u*) will be presented as segmented parts of the verbal forms, with their functions represented in morphemic glossing.

2. Terminology

In order to avoid misunderstandings, a section on terminology is necessary.

First, I will use the term ‘event’ not in its everyday meaning but as a technical term when speaking about verbs. My definition of ‘event’ is taken from Kemmer (1993: 8): “The term ‘event’ ... will serve as a convenient cover term for actions, processes and states – in other words, an event is the conceptual correlate of a verb”.

Second, I use ‘anterior’ as a term referring to relative tense and not in the way it is used by Bybee et al. (1994: 51–105, especially 53–55). That is, in the following ‘anterior’ is used as an adjective with the precise meaning ‘preceding in time’. Moreover, it is essential for what is said below that this use of ‘anterior’ strictly refers to a temporal sequence of events only; it does not imply in any way a logical and coherent order of events, or any causality. Thus, if it is said, for example, that ‘event A is presented as anterior to event B’, this is simply equivalent to saying that the verbal forms used in the example in question indicate that event A took place earlier than event B, without any implication that event A is a source of event B, or that event B is a consequence of event A. The adjectives contrasting with ‘anterior’ are ‘simultaneous’ (‘coincident in time; happening at the same time’) and ‘posterior’ (‘happening later in time’). The use of ‘anterior’ and ‘anteriority’ as defined here is widespread in linguistic literature dealing with tense, e.g. in Comrie (1985: 11, 117–119) and Rijksbaron (2006: 2).

4. For full descriptions of the phonology and orthography of Modern Standard Albanian see Newmark et al. (1982: 7–17) as well as Buchholz & Fiedler (1987: 27–43). For Old Geg, see Schumacher & Matzinger (2013: 199–203).

Third, the most important terminology to be defined here is terminology describing perfect semantics. While scholars dealing with categories labelled ‘perfect’ disagree about many details, the one thing on which they agree is that such categories are usually polysemous; in my view, this polysemy can be compartmentalized in various ways, which also depends on the language(s) that one describes. As will be seen, I have adopted a fairly traditional framework.

In handbooks dealing with perfects, four readings are typically ascribed to perfects.⁵ These readings are usually derived from the present perfect of Modern English but have cross-linguistic validity; naturally, some of the readings are more frequent in the languages of the world than others (in particular, d. seems to be rather rare).⁶

- a. Resultative reading: a perfect can indicate that a past event has a result which is manifest at speech time, e.g. *President Donald Trump has become unpopular in record time*.⁷ As can be seen from this example, the result is usually a quality of the subject; however, in Old Geg there are also examples of resultative perfects where the result is actually a quality of the direct object, as in (14).
- b. Existential reading: a perfect can indicate that an event has occurred at one or more times in the past, conveying the implicature that the past event has some bearing on the state of affairs at speech time, although there is no manifest result at speech time. A good example of this is *Obama has been to Kenya before*.⁸ As far as Old Geg is concerned, readers should keep in mind that this reading of the perfect also occurs with reference to subjects that are no longer alive, as in (28).⁹

5. In rare cases, it is possible to ascribe more than one reading to a given perfect form. However, such occasional ambiguity does not undermine the overall usefulness of the readings enumerated here.

6. The following definitions are based on definitions found with Comrie (1981: 56–61), Ö. Dahl (1985: 129–153, esp. 132–133); Bybee et al. (1994: 53–55, 61–68), Ey. Dahl (2010: 82–84) and Crellin (2016: 5–11). I have adopted parts of definitions from these authors, but the exact wording of the definitions given here is mine.

7. <http://www.salon.com/2017/01/30/trump-makes-history-poll-finds-president-trump-has-become-an-unpopular-president-in-record-time/> (accessed February 15, 2017).

8. <https://yipe.wordpress.com/2009/09/23/transcript-of-online-webchat-with-us-ambassador-to-kenya-michael-ranneberger-september-23rd-2009/> (accessed February 20, 2017). This sentence was said by the American ambassador to Kenya when he was asked in 2009 if Obama would come to Kenya.

9. For a further discussion of the term ‘existential’ and of possible alternative terms, see Mumm (2002: 177 with footnote 26).

- c. Recent-past reading: a perfect can indicate that an event has occurred a short time before speech time, e.g. *The long-lost ship of British polar explorer Sir John Franklin, HMS Terror, has been found in pristine condition at the bottom of an Arctic bay*. This piece of information was posted on the website of the *Guardian* on the day that the finding of the *Terror* was announced to the public.¹⁰
- d. Persistent-situation reading: a perfect can indicate that a state has held from some definite or indefinite time in the past until speech time, e.g. *Born in 1933 in Newark, NJ, Philip Roth has lived and worked in Litchfield County, CT since 1971*.¹¹ As indicated above, this reading of the perfect is less widespread. For example, French and German use the present tense for expressing the same thing (cf. Comrie 1981: 60), and this is also true of lesser studied languages such as Bulgarian (cf. Hauge 1999: 104) or Welsh, which uses the periphrastic present in such cases (cf. Thorne 1993: 297, Thomas 1996: 99).

3. An overview of the Tense-Aspect-Mood system of Old Geg

In the Old Geg verbal system,¹² tense is prominent, and aspect plays a subordinate role. Every Old Geg verb has four synthetic finite stems and only one synthetic non-finite form:

1. Present stem
2. 2sg imperative stem
3. Aorist stem
4. Optative stem
5. Past participle

The past participle serves as the basis for various non-finite forms (e.g. infinitive, converbs) and of periphrastic finite forms (e.g. perfect, future).

10. <https://www.theguardian.com/world/2016/sep/12/hms-terror-wreck-found-arctic-nearly-170-years-northwest-passage-attempt> (accessed February 20, 2017).

11. http://www.upenn.edu/almanac/v49/n26/honorary_sketches.html (accessed February 21, 2017).

12. For details, see Schumacher & Matzinger (2013: 25–108).

3.1 The Tense-Aspect-Mood system of the Old Geg synthetic verbal stems¹³

Table 2. The Tense-Aspect-Mood system of the Old Geg synthetic verbal stems

Inflectional stem	Indicative subcategories	Non-indicative subcategories
present stem	– present indicative – imperfect indicative	– present subjunctive – imperfect subjunctive – 3SG imperative – 1PL imperative – 2PL imperative
2SG imperative stem	†	2SG imperative
aorist stem	aorist indicative	†
optative stem	†	non-past optative

Only the past tenses in this system (imperfect indicative, aorist indicative) are marked for aspect but nothing else. The present indicative and the imperfect indicative can be marked as progressive by a preposed particle.

3.2 The perfect system

Table 3. The perfect system of Old Geg

Form of the auxiliary	Indicative subcategories	Non-indicative subcategories
present-stem forms	– present perfect indicative – imperfect past perfect indicative	– present perfect subjunctive – imperfect past perfect subjunctive
aorist	aorist past perfect indicative	†
optative	†	present perfect optative
present perfect	present perfect indicative II	†
imperfect past perfect	imperfect past perfect indicative II	†

The forms of the perfect system consist of an auxiliary plus the past participle (for a full account of the morphology, see §6.1). In this system, all synthetic verbal forms of the auxiliary (with the exception of the imperatives) occur. In addition to this, there are two *surcomposé* subcategories of the perfect system, in which the present perfect indicative and the imperfect past perfect indicative of the auxiliary combine with the past participle.

13. In the following, the dagger † marks categories which do not occur, mostly because the feature combination would be incompatible (for instance, there is no indicative form based on the optative stem).

The semantics of the various subcategories of the perfect system is explained in the subsections of §6. Although there is no future perfect as such, the present perfect subjunctive can be used as an equivalent of a future perfect (see §6.7).

3.3 The future/conditional system

The future/conditional system, which uses various tenses and moods of ‘have’ plus the infinitive, is slightly less intricate than the perfect system; however, this need not be elaborated on here.

4. The voice system

All the finite and non-finite forms above (apart from the past participle itself) are either active or non-active.¹⁴ In the present-stem forms, the non-active forms have their own set of endings; in the 2sg imperative forms, the aorist forms and the non-past optative forms, non-active verbal forms are characterised by an extra verbal affix *u* (< grammaticalised clitic reflexive pronoun). This also applies to all non-finite forms and to the future-system forms. By contrast, in the perfect system the difference between active and non-active is indicated by the choice of the auxiliary (‘have’ vs. ‘be’, see §6.1).

5. Origin and functions of the Old Geg aorist; syncretism in the early history of Albanian

As the term suggests, the aorist of Albanian is a perfective past tense (and as such clearly contrasts with the imperfect indicative, which is an imperfective past tense and is based on the PIE imperfect, cf. Schumacher & Matzinger 2013: 132–149). It has only an indicative, but since it contrasts with the imperfect indicative, I often call it ‘aorist indicative’ in what follows.

5.1 Origin of the aorist

In origin the Albanian aorist is a syncretic category, which morphologically continues either a former perfective past tense or a former perfect (cf. Schumacher & Matzinger 2013: 68–73; 149–177). At an early stage of Proto-Albanian, almost all

14. The Albanian non-active voice continues the PIE middle voice, which, however, has undergone some special morphosemantic developments in Albanian. It can also be read as a passive but this is not its main function.

deradical¹⁵ verbs had both a perfective past (usually called an aorist) and a perfect; this state of affairs had been inherited from Proto-Indo-European with a few minor changes. At some stage, however, the aspectual/temporal difference between these two categories became blurred (the inherited perfect turning into a perfective past), and in each verb one of the two competing perfective past stems was selected, while the other was eliminated (Schumacher & Matzinger 2013: 68–70, 149–177). This process of syncretism must have been accomplished a long time ago;¹⁶ the category that emerged after syncretism was a polysemous, non-imperfective, past tense having characteristics both of the underlying perfective past tense and of the underlying perfect. At some later stage, the extant perfect of Albanian came into existence (see §6), and this reduced the polysemy: the newly formed perfect naturally had semantic traits typical of perfects, whereas the older category retained semantic traits typical of a perfective past tense. In other words, the fact that the aorist of Albanian can be defined as a perfective past tense is also due to the rise of a new perfect.

The syncretism process postulated here has a rough parallel in Latin: in the recent prehistory of Latin, the Proto-Italic perfective past and the Proto-Italic perfect were also merged into one category, which was similarly polysemous but was given the term ‘perfect’ by the grammarians of Classical Antiquity. At the same time, I must emphasise here that the mergers of perfect and perfective past in Albanian and in Latin were completely independent, parallel, developments. Even within Italic, syncretism is a late process, which can be inferred from the fact that the selection criteria applied in Latin differ from the selection criteria applied in Sabellian. There are even discrepancies between Latin and its sister language Faliscan. This means that syncretism occurred not only after Proto-Italic had split up into Sabellian and Latino-Faliscan but also after Latino-Faliscan had split up into Latin and Faliscan (Meiser 2003: 72–74, 83–85, 240–241). On the other hand, Latin syncretism was an accomplished fact when Roman armies first set foot on the Balkans so it is unlikely that syncretism in Albanian was influenced by syncretism in Latin. Moreover, it can be shown that the selection criteria applied in Albanian syncretism (cf. Schumacher & Matzinger 2013: 68–70, 149–177) have nothing in common with those applied in either Latin, Faliscan or Sabellian. – To sum up, the various pieces of evidence allow us to conclude that syncretism took place independently in early Albanian.

Within Latin, there is proof of syncretism in the form of rare doublets, e.g. the competing perfects *pepercī* and *parsī* of *parcō* ‘to act sparingly, refrain’ (cf.

15. By ‘deradical’ I mean verbs that are derived straight from a verbal root inherited from Proto-Indo-European. In Indo-European studies, such verbs are normally called ‘primary verbs’.

16. The *terminus ante quem* for syncretism is the early Middle Ages, but it may have happened much earlier.

Meiser 2003: 184). Similarly, we can trace in Albanian the reflexes of at least one deradical verb whose paradigm underwent an early split with the effect that both the pre-syncretism perfective past and the pre-syncretism perfect were preserved, synchronically belonging to completely different paradigms. The underlying root is PIE **k^welh₁-* “turn around, move to and fro” (Rix et al. 2001: 386–388):

On the one hand, its perfective past (PIE **k^wélh₁-*/*k^wl̥h₁-*) is preserved in Albanian as the suppletive aorist of ‘be’, namely Old Geg 3sg *kle* “he/she was” (3sg act. suppletive aorist of ‘be’); this can be compared directly with Classical Armenian *elew* “became” and Homeric Greek *ἔπλετο* “became”.

On the other hand, its perfect is continued in Old Geg *suoll* (3sg active aorist of *siell* “to bring”).¹⁷ This ultimately reflects a perfect **k^wek^wólh₁-*/*k^wek^wl̥h₁-*. However, outside Albanian such a perfect is attested only in the Indic branch of Indo-Iranian (*cacára* [*dúscaritam*] “has gone [a bad way]” in the Atharvaveda, cf. Kümmel 2000: 173–174). Therefore, it is more likely that these perfects were created independently in Indic and early Albanian.

5.2 Functions of the aorist in Old Geg¹⁸

Within the Tense-Aspect-Mood system of Old Geg, the main function of the aorist is that of a perfective past tense, as mentioned above in §5. As such, it is essential in all narrative texts:

- (1) Buzuku 172.4–5 (= 2 Kings 4:37)
- | | | | | | |
|--------------------|------------------|-----------------------|--------------------|-------------------|----------|
| <i>e</i> | <i>muor</i> | <i>djalëtë</i> | <i>e</i> | <i>saj</i> | <i>e</i> |
| and | take.AOR.ACT.3SG | son.SG.ACC.DEF | ART | DIST.DEM.SG.GEN.F | and |
| <i>duol</i> | <i>jashtë e</i> | <i>Elizeu</i> | <i>ktheu</i> | | |
| go_out.AOR.ACT.3SG | out | and Elisha.SG.NOM.DEF | return.AOR.ACT.3SG | | |
| <i>ëndë</i> | <i>Galgat</i> | | | | |
| to | Gilgal.SG.ACC | | | | |
- “and she took her son and went out. And Elisha returned to Gilgal”

17. For the change in meaning (intransitive “move to and fro” → transitive “bring”) see Schumacher & Matzinger (2013: 41–42, 996). For the morphological details, see Schumacher 2005: 612, 614–615, and Schumacher & Matzinger 2013: 162, 169–172.

18. Cf. also Fiedler (2004: 331–340), where some of the following examples are mentioned. All translations given here are mine; in most cases, I have deliberately ignored translation traditions but rather tried to ensure that the translation is as close to the Albanian original as possible. Therefore, some examples may sound unusual to readers familiar with the King James Version or other English Bible translations.

However, this is not the only use, and there are also special functions, some of which might rather be expected as functions of the perfect system.

First, in subordinate clauses, the aorist can (but need not) imply anteriority in the sense defined in §2 above. That is, the aorist can imply that an event was completed prior to a reference point in past time. One could also say that the aorist can be used as a relative past tense (cf. Comrie 1985: 56–64, 124–125), implying past-in-the-past:

- (2) Buzuku 370.31–32 (= Matthew 25:10)
e sã ato vonë me -blëm
 and as_soon_as DIST.DEM.PL.NOM.F go.AOR.ACT.3PL INFP-buy.PST.P
erdh dhandërri
 come.AOR.ACT.3SG bridegroom.SG.NOM.DEF
 “and as soon as they had gone off to buy [oil], the bridegroom came”

This example (taken from the Parable of the Wise and Foolish Virgins) also serves to illustrate the definition of anteriority in §2 above: there is no causal link between the foolish virgins’ leaving the scene and the arrival of the bridegroom on the scene.¹⁹ Moreover, it is also clear that the foolish virgins can no longer be within hearing distance when the bridegroom arrives, since otherwise it would be easy to call them back.

- (3) Buzuku 376.4–6 (= 2 Samuel 24:16)
e aty Zot’ ynë pat
 and then Lord.SG.NOM.DEF our.SG.NOM.M have.AOR.ACT.3SG
mishërier ën mundimit qi lëshou
 mercy.SG.ACC because_of pain.SG.ABL.DEF REL release.AOR.ACT.3SG
përëmbi popullit të tī
 upon people.SG.INS.DEF ART DIST.DEM.SG.GEN.M
 “and then the Lord had pity because of the pain that he had released upon his people”

In (2), one might argue that anteriority is also implied by the conjunction *sã* “as soon as”. However, in (3), anteriority does not emerge from the relative particle *qi* but only from the context, where it is said that already 74,000 Israelites had died from the plague sent by God.

19. Note that the context of the parable makes it quite clear that it is the virgins’ own fault that they have not taken enough lamp oil with them – it is implied that they could have avoided missing the bridegroom by simply paying more attention to planning the evening. There are no indications whatsoever that Buzuku wanted to present the sequence of events as predestined.

Second, in verbs whose present denotes a state, the aorist can indicate the beginning of the state:

- (4) Buzuku 204.64–65 (= John 12:9)²⁰
e ditinë shumë shumicë ën Xhudhishit se
 and know.AOR.ACT.3PL much multitude.SG.NOM of Jew.PL.ABL.DEF that
ish aty
 be.IPRF.IND.ACT.3SG there
 “and a great multitude of the Jews came to know that he was there”

This use of a perfective past tense is found elsewhere, e.g. in the aorist of Classical Greek, in whose traditional grammar it is called *ingressive* (cf. Rijksbaron 2006: 20–21; see *ëmbet* in (38) for a further example).

Third, contrary to the uses enumerated so far, there are also uses where the aorist indicates that an event is connected with speech time. There are different possibilities: one is that the result of the event is manifest at speech time (as in (5), (6)), whereas the event itself terminated some time before speech time:

- (5) Buzuku 96.72–73 (= Matthew 13:27)
si tash u-ëmbush plot manëmjedhëra
 how now NACT-fill.AOR.3SG full weed.PL.INS
 “how has it now become full of weeds?”
- (6) Buzuku 76.17–19 (= Romans 13:11)
përse tash u-afëruo të shëlbuomitë
 because now NACT-bring_near.AOR.3SG CLF salvation.SG.NOM.DEF
tanë mǎ se atë herë kūr
 our.SG.NOM.N more than DIST.DEM.SG.ACC.F time.ACC when
besuom
 believe.AOR.ACT.1PL
 “because now our salvation has come near, more so than at the time when we began to believe”

Fiedler (2004: 335) points out that here the two different readings of the aorist are highlighted by the adverbial phrases *tash* “now” vs. *atë herë* “at that time” respectively.

What is even more interesting is that the Vulgate texts underlying (5) and (6) show Latin present-tense forms: in Matthew 13:27 we find *unde ergo habet*_[have.PRS.IND.ACT.3SG] *zizania?* “where then does it have weeds from?”; and in Romans 13:11 the Latin text says *nunc enim propior est*_[be.PRS.IND.ACT.3SG] *nostra salus quam cum*

20. Note that the underlying Vulgate text has *cognovit* “came to know”. The King James Version’s *knew* is rather imprecise in view of the fact that the Greek New Testament has ἐγὼν “came to know”.

credidimus “for now our salvation is closer than when we believed”. In short, Old Geg aorists can have resultative readings at least if they are accompanied by the adverb *tash* “now”.

The termination of the event can also immediately precede speech time:

- (7) Buzuku 292.38–39 (= Mark 9.25)
e u-bā porsi vdekunë sã shumë vetë
 and NACT-make.AOR.3SG like dead so_that many person.PL.NOM.
thoshnë vdiq
 say.IPRF.IND.ACT.3PL die.AOR.ACT.3SG
 “and he became like dead, so that many people kept saying: ‘he has died’”

This is best described as a recent-past reading of the aorist. An even more dramatic instance of a recent-past reading is found in the following example, where the disciples present Thomas with the sensational news that they have seen Jesus for the first time after resurrection:

- (8) Buzuku 242.8 (= John 20.25)
Na pām tënë Zonë
 we see.AOR.ACT.1PL our.SG.ACC.M. Lord.SG.ACC.DEF
 “we have seen our Lord!”

It is worth noting that, differently from English (see 2.c. above), recent-past readings never occur with the perfect in Buzuku’s Old Geg; in other words, this function is restricted to the aorist and characteristic of it.

Finally, the termination can be merely anticipated although the event only comes to completion at the moment of speaking:

- (9) Buzuku 72.2
këtu u-ëmbaruo bagmi e tash
 here NACT-bring_to_completion.AOR.3SG baptism.SG.NOM.DEF and now
zënë_ënfill të vūmitë e kunorëshë
 begin.PRS.IND.ACT.3PL CLF placing.PL.NOM.DEF ART crown.SG.GEN.DEF
 “here, [the section dealing with the ritual of] baptism comes to an end.
 And now [the section dealing with the ritual of] matrimony begins”²¹

This is part of the heading preceding the section of the *ordo desponsandi*, i.e. the ritual of matrimony (a heading with similar wording is found in Buzuku 56.9). Such uses of perfective past-tense forms also occur in other languages but typically

21. Literally, the second part says “and now begin the placings of the crown”. This means that Buzuku celebrated the Sacrament of Matrimony according to a (basically eastern) ritual, whereby crowns are held above the couple and exchanged several times.

are used in performative sentences (cf. Ey. Dahl 2010: 80–82). Here, the use of the aorist is probably triggered by a certain resemblance between such headings and performative sentences. – Note that there is one properly performative sentence in Buzuku’s colophon, and in this the perfect is used (see §6.2.4).

From Examples (5) and (6) as well as from the description of readings typically associated with perfects (§2), one can already guess that, since Albanian also has a perfect as a category of its own, there must be some overlap between the semantics of aorist and perfect. Why this is so is not entirely clear. However, we must not forget that the aorist is the result of the merger of two different tense-aspect categories (one of which was a perfect) and thus has a double heritage, similar to the Latin ‘perfect’. That is, despite the existence of a fully grammaticalised perfect in Albanian, the Albanian aorist may have retained some of the temporal/aspectual polysemy it had before the perfect came into existence.

6. The perfect system of Old Geg

6.1 Morphology of the perfect system

Morphologically, the perfect system of Old Geg is reminiscent of the German perfect (Fiedler 2004: 341–350): the perfect is periphrastic, consisting of (a) the auxiliary ‘have’ or ‘be’ (containing the information for tense, mood and voice); (b) the past participle, which is invariable and does not show any concord features (NB: when used adjectivally, the past participle usually shows concord).

Note also that auxiliary and participle can be separated syntactically; furthermore, there is no fixed word order. That is, even when the auxiliary and the past participle are not separated by an intervening word, the auxiliary can either precede the past participle or follow it, though there is already in Buzuku a preference for the auxiliary coming first.

Voice is indicated as follows. Transitive verbs always use ‘have’ as an auxiliary in the active voice; in such verbs, ‘be’ is used as an auxiliary in the non-active voice.²² Deponent verbs (which are almost exclusively intransitive) always use ‘be’ as their perfect auxiliary.²³ Among intransitive non-deponent verbs, a certain number have

22. In all varieties of Old Albanian, present-tense, imperfect and aorist forms of ‘be’ plus past participle can also function as passives of the present, the imperfect and the aorist (Fiedler 2004: 606–607, 647–648; Schumacher & Matzinger 2013: 46–47). In this paper, such forms have been sorted out systematically and will play no role in the following.

23. The one major exception, *gjegetë* “hear”, is semi-deponent, i.e. it has active morphology in the aorist and uses “have” as its perfect auxiliary.

perfects formed with 'be' ('stay', 'arrive', 'fall asleep', 'die'); a second group also have allomorphic forms with 'have' even within Buzuku ('be', 'go out', 'sleep', 'sit (down)', 'go', 'go across, pass', 'come'); finally, a third group use 'have' exclusively (e.g., 'ascend', 'fall', 'fast', 'live', 'sin', 'stop').²⁴ – This morphology suggests that the perfect in Albanian came into existence as a result of strong influence from Romance. Interestingly, the distribution of the two auxiliary verbs is closer to what we find in Italian (and in Standard Average European in general) than to what we find among the Balkan neighbours of Albanian: Romanian perfects always use 'have' as an auxiliary (cf. Frâncu 2009: 111–113 for Old Romanian), and the same is probably the case in Aromanian; for Bulgarian and Macedonian perfects, see Arkadiev and Wiemer (this volume). Finally, the Modern Greek perfect uses 'have' plus what is historically the aorist infinitive (Holton et al. 2012: 132–133). Medieval Greek also had other, competing, constructions, some of which were closer to Romance, but eventually these were marginalised (Leluda-Voß 1997: 72–81; cf. also Horrocks, this volume).

6.2 The functions of the present perfect indicative of Old Geg

Morphologically, the present perfect indicative consists of the present indicative of the auxiliary plus the past participle. For Modern Standard Albanian, the reference grammar by Newmark et al. (1982: 71) defines the use of the present perfect as follows:

The basic use of the present perfect of the indicative mood is to indicate that the scope of time considered by the speaker includes both the past and the moment of speaking. By using this tense the speaker implicitly claims that an action has some connection with the present moment, although it began in the past.

This is also true of Old Geg but, as will be seen, this can be differentiated further. However, before describing the functions of the present perfect indicative in Buzuku, let me say a few words about the size of the corpus and its analysis. In its present state, Buzuku's book still has 187 pages with roughly 120,000 words. It contains numerous forms of about 500 lexical verbs, and with roughly 115 of these a perfect is attested. Therefore, the Buzuku corpus provides a large basis for the investigation of the perfect system of Old Geg. What is particularly fortunate is the fact that Buzuku translated from Latin; that is, every time that he came across a Latin perfect-tense form, he had the choice whether to render it with an Albanian aorist or with an Albanian perfect. It appears that he considered his decisions carefully and usually picked the appropriate verbal form. Buzuku is therefore an excellent source for the distribution of aorist vs. perfect in 16th-century Old Geg.

24. Note that intransitive non-deponent verbs do not have non-active forms.

6.2.1 Resultative readings

Among the present perfect forms in Buzuku, resultative readings are particularly frequent:

- (10) Buzuku 278.90–280.1 (= Luke 19:42)
e tash janë ënfshehunë ën sÿshit
 but now be.PRS.IND.ACT.3PL hide.PST.P from eye.PL.ABL.DEF
së tÿsh
 ART thy.PL.ABL.N
 “but now they are hidden from your eyes”
- (11) Buzuku 156.47–48 (= Dan 13:22)
u për gjithë enëshit jam ëngjëruom me
 I on all side.PL.ABL.DEF be.PRS.IND.ACT.1SG surround.PST.P with
të hidhunë
 CLF malice.SG.INS
 “I am surrounded with malice on all sides”

These are resultative readings of non-active present perfect forms. However, resultative readings can also found with intransitive active present perfect forms:

- (12) Buzuku 372.52–53 (= 1 Thess 4:15)
na qi gjellimë e qi ëmbetunë jemi
 we REL live.PRS.IND.ACT.1PL and REL remain.PST.P be.PRS.IND.ACT.1PL
ëmbë t’ ardhunit të tinë Zot
 until CLF arrival.SG.INS.DEF ART our.SG.GEN.M Lord.SG.GEN
 “we who are alive and who have remained until the arrival of Our Lord”

Here, the verb is intransitive; but also active transitive verbal forms allow for resultative readings:

- (13) Buzuku 368.63–65 (= 1 Cor 7:33)
e ai qi kâ marrë gruo
 but DIST.DEM.SG.NOM.M REL have.PRS.IND.ACT.3SG take.PST.P wife.SG.ACC
kâ kujdes pr’ ato kafshë
 have.PRS.IND.ACT.3SG care.SG.ACC for DIST.DEM.PL.ACC.F thing.PL.ACC
të këti shekulli
 ART PROX.DEM.SG.GEN.M world.SG.GEN
 “but he who is married [*lit.* has taken wife] cares for the things of this world”

Note that *gruo* is not a canonical direct object, as it is not preceded by the indefinite article, which is otherwise obligatory. This means that *gruo* has a similar syntactic status to *Auto* in German sentences like *er fährt nicht gut Auto* “he does not drive well”.

Finally, there is at least one example where the result is actually a quality of the direct object, as mentioned above (§2):

- (14) Buzuku 250.57–59 (= Luke 11:7)
mos-m-ep brigë përse derëne
 NEG-OMI.1SG-give.IMP.ACT.2SG nuisance.SG.ACC for door.SG.ACC.DEF
e-kam ëmbërshelë e djelmtë
 OMD.3SG-have.PRS.IND.ACT.1SG close.PST.P and boy.PL.NOM.DEF
janë me muo ëndë shtrat
 be.PRS.IND.ACT.3PL with me in bed.SG.INS
 “do not bother me, for I have closed the door, and the boys are in bed with me”

This is taken from the Parable of the Friend at Night (Luke 11:5–13). In view of the fact that the Vulgate version says *iam ostium clausum est* “the door is shut already”, it is surprising that Buzuku has reworded this, transforming the Latin passive voice into the active voice in his translation, thereby introducing a subject. Still, the main point of what the speaker says is that the door is already shut. Therefore, I conclude that this perfect is best understood as indicating resultativity, albeit as a quality of the object.

Moreover, in some of the above-mentioned examples, the resultative reading is also supported by the fact that the Vulgate text does not have Latin perfect-tense forms but rather present-tense forms. In (12), *ëmbetunë jemi* “we have remained” renders Latin *residui sumus* “we are left”. In (13), *e ai qi kâ marrë gruo* “but he who is married” stands for Latin *qui autem cum uxore est* “but he who is with a wife”. In (11), the wording is a creative rendering of the Latin nominal sentence *angustiae mihi undique* “distress for me from all sides”. And in (10), *nunc* “now” in Latin *nunc autem abscondita sunt ab oculis tuis* as well as *tash* “now” in the Albanian version makes clear that this is a reference to the result of the hiding.

It is worth noting that Old Geg also had a resultative construction, which is not part of the perfect system but is best described as a special form of the present, similar to the *Zustandspassiv* of Modern German. This construction consists of the present indicative of ‘be’ plus the past participle, the difference being that here the past participle shows full concord with the subject. In the following example, concord is seen in that the past participle *bëkuom* is preceded by a classifier typical of adjectives and bears the feminine suffix *-e*:

- (15) Buzuku 24.35–36 (= Luke 1:28)
ti je e bëkuome ëndër grāt
 thou be.PRS.IND.ACT.2SG CLF bless.PST.P.SG.F among woman.PL.INS.DEF
 “you are blessed among women”

6.2.2 Existential readings

Existential readings are also well attested among the Old Geg perfect forms:

- (16) Buzuku 312.19–21 (= Acts 9:13)
Zot u kam gjeqjunë ën shumësh ën
 Lord I have.PRS.IND.ACT.1SG hear.PST.P from many.PL.ABL about
kësi nierī sā tē keq
 PROX.DEM.SG.ABL.M man.SG.ABL how_much CLF evil.ACC
kÿ kâ bām shenjtet
 PROX.DEM.SG.NOM.M have.PRS.IND.ACT.3SG do.PST.P saint.PL.DAT
tuve ëndë Jeruzalemt
 thy.PL.DAT in Jerusalem.SG.INS.DEF
 “Lord, I have heard from many about this man, how much evil he has done to your saints in Jerusalem”
- (17) Buzuku 260.47–49 (= John 6:45–46)
jo se kush kâ pām
 NEG that anyone.SG.NOM have.PRS.IND.ACT.3SG see.PST.P
Atënë mase ai qi anshtë
 Father.SG.ACC.DEF but_only DIST.DEM.SG.NOM.M REL be.PRS.IND.ACT.3SG
ën sinë Zot ai kâ
 from our.SG.ABL.M Lord.SG.ABL DIST.DEM.SG.NOM.M have.PRS.IND.ACT.3SG
pām Atënë
 see.PST.P father.SG.ACC.DEF
 “not that anyone has seen the Father, but only he who is from God, he has seen the Father”
- (18) Buzuku 58.38–40²⁵
e kush ëmbë këtë mëndyrë kâ
 and who in PROX.DEM.SG.INS.F manner.SG.INS have.PRS.IND.ACT.3SG
fëjyem fëjyem kâ ëndë e parët
 sin.PST.P sin.PST.P have.PRS.IND.ACT.3SG in CLF first.SG.INS.DEF
kuat tē shqisevet
 sin.SG.INS ART sense.PL.GEN.DEF
 “and whoever has sinned in this manner, has sinned in the first sin of the senses”

The difference in word order (*kâ fëjyem* in the relative clause vs. *fëjyem kâ* in the main clause) is not syntactic but stylistic: this is one of the numerous occasions where Buzuku avoids saying the same thing twice. Here, as on many other occasions throughout his work, Buzuku followed the stylistic ideal of *variatio* (see also (41) with footnote 34, and (52) below).

25. The classifier *e* (between *ëndë* and *parët*) is not printed in the book but this is a mere typo.

Adverbials typically associated with the perfect in English, such as *already*, seldom occur in Old Geg. The following is a rare example from Buzuku:

- (19) Buzuku 252.4–6 (= Acts 1:1)²⁶
u Teofilë qysh moti folë kam ën
 I o_Theophilus already formerly speak.PST.P have.PRS.IND.ACT.1SG of
gjithë anso kafshësh qi zū Jezu
 all those things REL begin.AOR.ACT.3SG Jesus.SG.NOM.DEF
me -bām e me -ëm̃psuom
 INFP-DO.PST.P and INFP-teach.PST.P
 “I have already, o Theophilus, formerly spoken of all those things that Jesus began to do and to teach [...]”

The next example is remarkable, because here the perfect (*kam pësuum* “I have suffered”) is combined with a definite past time adverbial (*sonëte* “this past night”):

- (20) Buzuku 200.50–51 (= Matthew 27:19)
përse shumë kafshë sonëte e të mëdhā andërra
 for many things this_past_night and CLF severe visions
kam pësuum për ’të
 have.PRS.IND.ACT.1SG suffer.PST.P because_of DIST.DEM.SG.ACC.M
 “for I suffered many things and severe visions because of him this past night”

As is well known, the combination of definite past time adverbials with the perfect is impossible in English; but it is possible elsewhere, e.g. in Norwegian (cf. Comrie 1985: 32–33).

Some negated perfects, such as (21) and (22), are best analysed as perfects with an existential reading:²⁷

- (21) Buzuku 318.24–25 (= John 3:13)
e askush nukë-kā hipunë ëmbë qiellt
 and nobody NEG-have.PRS.IND.ACT.3SG ascend.PST.P to heaven
māse ai qi u-dorgj ën qiellshit
 but_only DIST.DEM.SG.NOM.M REL NACT-descend.AOR.3SG from heaven
 “and nobody has ascended to heaven but only he who descended from heaven”

26. While this is a well-formed sentence in Old Geg, this example is strange in that it is quite different from its Vulgate counterpart, which says *Primum quidem sermonem feci de omnibus o Theophile quae coepit Jesus facere et docere* “I wrote the former treatise, o Theophilus, about everything that Jesus began to do and to teach”. It seems that Buzuku misinterpreted *quidem* “indeed” as *quondam* “formerly”, possibly because in his source text *quidem* appeared in an abbreviated spelling.

27. A further such example is the first part of (17) *jo se kush kā pām Atënë* “not that anyone has seen the Father”.

- (22) Buzuku 306.7–11 (= Matthew 24:21)
përse atëherë të-jetë *të madh t' idhunë qi*
 for then SBJVPX-be.PRS.SBJV.ACT.3SG CLF great CLF bitterness REL
kurrajtë s-ashtë *klenë qysh së zanët*
 ever NEG-be.PRS.IND.ACT.3SG be.PST.P since CLF beginning.SG.ABL.DEF
së shekullit djerje tash as të-jetë kurrajtë
 ART world.SG.GEN.DEF until now nor SBJVPX-be.PRS.SBJV.ACT.3SG ever
 “for then there will be great bitterness, which has never been there since the
 beginning of the world until now, nor will it ever be there [again]”

Since the existential reading of the perfect indicates that an event has occurred at least once in the past (hence the term ‘existential’), a statement to the effect that an event has not even occurred once in the past is also expressed with a perfect with an existential reading.

There is a certain complication in that there are in Buzuku also similar statements using the aorist:

- (23) Buzuku 266.59–60 (= 1 John 4:12)
askush kurrajtë nuk'-e-pā *tënë*
 nobody ever NEG-OMD.3SG-see.AOR.ACT.3SG our.SG.ACC.M.
Zonë
 Lord.SG.ACC.DEF
 “nobody has ever seen Our Lord”
- (24) Buzuku 280.27–29 (= 1 Cor 12:3)
se askush tue-folunë ën shpirtit së
 that nobody CVBP-speak.PST.P through spirit.SG.ABL.DEF ART
tinë Zot tha Jezut anatema
 our.SG.GEN.M. Lord.SG.GEN say.AOR.ACT.3SG Jesus.SG.DAT.DEF curse
 “[...] that nobody, speaking through the Spirit of God, has [ever] said: ‘A curse
 on Jesus!’”

It is possible, however, that (21) and (22) differ from (23) and (24): both in (21) and (22) it is said that an event has not occurred. Nonetheless, it is said in (21) that there has been one exception up to now (now being the time of the nocturnal conversation between Jesus and Nicodemus).²⁸ In addition, in (22) it is predicted that the event will take place once at the End of the Age, although it has not happened up to now (now being the time of the Olivet Prophecy, soon after which Jesus is arrested). By contrast, (23) and (24) simply claim that an event has not taken place at any point in the past. However, we must also consider the following example:

28. What applies to (21) equally applies to (17).

- (25) Buzuku 214.8–9 (= John 18:20)
e asgjā ëndë e ënfshehunë nukë-kam folë
 and nothing in CLF secret NEG-have.PRS.IND.ACT.1SG speak.PST.P
 “and I have spoken nothing in secret”

If the speculation concerning (21)–(24) is correct, it has interesting implications here: on the one hand, Jesus (being interrogated by the Assembly of the Elders) states clearly that he has not spoken in secret, on the other hand he does not absolutely exclude that he will do so in the future.

Finally, it is worth examining the present perfect forms of ‘have’ and ‘be’, which are exclusively found with existential readings. The following example contains a perfect of ‘have’:

- (26) Buzuku 152.90–154.2 (= John 4:18)
përse ti kē pasunë pësë burra e
 for thou have.PRS.IND.ACT.2SG have.PST.P five husband.PL.ACC and
tash atë qi kē ai
 now DIST.DEM.SG.ACC.M REL have.PRS.IND.ACT.2SG DIST.DEM.SG.NOM.M
s-ashtë burri yjt
 NEG-be.PRS.IND.ACT.3SG husband.SG.NOM.DEF thy.SG.NOM.M
 “for you have had five husbands, and the one whom you have now, he is not your husband”

As for perfects of ‘be’, two examples are found in Buzuku’s translation of 2 Corinthians 11:24–27 (Paul’s enumeration of his sufferings). This contains a sequence of six existential perfects, one of these being a perfect of ‘have’ and two being perfects of ‘be’:

- (27) Buzuku 100.19–26 (with omissions; = 2 Cor 11:24–25)
u kam pasunë ën Xhudhishit pësë herë
 I have.PRS.IND.ACT.1SG have.PST.P from Jew.PL.ABL.DEF five times
tridhjetë_e_nandë të ënvrana [...] një natë e një ditë
 thirty-nine CLF lashes a night and a day
jam klenë ëmbë pellëgut të dëtit
 be.PRS.IND.ACT.1SG BE.PST.P on deep_part ART sea.SG.GEN.DEF
me -votë ën_fond; shpesh ënde viaxat jam klenë
 INFP-go.PST.P down often on journeys be.PRS.IND.ACT.1SG BE.PST.P
ëmbë perikullë të lumenavet [...]
 in danger ART river.SG.GEN.DEF
 “five times I had thirty-nine lashes from the Jews [...] one night and one day I was on the deep part of the sea, [expecting] to go down; often on journeys I was in danger of rivers [...]”

The part of this referring to Paul's adventures at sea is reminiscent of the King James Version's wording, which says *a night and a day I have been in the deep*. However, while the King James Version may have been influenced by the Greek New Testament (which uses the perfect form $\pi\epsilon\pi\omicron\iota\eta\kappa\alpha$ "I have done"), this is quite improbable for Buzuku, who did his translation at a time when and in an environment where the Greek New Testament was not studied and was virtually unknown. Rather, in his case the use of the perfect must be fully idiomatic.

Apart from (22) and the two sentences containing perfects of "be" in (27), the only other examples of such perfects are found in (28), in a further example very similar to (28),²⁹ and in (29):

(28) Buzuku 72.80–88

e gjithë Shenjtitë e mëdhenj, qi klenë_[be.AOR.ACT.3PL] priftënë, porsi Melkisedek, Moiseu e Aaroni e shumë të tjerë, qi të njehunë nukë kanë, porsi Shenjt e të Zgjedhunitë e tinë Zot,

"and all the great saints who were priests, like Melchizedek, Moses and Aaron, and many others, who are beyond counting, like Saints and the Chosen Ones of God,

e i urti Salamon me shumë të tjerë t' urtë ëndë këtë

and CLF wise Solomon with many CLF other CLF wise_ones in this
pār të bēkuom kanë klenë; e gjithë këta

coupling CLF blessed have.PRS.IND.ACT.3PL be.PST.P and all these

kanë pasunë grā për fat veti e me

have.PRS.IND.ACT.3PL have.PST.P women for spouse REFL.DAT and with

bī e bija

sons and daughters

and wise Solomon with many other sages were in this blessed coupling; and all these had women as spouses for themselves and with sons and daughters"

This is from a speech that introduces the *ordo desponsandi* (the ritual of matrimony) and explains why the Catholic Church, which praises virginity as its highest ideal, nonetheless favours marriage: marriage is presented as God-given by arguing that many great figures of the Old Testament were married. Linguistically, the passage is interesting for two reasons. First, it refers to persons that are all dead. Second, this passage and the surrounding context refer to a period which was finished long before speech time: the most recent person mentioned is Saint Petronilla, whom the text describes as Saint Peter's daughter, as was generally believed at the time. Hence, it is clear that the perfects in this passage (*kanë klenë* "have been";

²⁹. This example is Buzuku 72.51–57, which contains another example of *kanë klenë* "they have been": here, as well as in (28), the subject is qualified by *gjithë* "all".

kanë pasunë “have had”) cannot have a persistent-situation reading, since from a mid-16th-century perspective the period described (from the creation of Eve to the Dispersion of the Apostles) quite clearly lies in the past. On the other hand, the implicature is present that what was usually the case between the creation of Eve and the Dispersion of the Apostles (i.e. that even saints, priests and sages could be married) is relevant at speech time, when the priest is about to marry a couple. I therefore judge this example to be another example of an existential reading.

The following example is somewhat similar to (28):

- (29) Buzuku 258.89–260.1 (= John 10:8)
gjithë ata qi erdhnë përpara muo gjithë
 all those REL come.AOR.ACT.3PL before me all
janë klenë grabitës e kusarë
 be.PRS.IND.ACT.3PL be.PST.P thieves and robbers
 “all those who came before me, all have been thieves and robbers”

Note that here the Vulgate text does not have a past-tense form at all but the present-tense form *sunt* “they are”, which is based on the present-tense form εἰσιν “they are” of the Greek New Testament. (28) and (29) resemble each other in that both of them use present perfect forms of “be” and subjects qualified by *gjithë* “all” or by other quantifiers indicating a totality. Here, the implicature is that Jesus, who in this section of John presents himself as the Good Shepherd, is the opposite of a thief or robber.

6.2.3 Persistent-situation readings

In the Buzuku corpus, I have found only three examples of perfects with persistent-situation readings:

- (30) Buzuku 188.16–18 (= Luke 7:45)
e këjo qish kūr hini
 but PROX.DEM.SG.NOM.F since when enter.AOR.ACT.3SG
nukë-kā pushuom me -puthunë kambëtë e mī
 NEG-have.PRS.IND.ACT.3SG cease.PST.P INFP-kiss.PST.P foot.PL.ACC.DEF my
 “but this [woman] here has not ceased kissing my feet ever since she entered”
- (31) Buzuku 28.39–40 (= Psalm 44:3)
e pr_ashtu Zot’ ynë
 and therefore Lord.SG.NOM.DEF our.SG.NOM.M
të-kā bēkuom për jetë të
 OMD.2SG-have.PRS.IND.ACT.3SG blessed.PST.P for life.SG.ACC ART
jetësë
 life.SG.GEN.DEF
 “and therefore God has blessed you forever”

With these words the Virgin Mary is addressed in a devotional text in her praise, the so-called ‘Hours of the Virgin’.

- (32) Buzuku 296.83–87 (= Luke 13:16)³⁰
e këjo e bija e
 and PROX.DEM.SG.NOM.F his daughter.SG.NOM.DEF ART
Abraamit qi Satani
 Abraham.SG.GEN.DEF REL Satan.SG.NOM.DEF
e-kā ëmbajtunë ënlidhunë tetë_ëmbë_dhjetë
 OMD.3SG-have.PRS.IND.ACT.3SG hold.PST.P enchain.PST.P eighteen
vjetë
 years
 “and this daughter of Abraham, whom Satan has held enchained for eighteen
 years,
a s’ duhë ajo me klenë zgjidhunë ditënë e shëtunde këta të ënlidhunë?
 should she not have been unchained from this enchaining on the Sabbath?”

This example is exceptional, and there are similar examples where the present indicative is used (cf. Fiedler 2004: 314):

- (33) Buzuku 140.81–82 (= Luke 15:29)
hinje se u tÿ kaqë vjetë të-shërbenj
 behold that I thee.DAT so_many years OMI.2SG-serve.PRS.IND.ACT.1SG
 “behold, I have served you for so many years”

Interestingly, even in Modern Standard Albanian persistent-situation readings of the perfect seem to be rare, and Buchholz & Fiedler (1987: 130; 194, endnote 13) state explicitly that perfects like ‘We have been close friends since childhood’ are not deemed acceptable by all Albanians.

6.2.4 Other readings of the perfect

As we have seen in Examples (7)–(8) above (§5.2), recent past is expressed by the aorist, not by the perfect.

There is, on the other hand, a usage of the perfect in Buzuku that does not seem to be described by handbooks of Albanian:

30. Fiedler (2004: 354–355) describes *kā ëmbajtunë* as a perfect standing for a pluperfect. However, this seems hardly appropriate: the dispute about whether the healing of a person is legitimate on the Sabbath immediately starts after the woman has been healed; therefore, it is not wrong for Jesus to say something to the effect that she has been held in chains up to now.

(34) Buzuku 378.65–66

e tash u jam ënfalë gjithëve e
 and now I be.PRS.IND.ACT.1SG present.PST.P everyone.DAT and
lutëni tënë Zonë ende për muo
 beseech.IMP.ACT.2PL our Lord even_more for me
 “and now I have greeted everyone, and pray to our Lord even more for me!”

This is comparable to (9) in that here, too, the event only comes to completion at the moment of speaking. There are two differences between (9) and (34). First, differently from (9), the verb ‘greet’ used in (34) is a performative verb in the full sense of the word. Second, this verbal form has a much more prominent position in the book, because (34) is the last sentence of Buzuku’s colophon, which means that it is also the very last sentence of the whole book. Quite clearly, the perfect was used here to produce a dramatic effect: the preceding lines of the colophon tell us that Buzuku had worked very hard for three quarters of a year, and this sentence expresses his elation at the moment when he was actually finishing his work.

6.3 The function of the imperfect past perfect indicative

The relationship between the imperfect past perfect indicative and the present perfect indicative could be expected to be basically similar to the relationship between the imperfect and the present. However, although one can try to retrieve each function of the present perfect indicative in the imperfect past perfect indicative, the main function of this tense is to indicate that an event took place prior to a reference point in past time.³¹ This is also the main function of the aorist past perfect indicative, which differs from the imperfect past perfect indicative only aspectually; I have deferred discussing this aspectual difference to §6.4, Examples (38) and (39).

Thus, there is some overlap between these two past tenses of the perfect system and the use of the aorist as a relative past tense (cf. 5.2). However, the main difference between (a) the relative-past-tense use of the aorist and (b) the two past tenses of the perfect system is that the relative-past-tense use of the aorist can only be inferred from the context, whereas both imperfect past perfect indicative and aorist past perfect indicative are relative-past tenses by default.³² That is, the only

31. See also Comrie (1985: 77–82) and Ö. Dahl (1985: 144) for the conceptual distinctions between perfects and pluperfects.

32. Comrie would describe the imperfect past perfect indicative as well as the aorist past perfect indicative as absolute-relative tenses (cf. Comrie 1985: 64–82, 125–127).

function of the aorist past perfect indicative is to refer to events prior to a reference point in past time, and this is also the main function of the imperfect past perfect indicative, as can be seen in the following example:

- (35) Buzuku 174.33–34 (= John 11:19)
e shumë ën Xhudhishit ishnë ardhunë tek
 and many of Jew.PL.ABL.DEF be.IPRF.IND.ACT.3PL come.PST.P to
Marta e tek Mëria
 Martha and to Mary
 “and many of the Jews had come to Martha and Mary”

Apart from this, the imperfect past perfect indicative is also used in counterfactual conditionals referring to past time:

- (36) Buzuku 174.38–39 (= John 11:21)
Zot ti në ishnje klenë këtu em vëllā
 Lord thou if be.IPRF.IND.ACT.2SG be.PST.P here my brother
nukë-ish vdekunë
 NEG-be.IPRF.IND.ACT.3SG die.PST.P
 “Lord, if you had been here, my brother would not have died”

This is parallel to counterfactual conditionals referring to speech time, where the imperfect is used (cf. Fiedler 2004: 485).

Finally, in questions introduced with the question-particle combination *a mos* (which, in a way similar to Classical Greek ἄρα μή and Latin *num*, indicates that the speaker hopes for a negative answer), the imperfect past perfect indicative is used to imply that the speaker hopes that something did not happen in past time. This is parallel to *a mos* + imperfect indicative, which indicates that the speaker hopes that something is not happening at speech time (cf. Fiedler 2004: 628–630).

- (37) Buzuku 154.38–39 (= John 4:33)
a-mos-i-kish kush përrum me -ëngranë
 Q-Q-OMI.3SG-have.IPRF.IND.ACT.3SG anyone bring.PST.P INFP-eat.PST.P
 “surely no-one has brought him [something] to eat?”

6.4 The function of the aorist past perfect indicative

The difference between the imperfect past perfect indicative and the aorist past perfect indicative is that in the former the imperfect of the auxiliary is used while the latter is formed with the aorist of the auxiliary. We are, therefore, entitled to expect that the temporal meanings of the two tenses are similar (indication of anteriority to a reference point in past time), whereas their aspectual meanings differ. In fact,

there is at least one context where such an aspectual difference is clearly visible: the aorist past perfect indicative frequently occurs in temporal sentences introduced by the conjunctions *si* and *ëmbasi* “after” (cf. Fiedler 2004: 366–368):

- (38) Buzuku 326.15–16 (= Matthew 14:32)
e si patnë hipunë ëmbë barkëzët
 and after have.AOR.ACT.3PL board.PST.P onto boat.INS.SG.F.DEF
ëmbet ëra
 stay.AOR.ACT.3SG wind.NOM.SG.DEF
 “and after they had boarded the boat, the wind came to a standstill”

As Fiedler emphasises, the aorist past perfect indicative in such subordinate clauses always occurs in combination with an aorist indicative in the main clause, and the subordinate clause usually precedes the main clause. There is, however, one exceptional example, which has imperfect past perfect indicative in the subordinate clause and imperfect indicative in the main clause:³³

- (39) Buzuku 122.77–79 (= John 5:4)
*Përse engjëlli i tinë Zot dirgjë*_[descend.IPRF.IND.NACT.3SG] *ëndë një mot ëndë bërrakët e*
*turbullon*_[stir_up.IPRF.IND.ACT.3SG] *ujëtë,*
 “for the angel of God would at a certain time descend into the pool and stir up the water,
e mǎ i pari qi ëmbrenda hīn
 and more CLF first.NOM.SG.M.DEF REL inside enter.IPRF.IND.ACT.3SG
si ish turbulluom ujëtë ashtu
 after be.IPRF.IND.ACT.3SG stir_up.PST.P water.NOM.SG.DEF thus
ai shëndoshë ën qishdo sëmunde
 DIST.DEM.SG.NOM.M heal.IPRF.IND.NACT.3SG from whatever disease.ABL.SG
ai të-kish
 DIST.DEM.SG.NOM.M SBJVPX-have.IPRF.ACT.3SG
 and the very first who would step in after the water had been stirred up, he would thus be healed from whatever disease he might have”

It can easily be spotted here that the use of the imperfect past perfect indicative in the subordinate clause serves to indicate iterativity, just as the imperfect in the main clause does. In other words, it is said here that whenever the water had been stirred up, the first one to step in would be healed.

Furthermore, Fiedler makes the point that in referring to a sequence of two contradictory events in the past, the prior event is related in the aorist past perfect indicative, whereas the subsequent event is related in the aorist indicative:

33. This example has been overlooked by Fiedler.

- (40) Buzuku 140.71–72 (= Luke 15:24)
kle bdjerrë e u-gjet
 be.AOR.ACT.3SG lose.PST.P and NACT-find.AOR.3SG
 “he had been lost and was found”

Apart from these examples, there are numerous examples where there is no discernible difference between the aorist past perfect indicative and the imperfect past perfect indicative; compare the following example with (35):

- (41) Buzuku 176.9–11 (= John 11.45)³⁴
e shumë ën Xhudhishit qi klenë ardhunë tek
 and many of Jew.PL.ABL.DEF REL be.AOR.ACT.3PL come.PST.P to
Marta tue-pām 'ta çë bani Jezu
 Martha CVBP-see.PST.P that which do.AOR.ACT.3SG Jesus.SG.NOM.DEF
besuonë ëmbë 'të
 believe.AOR.ACT.3PL in DIST.DEM.SG.ACC.M
 “and many of the Jews who had come to Martha began to believe in Jesus,
 seeing what he had done”

6.5 The function of the present perfect indicative II

The present perfect indicative II is literally a perfect of the perfect. It thus resembles French *surcomposé* forms at least superficially (cf. Comrie 1985: 76–77). The present perfect indicative II as such is not attested in Buzuku, either because it did not yet exist or because it was restricted to very special contexts. The following instructive example is from Bogdani, who wrote his work some 130 years after Buzuku. It is a comment on an astronomical doctrine maintained by Bogdani’s Muslim contemporaries, a doctrine that Bogdani deemed erroneous:

- (42) Bogdani 1.31.52
përse dielli, qi rri mbë të katërtit qiell, kurraj mbë dhë nukë ungjetë as zdropën,
po gjithë herë ndritën rrethn’e shekullit e natëne ndritën atë pjesë dheu, qi u thonë
shtat pëlqerëtë,
 “for the sun, which is situated in the Fourth Heaven, never goes down nor
 descends onto earth but always illuminates the perimeter of the earth and at
 night-time illuminates the part of the earth which they call *shtat pëlqerëtë*,

34. There are in this pericope (Buzuku 172.81–176.11 = John 11:1–45) four references to the same group of Jews having come to Bethany, and each instance has different wording: in (35), the auxiliary used is the imperfect of ‘be’; in two other instances not cited here the auxiliary used is the imperfect of ‘have’ (once preceding the past participle, once following it; cf. §6.1), and in (41) the auxiliary used is the aorist of ‘be’. In my view, it is far-fetched to ascribe different temporal/aspectual meanings to the individual forms: instead, the differences are best understood as due to *variatio* (cf. (18) and (52)).

posikundërse gjithë dheu e shekulli e
 just_as whole earth.SG.NOM.DEF and world.SG.NOM.DEF and
parë_se lënte Muhameti e
 before be_born.IPRF.IND.ACT.3SG Mohammed.SG.NOM.DEF and
mbasandaj gjithë herë kanë pasë ditunë
 afterwards always have.PRS.IND.ACT.3PL have.PST.P know.PST.P
e mbajtunë
 and believe.PST.P
 just as the whole earth and world – both before Mohammed was born and
 afterwards – have always known and believed”

As can be seen, the meaning of the present perfect II here is quite similar to that of an ordinary present perfect with a persistent-situation reading (cf. §6.2.3). However, it is easy to see that the present perfect II, much more strongly than an ordinary present perfect, emphasises that what is referred to has been lasting for a very long time. There can be no doubt that Bogdani used this tense to polemicise against muslims in general, who in his view denied something that had been known as true literally for ages.

In Modern Standard Albanian, there is a tense with the same morphology but with a different meaning (cf. Buchholz & Fiedler 1987: 133).

6.6 The function of the imperfect past perfect indicative II

The imperfect past perfect indicative II is an imperfect past perfect tense of the perfect, i.e. it is also a *surcomposé* tense. Its purpose is to introduce a second, deeper, layer of anteriority: it indicates that an event took place prior to another event which itself took place prior to a reference point in past time:

- (43) Buzuku 204.43–47 (= John 12:1–2)³⁵
- | | | | |
|--------------------|--------------|--------------------------|---------------------------|
| <i>gjashtë dit</i> | <i>parë</i> | <i>Pashkësë</i> | <i>erdh</i> |
| six days.PL.ACC | before | Passover.SG.GEN.DEF | come.AOR.ACT.3SG |
| <i>Jezu</i> | <i>ëndë</i> | <i>Betanië</i> | <i>tuk ish</i> |
| Jesus.SG.NOM.M | to | Bethany | where be.IPRF.IND.ACT.3SG |
| <i>Laxari</i> | <i>klenë</i> | <i>vdekunë</i> | <i>qi u-ëngjall</i> |
| Lazarus.SG.NOM.M | be.PST.P | die.PST.P | REL NACT-revive.AOR.3SG |
| <i>mordjet</i> | <i>e</i> | <i>aty i-banë</i> | <i>një darkë</i> |
| death.SG.ABL.DEF | and there | OMI.3SG-make.AOR.ACT.3PL | an evening_meal |

35. I have reordered the first four words: in the print, we find *parë gjashtë dit Pashkësë*, which makes no sense syntactically, particularly in view of the fact that *parë* “before” governs the genitive (cf. *parë dritësë* “before daylight” in Buzuku 14.13–14). However, the rest of the example is quite straightforward and shows no corruption.

“six days before Passover, Jesus came to Bethany, where Lazarus had died, who had [subsequently] been restored to life from death; and there they prepared an evening meal for him”

Here, the reference point is Christ’s last visit in Bethany before the passion. The first layer of anteriority is found in the aorist form *u ëngjäll* “had been restored to life” (cf. 5.2): the restoration to life of Lazarus had taken place at Christ’s previous visit in Bethany (John 11:17–44). The second layer of anteriority is the death of Lazarus, which had occurred before Christ’s previous visit (John 11:11–14); this is indicated by the imperfect past perfect indicative II form *ish ... klenë vdekunë*. For other examples of the imperfect past perfect II in Buzuku, see Fiedler (2004: 377–379).

6.7 The function of the present perfect subjunctive; general remarks on the non-indicative subcategories of the perfect system

The functions of the non-indicative subcategories of the perfect system have little to do with the functions of the present perfect indicative; rather, they serve as past-tense counterparts of the respective non-indicative categories of the synthetic verbal system (cf. 3.1, 3.2). Thus, the present perfect subjunctive is the past-tense counterpart of the present subjunctive, the imperfect past perfect subjunctive is the past-tense counterpart of the imperfect subjunctive,³⁶ and the present perfect optative is the past-tense counterpart of the non-past optative.

The present perfect subjunctive is used in certain types of subordinate clause that require the subjunctive. In relative clauses, the subjunctive indicates generic statements. The use of the present subjunctive in such generic relative clauses indicates non-past time reference (as in *bëkuom ata qi ... të besonjë* “blessed [are] all those who ... believe” in Example (45) below), whereas the present perfect subjunctive indicates that the event referred to happened prior to speech time. Such relative clauses can be headless, introduced by *gjithëkush* “whoever” and similar pronouns, as in (44), or headed, as in (45):

- (44) Buzuku 260.46–47 (= John 6:45)
gjithëkush të-kehtë gjegjunë ën Atit
 whoever SBJVPX-have.PRS.SBJV.ACT.3SG hear.PST.P from father.SG.ABL.DEF
sim e të-kehtë xanë
 my.SG.ABL.M and SBJVPX-have.PRS.SBJV.ACT.3SG understand.PST.P
të-vinjë tek u
 SBJVPX-come.PRS.SBJV.ACT.3SG to me
 “whoever has heard from my father and understood will come to me”

36. Note that there is no aorist subjunctive, as implied in §3.1.

- (45) Buzuku 244.23–25 (= John 20:29)
bëkuom ata qi të-mos-kenë
 blessed DIST.DEM.PL.NOM.M REL SBJVPX-NEG-have.PRS.SBJV.ACT.3PL
pātë e të-besonjënë
 see.PST.P and SBJVPX-believe.PRS.SBJV.ACT.3PL
 “blessed [are] all those who have not seen and believe”

Here, I have added “all” in order to convey the sense of generalisation implied in the subjunctive.

Another use of the present perfect subjunctive occurs in subordinate temporal clauses preceded or followed by a main clause with a verbal form referring to future time. In such cases, both subordinate and main clause refer to future time but it is clear that the event referred to in the subordinate clause is anterior to the event referred to in the main clause. In other words, just as the present subjunctive in Buzuku can refer to future events (with no modal implications) and is thus interchangeable with the Old Geg future tense both in main and in subordinate clauses (cf. Fiedler 2004: 423–428), the present perfect subjunctive can be used as an equivalent of a Latin future perfect:

- (46) Buzuku 252.24–26 (= Acts 1:8)³⁷
por ju të-përzini vërtyt si
 but you SBJVPX-receive.PRS.SBJV.ACT.2PL power.SG.ACC after
të-ketë ardhunë Shpirti Shenjt
 SBJVPX-have.PRS.SBJV.ACT.3SG come.PST.P Spirit.SG.NOM.DEF Holy
përëmbi ju
 over you
 “but you will receive power after the Holy Spirit has come [*lit.* will have come]
 over you”

6.8 The function of the imperfect past perfect subjunctive

The imperfect past perfect subjunctive is rare. On the one hand, it is used in indirect yes/no-questions referring to events that took place prior to a reference point in past time:

37. The wording of the subordinate clause here follows Latin *cum superuenerit santus spiritus super uos* “when the Holy Spirit will have come over you” (cf. Wordsworth, et al. 1954: 37, apparatus).

- (47) Buzuku 222.81–83 (= Genesis 8:8)
e dërgoi pëllumnë ëmbas korbit
 and send_forth.AOR.ACT.3SG dove.SG.ACC.DEF after raven.SG.ABL.DEF
me -pām pam³⁸ a-t-ishnë ënsēm³⁹
 INFP-see.PST.P by_any_chance Q-SBJVPX-be.IPRF.ACT.3PL subside.PST.P
ujënatë përrëmbi dhët
 water.PL.NOM.DEF on earth.SG.INS.DEF
 “and he sent forth the [sic] dove after the raven in order to see if by any chance
 the waters had subsided on earth”

As implied in §6.7, the use of the imperfect past perfect subjunctive here is paralleled by the use of the imperfect subjunctive in indirect yes/no-questions referring to events simultaneous with a reference point in past time. Note that, although the use of the subjunctive in indirect yes/no-questions is reminiscent of Latin syntax, this use is genuinely Albanian and not triggered by the fact that Buzuku’s text is translated from Latin. This can be seen from the fact that the subjunctive occurs even in indirect yes/no-questions that have no equivalent in the Latin text of the Vulgate, e.g. in Buzuku 296.55 (= Luke 13:6).

On the other hand, the imperfect past perfect subjunctive is used to express counterfactual wishes referring to past time. This wish is dependent on a (petrified?) modal-verb expression:

- (48) Buzuku 192.84–86 (= Exodus 16:3)
Zot’ ynë të-duoj na
 Lord.SG.NOM.DEF our.SG.NOM.M SBJVPX-want.IPRF.ACT.3SG we
t-ishnjim vdekunë ën duorshit së tinë
 SBJVPX-be.IPRF.ACT.3PL die.PST.P from hand.PL.ABL.DEF ART our.SG.GEN.M
Zot ëndë dhët të egjipit
 Lord.SG.GEN in land.SG.INS.DEF ART Egypt.SG.GEN.DEF
 “would God that we had died by the hands of our Lord in the land of Egypt”

38. My analysis of *pam* follows Ashta (2000: 400).

39. Despite Fiedler’s objections (Fiedler 2004: 495, n. 143), I read this as *ënsēm*; this could further be interpreted as deriving from a verbal stem **se-* “swell” (Transponat ***k’w-éje/o-*, remodeled from **k’uh₁-éje/o-*, cf. the similar, but independent, prehistory of Vedic *śváyati* “swell”, root **k’weh₁-*, see Rix, Kümmel et al. 2001: 339–340). The meaning “subside” must then be due to the preverb *ën* – note that *ën-* means “away, off” in *ënhjek* “take away, delete” (Fiedler 2004: 736) and in *nduk* “pluck (someone’s beard)” (Schumacher & Matzinger 2013: 666, 987; Rix, Kümmel et al. 2001: 124).

The translation adopted here is based on that of the King James Version,⁴⁰ because the archaic diction of that translation is structurally much closer to the wording of the Albanian text than any translation into Modern English could be. Despite the uncanny resemblance between this example and its counterparts in the King James Version (which itself is based on Tyndale's translation) and in Luther's translation, it is unlikely that Buzuku was aware of these translations. More likely, Buzuku was using idiomatic Albanian, which is supported by the fact that in Bardhi's Latin-Albanian dictionary the Latin particle *utinam* "if only" is rendered as *dashtë Zot'ynë* "may God want" (Bardhi 188.7). This closely resembles *Zot' ynë të duoj* in Example (48): while *të duoj* is the 3SG imperfect subjunctive active of *do* "want, wish", *dashtë* is the 3SG active of the non-past optative of the same verb. Moreover, there is one further counterfactual wish in Buzuku (144.34–36 = 2 Kings 5:3), which refers to speech time and therefore uses the imperfect subjunctive, likewise dependent on *Zot' ynë të duoj*.

6.9 The function of the present perfect optative

The perfect optative appears only in the protases of non-counterfactual conditionals. It indicates that the event referred to in the protasis is prior to the event referred to in the apodosis:

- (49) Buzuku 174.45–47 (= John 11.25)
- | | | | |
|-------------------|-----------------------------|-------------------------------|----------------|
| <i>ai</i> | <i>qi</i> | <i>ëndë muo beson</i> | <i>edhe në</i> |
| DIST.DEM.SG.NOM.M | REL | in me believe.PRS.IND.ACT.3SG | even if |
| <i>kloftë</i> | <i>vdekunë ai</i> | <i>të-gjëllinjë</i> | |
| be.OPT.ACT.3SG | die.PST.P DIST.DEM.SG.NOM.M | SBJVPX-live.PRS.SBJV.ACT.3SG | |
- "he who believes in me, will live, even if he has died"

As implied above (6.7), the present perfect optative contrasts with the non-past optative in protases, which presents the event referred to in the protasis as simultaneous with the event referred to in the apodosis. Note also that the use of optatives in protases at least in some examples in Buzuku indicates that the speaker presents the event as possible but no more than that.

40. However, I have taken the wording "would God" from Numbers 14:2, since Exodus 16:3 "would to God" shows an additional "to", whose function is difficult to interpret.

7. The inverted unverbated perfect and the rise of the admirative

Already in Buzuku it can be observed that the perfect is giving rise to an entirely new category, the so-called admirative. In Modern Albanian, the admirative system has become an important new sub-system of the verbal system; it has a present, an imperfect, a perfect and a past perfect. Its semantics are defined as follows by Friedman (2000: 339, 343):

- a. Admirativity: the expression of surprise⁴¹ at a pre-existing state of affairs that the speaker would not have been willing to vouch for prior to discovery;
- b. Dubitativity: the expression of sarcastic disbelief, i.e. expressively marked rejection of confirmation.
- c. Reportedness: explicit non-confirmativity with the implication or statement that the information is derived from a report.

In Buzuku, the specific characteristics that distinguish the Modern Albanian admirative from the perfect are only just developing; the rest of this paper will be dedicated to demonstrating how these characteristics slowly developed in Old Albanian. The following account is based on Fiedler (2004: 380–405) but differs from this in many details.

7.1 Morphology of the inverted unverbated perfect (IUP)

The morphology that characterises the modern admirative is already present in Buzuku:

- a. The auxiliary, which is always ‘have’, follows the participle and is unverbated with it (note that inverted order can also occur in ‘normal’ perfects, cf. 6.1);
- b. The participle itself is often clipped and, depending on its morphology, may lack either an auslaut consonant or one or more auslaut syllables;
- c. The morphology of ‘have’ used here is partly different from, and more archaic than, the morphology of ‘have’ when used as a non-unverbated auxiliary or as a non-auxiliary verb.
- d. The non-active forms are always formed with the non-active verbal affix *u*.

Since the Tense-Aspect-Mood characteristics of such verbal forms in Buzuku are on the whole closer to those of the contemporary perfect system than to those of the Modern Albanian admirative system (as will be shown), it would be anachronistic

41. The term *surprise* also includes unpleasant surprise, verging on irritation.

to call them admirative forms. I therefore use the term ‘inverted unverbated perfect’ (henceforth IUP). In Buzuku, the IUP has the following tenses and moods:

- Present indicative IUP: participle + unverbated present indicative of ‘have’;
- Imperfect indicative IUP: participle + unverbated imperfect of ‘have’;
- Imperfect subjunctive IUP: subjunctive prefix + participle + unverbated imperfect of ‘have’;
- Present perfect indicative IUP: present indicative IUP of the auxiliary ‘have’ (as in a.) + past participle (note that this is completely parallel to the present perfect indicative as described in 6.2, the difference being that the auxiliary here itself has IUP morphology).

7.2 Functions of IUP tenses and moods in Buzuku

7.2.1 *The function of the imperfect indicative IUP and the imperfect subjunctive IUP*

The imperfect indicative IUP and the imperfect subjunctive IUP forms are by far the best attested IUP forms. Since they usually occur in tandem, they are best discussed together.

Almost all examples of the imperfect indicative IUP and the imperfect subjunctive IUP are found in counterfactual conditionals referring to past time:⁴²

- (50) Buzuku 316.49–51 (= John 14:7)
- | | |
|--|------------------------|
| <i>në njoh-kishtë</i> | <i>muo edhe Atënë</i> |
| if recognise.CLPP-have.IPRF.IND.ACT.2PL me | also father.SG.ACC.DEF |
| <i>tem për të vërtetë të-njoh-kishtë</i> | |
| my.SG.ACC.M for CLF truth SBJVPX-recognise.CLPP-have.IPRF.ACT.2PL | |
| “if you had recognised me, you would also have truly recognised my Father” | |

Note that there is no discernible difference between this example and (36). There is only one morphological difference: in (36) – and in all other examples of counterfactual conditionals referring to past time using non-IUP forms – we find indicative forms of the imperfect past perfect both in the protasis and in the apodosis. By contrast, in the above example we find imperfect indicative IUP in the protasis but imperfect subjunctive IUP in the apodosis (the use of the imperfect subjunctive IUP in the apodosis is a general trait of all counterfactual conditionals referring

42. In seven out of 27 examples in Buzuku, the imperfect subjunctive IUP is used in sentences that are not conditionals, but in all seven examples it likewise serves to express counterfactuality in past time.

to past time formed with imperfect IVP forms). Still, one should not overrate this difference: in apodoses of counterfactual conditionals referring to speech time, both the imperfect indicative and the imperfect subjunctive can appear (Fiedler 2004: 562–564). That we find no examples of the subjunctive of the imperfect past perfect in apodoses of counterfactual conditionals referring to past time may thus be due to the limited number of such conditionals. At any rate, it is safe to say that in counterfactual conditionals referring to past time ‘normal’ imperfect past perfect forms and imperfect IVP forms are interchangeable to a certain extent.

This tendency towards interchangeability shows also in the fact that imperfect past perfect forms and imperfect IVP forms can occur side by side in such conditionals:

- (51) Buzuku 372.66–68 (= John 11:21)
Zot ti në ishnje klenë këtu em vëllā
 Lord thou if be.IPRF.IND.ACT.2SG be.PST.P here my brother
të-mos-vdekunë-kë
 SBJPX-NEG-die.PST.P-have.IPRF.ACT.3SG
 “Lord, if you had been here, my brother would not have died”
- (52) Buzuku 174.67–69 (= John 11:32)
Zot ti në klenë-kishnje këtu em vëllā
 Lord thou if be.PST.P-have.IPRF.IND.ACT.2SG here my brother
nukë-ish vdekunë
 NEG-be.IPRF.IND.ACT.3SG die.PST.P
 “Lord, if you had been here, my brother would not have died”

Note that Examples (51) and (36) render the same sentence from the Vulgate; and the Latin wording underlying (52) is only minimally different. When first investigating this, I tried to ascribe subtly different meanings to (36), (51) and (52) but failed; instead, I am now convinced that all three examples are semantically fully equivalent to each other. The difference in wording is merely due to *variatio* (cf. (18), and (41) with footnote 34).

Summarising these findings, we can state that all forms of the imperfect indicative IVP and the imperfect subjunctive IVP in Buzuku are used to express pure counterfactuality in past time and not admirative meaning in the sense defined in §7 above.

Additional data from outside Buzuku further show that the counterfactual, but non-admirative, use of the imperfect IVP is an ancient trait of Albanian: in two 19th-century sources of the Arvanitic (i.e. southern Tosk) dialect of the island of Hydra in Greece we find imperfect subjunctive IVP forms both in counterfactual conditionals referring to past time and in counterfactual wishes referring to past

time (Liosis 2010: 186–188).⁴³ Liosis thinks that the purely counterfactual use of these imperfect subjunctive IUP forms is secondary and presupposes the loss of admirative meaning (Liosis 2010: 199–200). In the light of the above evidence from Buzuku, I am convinced that things happened the other way round. That is, the counterfactual use of the imperfect indicative/subjunctive IUP in Buzuku's Old Geg and the parallel use of the imperfect subjunctive IUP in Hydra Arvanitic is not secondary but common heritage and predates the development of admirative meaning in IUP forms. Consequently, the semantic peculiarities of the Modern Albanian admirative must have arisen from other uses of the IUP. We therefore have to investigate the other subcategories of the IUP attested in Buzuku (present indicative IUP, present perfect indicative IUP) in order to see if they throw light on the (pre)history of the Modern Albanian admirative.⁴⁴

7.2.2 *The function of the present indicative IUP*

There is only one example in the whole Buzuku corpus:

- (53) Buzuku 92.66–67 (= John 2.10)
e ti ruojtë-kë venënë e mirë
 but thou retain.CLPP-have.PRS.IND.ACT.2SG wine.SG.ACC.DEF CLF good
djerje tash
 up_to now
 “but you have actually retained the good wine up to now!”

With these words (taken from the narrative of the Wedding at Cana) the master of the feast expresses his surprise that (in his view) the bridegroom has retained the good wine until the time when the wedding guests are already drunk. *ruojtëkë* can only be translated as a perfect here, but one characteristic feature of the admirative – the speaker's sense of surprise at something unexpected – is already present.

43. For the exact morphological history of these forms cf. Liosis (2010: 188–191); Liosis makes it clear that the morphology goes back to a major rebuilding of what originally was the past participle plus the imperfect of ‘have’.

44. See also Friedman (2012: 509–512). Apart from (53) and (54), there is one main-clause attestation of an imperfect indicative IUP (Buzuku 242.26–27 = John 20:2), which also expresses surprise, but its temporality is very unclear (cf. Fiedler 2004: 387–388).

7.2.3 *The function of the present perfect indicative IUP*

Again, there is only one example in Buzuku:

- (54) Buzuku 204.60–62 (= John 12:7)
- | | | | |
|--------------------------------|-------------------|--------------------|-------------------|
| <i>lê-e</i> | <i>atê</i> | <i>ën ditet</i> | <i>së</i> |
| leave.IMP.ACT.2SG-OMD.3SG | DIST.DEM.SG.ACC.F | for day.SG.ABL.DEF | ART |
| <i>vorrit</i> | <i>tim</i> | <i>ajo</i> | <i>këta</i> |
| burial.SG.GEN.DEF | my.SG.GEN.M | DIST.DEM.SG.NOM.F | PROX.DEM.SG.ACC.N |
| <i>pas-kâ</i> | <i>ruojtunë</i> | | |
| have.CLPP-have.PRS.IND.ACT.3SG | retain.PST.P | | |
- “leave her alone; she has actually retained this for the day of my burial”

With this sentence Jesus defends Mary, who has anointed his feet, against Judas Iscariot, who calls this a waste of money. As for the wording, Buzuku’s version of John 12:7 goes back to Latin *Sine illam; in diem sepulturae meae servavit illud* “leave her alone; she has retained this for the day of my burial”. Although this textual variant (and its Greek model) is now no longer favoured by textual criticism, it is ancient, occurring both in versions of the original Greek text of John (cf. Nestle & Aland 2015: 341–342, apparatus) and in Latin versions of John (cf. Wordsworth & White 1898: 592–593, apparatus).⁴⁵ From the standpoint of exegesis, *in diem sepulturae meae servavit illud* is difficult to interpret, but whatever exactly this is supposed to mean, Buzuku did his best to translate it as it was. The crucial fact is that Buzuku rendered the Latin perfect form *servavit* with the present perfect indicative IUP form *paskâ ruojtunë*. That is, although it is not easy to tell why Buzuku did not use his ordinary perfect here,⁴⁶ the equation *paskâ ruojtunë* = *servavit* effectively proves that Buzuku already had a present perfect of the IUP. And the use of a present perfect of the IUP as an equivalent of a Latin perfect only makes sense if it was possible to use the present indicative IUP as an equivalent of a Latin present. The latter use is not attested in Buzuku. Of course, the lack of an attestation does not mean that it was impossible to use the present indicative IUP to render a Latin present-tense form; we must content ourselves with the fact that Example (54) provides only circumstantial evidence. Therefore, I have consulted the Budi corpus, written some 60 years after Buzuku’s work.

45. This textual variant also underlies Luther’s and the King James Version’s wording of John 12:7, but this is simply due to the fact that it is found in Greek and Latin in Erasmus of Rotterdam’s *Textus receptus* (Roterodamus 1516: John 12:7).

46. The exact implication of *paskâ ruojtunë* is not clear. Admittedly, surprise does not seem appropriate with a person supposed to be omniscient, but Buzuku was probably more concerned with making the statement sound natural. This also applies *mutatis mutandis* to (55).

7.3 More on the rise of the admirative in Old Geg: The evidence of Budi

Although there is not a great number of present indicative IUP forms in Budi, I have selected three examples that sufficiently explain how the Modern Albanian admirative developed out of the IUP as found in Buzuku.

The first example is still parallel to (53):

(55) Budi SC 49.21–23

shtëpia ime shtëpia e
house.SG.NOM.DEF my.SG.NOM.F house.SG.NOM.DEF ART
uratëvet quhetë e ju
prayer.PL.GEN.DEF call.PRS.IND.NACT.3SG but you
po-shof se e-bã-kî
PROG-see.PRS.IND.ACT.1SG that OMD.3SG make.CLPP-have.PRS.IND.ACT.2PL
shpellënë e kusarëvet e shtëpînë e
cave.SG.ACC.DEF and thief.PL.GEN.DEF and house.SG.ACC.DEF ART
tregut
market.SG.GEN.DEF
“my house is called the house of prayers, but I see that you have made it a [lit. the] cave of thieves and a [lit. the] market house”

Like (53), this example of a present indicative IUP must be read as a perfect expressing surprise (as defined in (7a)), since Budi himself presents the above passage as the equivalent of Latin *Domus mea domus orationis vocabitur, vos autem fecistis illam speluncam latronum, & domus negotiationis* “my house will be called a house of prayer, but you have made it a cave of thieves, and a house of trade”.

The second example is quite different:

(56) Budi SC 321.23–25

hinje tashti mirë gjeta e i-njofa
behold now well find.AOR.ACT.1SG and OMD.3PL-learn.AOR.ACT.1SG
e i-provova se genë-kanë
and OMD.3PL-experience.AOR.ACT.1SG that be.PST.P-have.PRS.IND.ACT.3PL
mirëfilli e për të vërtetë mundimet’ e ferrit
quite_clearly and for CLF truth pain.PL.NOM.DEF ART hell.SG.GEN.DEF
“behold, I have now found out well and learnt and experienced that the pains of hell quite clearly and truly exist”

Context: a legend of a man who refuses to go to confession and does not believe in the pains of hell at all. One night, he is taken away by demons, and after some time his dead body is brought back from hell (sic), completely scorched and bearing in his hand a piece of paper on which the above words have been written with

tar and pitch. – In this example, a perfect tense reading (“the pains of hell ... have been / have existed”) would make no sense at all. Instead, we must read *qenëkanë* as a present-tense form expressing strong surprise (as defined in (7a)). This means that here, *qenëkanë* already has the typical morphosemantic characteristics of the Modern Albanian present of the admirative.

Finally, there is also an example that shows that as early as Budi the present indicative IVP could also be used to indicate sarcastic disbelief:

(57) Budi SC 3.22–24

E Mjeshtri i Pëllasit, tue e vëm roe, i shtiu shkag,

“and the Master of the Palace, examining it, rejected it

se qenë-kā kafshë plakë e jo aqi

because be.PST.P-have.PRS.IND.ACT.3SG thing.SG.NOM old and not so

i mirë

CLF good

because [he alleged that] it was an old thing and not so good”

This is from the preface of the *Speculum Confessionis* and tells us some details of the book’s history: After completing his book, Budi submitted it to Pope Paul V, who agreed to have it printed at his own expense and passed it on to the Master of the Palace, who then rejected it. In the above example, Budi clearly shows that he did not accept the judgment of the Master of the Palace, which is why I have adopted the above translation. Unfortunately, however, it is impossible in English to express disbelief by means of a verbal form alone (by contrast, German, can do so by using ‘Konjunktiv I’: ... *wies es zurück, weil es eine alte Sache und nicht so gut sei*).

8. Summary

The Old Geg of Buzuku has an elaborate perfect system. The morphological means used are typical of perfects formed in the European Middle Ages (‘have’/‘be’ + past participle), but it is worth noting that the Old Geg perfect system is a major sub-system of the verbal system, using all synthetic forms of the auxiliary apart from the imperative. In addition to this, there are also *surcomposé* forms, using perfect and pluperfect forms of the auxiliary.

The central category of the perfect system, the present perfect tense, is well attested in Buzuku. Most instances have a resultative or existential reading,⁴⁷ while other readings are very rare; recent-past readings are not found at all, recent past

47. NB: existential readings can be combined with definite past time adverbials (e.g. (20)) and can refer to persons who are already dead (e.g. (28)).

being expressed by the aorist. The past tenses of the perfect system indicate anteriority to a reference point in past time but often convey specific aspectual nuances, depending on whether the imperfect or the aorist of the auxiliary is used. The *sur-composé* forms serve to form a perfect of the perfect (used for persistent-situation readings)⁴⁸ and a pluperfect of the perfect, which indicates a second, deeper layer of anteriority prior to the anteriority indicated by the aforementioned past tenses of the perfect system.

The non-indicative forms of the perfect system have no perfect semantics but serve as past-tense counterparts to the respective non-indicative categories of the synthetic verbal system.

Finally, the Old Geg perfect system gives rise to an entirely new category, the so-called admirative. Morphologically, admirative forms are composed of the past participle (which is often clipped) and the unverbated auxiliary 'have'. In Buzuku, such inverted unverbated perfect (IUP) forms are partly synonymous with the perfect-system forms from which they are derived. There are, however, two IUP forms in this corpus that indicate that the admirative was already *in statu nascendi*. After Buzuku, in the late 16th and early 17th centuries, the IUP eventually lost all perfect meaning and turned into the modern admirative, i.e. into a present expressing the speaker's surprise, disbelief, irony or doubt, or his or her unwillingness to vouch for the truth of the statement given.⁴⁹

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48. This perfect of the perfect is not found in Buzuku but only in Bogdani.

49. For the relationship between the Albanian admirative and similar categories in Balkan Slavic and Turkish see Friedman (2012, esp. 512–517).

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The perfect system in Latin

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The Latin perfect system is argued to denote that an eventuality described by a predicate terminates prior to some moment in time, whether utterance time in the case of the ‘present’ perfect, or reference/topic time, in the case of the perfect infinitive, past and future forms. The ‘present’ perfect is argued to function as a perfective, while the past, future and infinitive perfect are argued to denote anteriority. Additional conditions are considered in order to explain the behaviour with state and achievement predicates. The participle in **-to-* generally denotes that an eventuality described by the predicate terminates prior to topic time, as well as that an event’s poststate (if any) holds at topic time. As such the participle is generally passive in diathetical orientation, although there are exceptions. In certain kinds of predicate, namely those describing extent and mental state, the perfect loses direct reference to a prior event and refers only to an eventuality’s poststate.

Keywords: tense, viewpoint aspect, resultative, perfective, poststate, anterior, synthetic, analytic, non-active

1. Introduction

1.1 Formal overview

Latin¹ finite verbs are marked for tense (present, past, future), voice (active and passive), mood (indicative, subjunctive), and aspect (the categories of which are discussed in this article). The infinitive is marked only for tense-aspect and voice.

Latin verbs have two stems, which are termed in the literature *INFECTUM* and *PERFECTUM* (Pinkster 2015: 382; Vairel 1980). The *infectum* is used to form the imperfect, present and future tense forms, while the *perfectum* is used to form

1. The present article focuses almost entirely on Latin, at the expense of other ancient Italic languages. For some discussion of developments in wider Italic, see Schumacher (this volume, Chapter 15, §5.1).

the past, present and future perfect tense forms.² The perfectum, from the formal perspective, is held to be the product of the merging of the inherited perfect and aorist stems (Clackson & Horrocks 2007: 20, 64, 98f.; Willi 2016: 77f.). The Sabellian languages, making up the other half of the Italic language group, also participated in this process, although the two subgroups opt for different stems in most lexemes (Clackson & Horrocks 2007: 64, citing Meiser 1993: 170f., 2003).

In Latin this resulted in inherited perfect stems showing reduplication, e.g. perfectum *pe~pig-*, infectum *pang-* “fix”, or perfectum *fe~fell-*, infectum *fall-* “deceive”, sitting side by side in the same paradigm with inherited aorist stems in *-s-*, e.g. perfectum *dix-* (= *dik-s-*), infectum *dic-* “say”,³ as exemplified in Examples (1) and (2).⁴

- (1) *num me fe~fell-it, Catilina*
 PTCL me deceive.PRF-3SG Catiline.VOC.SG
 “Was I mistaken, Catiline [... ?]”
 (Cicero *In Catilinam* 1.3.7, text Clark 1908, translation Yonge 1856)
- (2) *dix-i ego idem in senatu*
 say.PRF.ACT-IND.1SG I also in senate.ABL.SG
 “I also said in the Senate”
 (Cicero *In Catilinam* 1.3.7, text Clark 1908, translation based on Yonge 1856)

The regular forms in *-v-* in Latin, as with their counterparts *-tt-* and *-(n)ç-/nš-* in Oscan and Umbrian respectively, likely do not have a direct Indo-European ancestry.⁵

2. These terms are retained here, as against adopting a term such as ‘imperfective’ and ‘perfective’ stems, in order to differentiate clearly between tense-aspect morphology and tense-aspect semantics, and so as not to prejudge the conclusions of the present investigation.

3. On the formal origins of the Latin perfect stem, see e.g. Meiser (1998: 202–214).

4. Examples were found either given in literature discussing the forms concerned, cited *ad loc.* Where a translation is given secondary sources, it should be assumed that the citation was found there. Further examples were found through searches of the *Loeb Classical Library*, <http://www.loebclassics.com/> and the *Perseus corpus* using both the website <http://www.perseus.edu/hopper/>, and a search algorithm written by the author using the morphological data provided in Diogenes, <https://community.dur.ac.uk/p.j.heslin/Software/Diogenes/>, applied to the XML files provided by the *Perseus Digital Library*. Translations are my own unless otherwise stated. Textual sources are given under the appropriate section at the end of the paper. Texts quoted are normalized for capitalization and diacritics, regardless of what is published in each edition. Texts taken from secondary sources may not be quoted to the same extent as in those sources. Gender is not glossed unless relevant for understanding the text.

5. For this view, and an overview of the various arguments, including those of Rix (1992) and Meiser (1998, 2003), see Willi (2009, 2016). See also Grestenberger’s recent work on deponents at an IE level, e.g. 2016.

By the time of our earliest Latin texts, the merging of the former perfect and aorist paradigms is complete. While the inherited synthetic perfect stem had no voice distinction, at the point when the perfect was integrated into the rest of the verb system, an analytic form was developed for it, consisting of a finite form of *esse* “be” and a participle in *-tu-* (inherited **-to-*). The general scheme, in the first person singular indicative, is given in Table 1, using the verb *amo* “love”.⁶

Table 1. Latin verb system

		Synthetic		Analytic	
		Active		Non-active	
		Infectum	Perfectum	Infectum	Perfectum
IND	PRS	<i>amo</i>	<i>amavi</i>	<i>amor</i>	<i>amatus sum</i>
	PST	<i>amabam</i>	<i>amaveram</i>	<i>amabar</i>	<i>amatus eram</i>
	FUT	<i>amabo</i>	<i>amavero</i>	<i>amabor</i>	<i>amatus ero</i>
SBJV	PRS	<i>amem</i>	<i>amaverim</i>	<i>amer</i>	<i>amatus sim</i>
	PST	<i>amarem</i>	<i>amavissem</i>	<i>amarer</i>	<i>amatus essem</i>
INF		<i>amare</i>	<i>amavisse</i>	<i>amari</i>	<i>amatus esse</i>
PTCP		<i>amans</i>		<i>amatus</i>	

In Latin there also exists a group of so-called ‘deponent’ verbs which are traditionally glossed as passive in form, while active in meaning.⁷ The forms are given in Table 2, using the verb *hortor* “encourage”.

Table 2. Latin verb system: ‘deponents’

		ACTIVE	
		INFECTUM	PERFECTUM
IND	PRS	<i>hortor</i>	<i>hortatus sum</i>
	PST	<i>hortabar</i>	<i>hortatus eram</i>
	FUT	<i>hortabor</i>	<i>hortatus ero</i>
SBJV	PRS	<i>horter</i>	<i>hortatus sim</i>
	PST	<i>hortarer</i>	<i>hortatus essem</i>
INF		<i>hortari</i>	<i>hortatus esse</i>
PTCP		<i>hortans</i>	<i>hortatus</i>

6. For full paradigms, see e.g. Kennedy & Mountford (1962).

7. For discussion of the syntax and semantics of these forms see e.g. Baldi (1976); Embick (2000); Clackson & Horrocks (2007: 225).

1.2 The problem of the semantics of the Latin perfect

The ‘present’ perfect,⁸ henceforth simply ‘perfect’ (opposed to the future perfect or pluperfect, henceforth ‘past perfect’) is generally regarded as the most problematic part of the Latin verb system from a semantic perspective (Pinkster 2015: 444, 1983: 286; Haverling 2010: 343). Since the perfectum is paradigmatically opposed to the infectum, that we find a perfective ~ imperfective opposition (per e.g. Acedo-Matellán 2016: 46) is not surprising:

- (3) *ardere* *censui* *aedis.* *ita tum*
burn.PRS.INF.ACT think.PRF.IND.ACT.1SG house.ACC.PL so then
confulgebant.
shine.IPRF.IND.ACT.3PL
“I thought that the house was burning. It was so bright at that time.”
(Plautus *Amphitruo* 1067, text from Pinkster 2015: 414)

As such, the perfect is the standard form used for narrating a sequence of past events in narrative:

- (4) *Suebi [...]* *domum* *reverti* *coeperunt;*
Suebi.NOM.PL home.ACC.SG return.PRS.INF.NACT begin.PRF.IND.ACT.3PL
quos *ubi* *qui* *proximi* *Rhenum*
REL.ACC.PL when REL.NOM.PL near.SUPERL.NOM.PL Rhine.ACC.SG
incolunt *perterritos* *senserunt,*
inhabit.PRS.IND.ACT.3PL terrify.PRF.PTCP.ACC.PL perceive.PRF.IND.ACT.3PL
insecuti *magnum* *ex* *iis* *numerum*
follow.PRF.PTCP.NOM.PL great.ACC.SG from them.ABL.PL number.ACC.SG
occiderunt.
kill.PRF.IND.ACT.3PL
“the Suebi [...] began to return home; when those who live nearest the Rhine saw that they were terrified, pursued and killed a great number of them.”
(Caesar *De bello Gallico* 1.54.1, text Holmes 1914)

In narrative, reference time is necessarily set prior to the time of utterance. However, the perfectum has other uses which presuppose a reference time at the time of utterance. Such instances come out as a present perfect or present in English, per Example (5).

8. That is paradigmatically opposed to the past and future perfects, although not carrying present time semantics.

- (5) *eadem nocte accidit ut*
 same.ABL.SG night.ABL.SG happen.PRF.IND.ACT.3SG that
esset luna plena, qui dies
 be.IPRF.SBJV.ACT.3SG moon.ABL.SG full.ABL.SG REL.NOM.SG day.NOM.SG
maritimos aestus maximos in Oceano
 of_the_sea.ACC.PL swell.ACC.PL great.SUPERL.ACC.PL in Ocean.ABL.SG
efficere consuevit
 produce.PRS.INF.ACT accustom.PRF.IND.ACT.3SG
 “On the same night it happened to be a full moon, which is accustomed to
 cause very high tides in the Ocean” (Caesar *De bello Gallico* 4.29, text
 Holmes 1916; also given in Allen & Greenough 1887: 198)

Approaches to analysing the Latin perfect have treated the perfect as fundamentally denoting:

1. Perfective aspect (Meillet 1933: 28f.);⁹
2. Past tense (Serbat 1980a: 53f.; cf. Poirier 1980: 88);
3. Both tense and aspect, as an anterior perfective (Pinkster 2015: 442–444).

The third view has in recent times gained ascendancy, and is often explained within the context of the historical development combining not only formally but also semantically the senses of the IE perfect and aorist (Hoffmann & Szantyr 1972: 317; Pinkster 1983: 293f., 2015: 444; Clackson & Horrocks 2007: 20). As Pinkster (2015: 444) points out, however, the mere fact of formal syncretism of perfect and aorist systems “can be explained much better by assuming that the semantic differences between them had disappeared, than by assuming that the original differences were preserved.”

1.3 Periodization of Latin

Notwithstanding the many difficulties in periodizing Latin (for which see Penney 2011; Adams 2011; Clackson & Horrocks 2007: 265f.), or indeed any language, it is nevertheless helpful to identify characteristics of the language of particular periods. For these purposes, I follow the periods and associated dates given by Pinkster (2015: 5), except that I do not make use of ‘Silver Latin’ and instead for simplicity of exposition follow Clackson (2011a) in taking Classical and Silver Latin together as ‘Classical’. The periods and approximate dates are given in Table 3.

9. Meillet does not use the term ‘perfective’ or its equivalent, but rather describes it as denoting “le procès achevé”. For discussion see Pinkster (1983: 286f.) and Szemerényi (1987: 5f.).

Table 3. Periodization of Latin

Period	Approximate dates
Early Latin	c. 240–90 BCE
Classical Latin	90 BCE–AD 199 CE
Late Latin	200–600 CE

2. Frameworks, terminology and definitions

2.1 Viewpoint aspect

In the spirit of Klein (1992, 1994), Bary (2009, 2012) and Devine & Stephens (2013: 69), I take viewpoint aspect to be a relation between the time of a situation, or ‘situation time’, and the time about which a claim is being made, or ‘topic time’ (also known as ‘reference time’). Situation and topic time may be regarded as sets or spans of time atoms (Krifka 1989: 96, 1992: 33). Situation time may be understood as a function mapping a situation to a set of times, or temporal trace, $\tau(e)$ (Krifka 1989), while topic time can be understood as a set of times t_t .

On this understanding, perfective aspect denotes that situation time is included in topic time (Devine & Stephens 2013: 69), imperfective that topic time constitutes a non-final part of situation time (per Bary 2009: 78), and anterior that situation time precedes topic time.¹⁰ These definitions are given formally in (6) through (8):

- (6) PFV: $\tau(e) \subseteq t_t$
- (7) IPFV: $\tau(e) \supset t_t$
- (8) ANT: $\tau(e) < t_t$

2.2 Tense

Tense is understood here as a relation between topic time and the time of the utterance, or set of times that constitute utterance time, t_u (Klein 1992: 536). On this model, past tense denotes that topic time occurs prior to utterance time, present tense that topic time includes utterance time, and future tense that utterance time precedes topic time:

10. This anterior formulation constitutes a modification of Klein’s definition of the aspectual semantics of the perfect (Klein 1992: 538), namely that topic time is included in the posttime of situation time. My formulation does not posit a separate expanse of time ‘posttime’, but relies for the definition purely on a relation to situation time.

- (9) PST: $t_t \prec t_u$
 (10) PRS: $t_t \supseteq t_u$
 (11) FUT: $t_t \succ t_u$

2.3 Situation types

Starting with Aristotle and in modern times Ryle (1949), Vendler (1957) and Kenny (1963), it has been standard in discussion of verbal semantics to distinguish various situation types, of which the most commonly referred to are those of Vendler (1957): accomplishments, activities, achievements and states. In general these may be distinguished according to the properties of telicity (in general terms, the presence or absence of terminal point) and whether or not the situation has phases. Thus accomplishments are telic and have phases, activities have phases but are atelic, states have no phases and do not involve change, while achievements are telic but do not have phases. Furthermore, since telicity may be taken to be a property of whole predicates / vps (see Horrocks & Stavrou 2007: 638), Vendlerian situation aspectual distinctions are best taken as descriptions of whole predicates / vps rather than of individual verb types. This is not the place to discuss the extent to which, and manner in which, the verbal head plays a role in determining the situation aspect of the predicate, except to say that I follow Rothstein (2004, 2008: 2f.) in holding that the verbal head has an important role to play here.¹¹

In more specific terms, we may define Vendlerian predicate types as follows:

- (12) **ACTIVITY**: a potentially infinite set of subeventualities in the denotation of X, each of which subeventualities in turn consists of a finite set of subsubeventualities, which however are not in the denotation of X;
- (13) **STATE**: a predicate subdivisible into an infinite number of subeventualities in the denotation of X, i.e. each subeventuality may itself be subdivided into eventualities in the denotation of X *ad infinitum*. This is also known as the subinterval property (for a full overview of the history of which concept, see Landman & Rothstein 2012). Note the difference with activities, where subeventualities may not be so infinitely divided;¹²
- (14) **ACHIEVEMENT** (following Ramchand 1997: 120–123): a predicate X describing a transition of zero conceptual length from a situation where the state in question does not hold to one where it does. At this point we do not take into account achievement change-of-state eventualities, for which see below § 2.4;

11. For a brief survey of the issues see Rothstein (2008: 1–3).

12. Activities also show the subinterval property down to a certain granularity (Taylor 1977; Dowty 1991: 170–173; Ramchand 1997: 123).

- (15) ACCOMPLISHMENT: a predicate X describing a transition with an endpoint, where the transition consists of a finite set of subeventualities each of which is not in the denotation of X .

For present purposes, I take achievements, accomplishments and activities together, and treat states separately. The key distinction between these two groups of predicates is the presence and absence of atomicity (defined immediately below) in the definition of the predicate, for which see Krifka (1989), Rothstein (2004). An eventuality may be said to be atomic if the following condition holds (after Rothstein 2004: 161):

- (16) If a predicate P is atomic then the elements of P have no proper parts which are also elements of P .

In these terms accomplishments and achievements in themselves, and the minimal subeventualities of activities, are atomic. By contrast, states are not atomic, since a state X has no subparts that are not also subparts of X .

2.4 Conceptual moments

Following Ramchand (1997) and Krifka (1992), I hold that temporal structure in linguistic terms is atomic, so that T_a is the set of all time atoms. Ramchand refers to these atomic entities as CONCEPTUAL MOMENTS. Following Krifka, there may be said to exist for every eventuality e a temporal trace function $\tau(e)$, which “maps every event onto its temporal duration” and “which gives us the conceptual moments isolable in the event, in correct temporal order” (Ramchand 1997: 68), i.e.:

- (17) $\tau(e) = (t_0, t_1, \dots, t_{n-1}, t_n)$

In this way, one can distinguish between physical time as a continuous function, and ‘linguistic time’ which can be modelled as atomic.

As Ramchand (1997: 124) observes, state predicates are different, in that their temporal structure is non-atomic. Rather, for a state predicate one may say that “there is an interval t over which the state is predicated to hold” but “no fixed endpoint to the state and there is no individuation into different conceptual moments”. Accordingly, for her, “the temporal trace function is not defined for them” (Ramchand 1997: 124). However, it does not seem to me necessary to take this step. Rather, one may say instead that the atomic units into which the temporal trace function divides up the stative eventuality may be of arbitrary length in terms of physical time, and that accordingly there are multiple solutions to the application of the temporal trace function to a state predicate. This property of state predicates turns out to have important implications for the interpretation of state predicates headed by perfects in Latin, as we will see.

2.5 Change of state

Certain verbs head predicates which describe transitions from one state to another, i.e. change of state. These may be modelled as complex eventualities consisting of a change-of-state subevent, either accomplishment or achievement in the terms outlined above, followed by a state subevent, having the properties of states (Rappaport Hovav & Levin 1998: 104f.; Kiparsky 2002: 115). In what follows I term this state subeventuality the *POSTSTATE* (cf. Bary 2009). By contrast, I reserve the term *POSTSITUATION* for a situation pertaining after the termination of an eventuality, regardless of whether such a situation is specifically envisaged in the semantics of the predicate.

In the case of accomplishment changes of state, the two eventualities can be understood to abut one another on the right/left respectively, i.e.:

$$(18) \quad \tau(e) \supset \subset \tau(s)$$

We have said that a prestate achievement eventuality is minimally defined in terms of two conceptual moments, a moment where the state does not hold, followed by one moment where the state does hold. An achievement change-of-state compound eventuality therefore consists of such an eventuality followed by the poststate. However, the poststate may be counted from the first moment where the state holds followed by all subsequent moments where this is the case. This means that the temporal trace of the prestate subeventuality and that of the poststate may be said to intersect by a single conceptual moment, i.e.:

$$(19) \quad |\tau(e) \cap \tau(s)| = 1^{13}$$

This is significant in particular for our understanding of the semantics of the future perfect (see § 3.2.2).

2.6 Resultative

Resultatives do not fit neatly into a division between situation and viewpoint aspect. However, insofar as they relate the temporal trace of a state described by a change-of-state predicate to topic time, specifying that the latter is included in the former, they may be regarded as parallel to tense-aspect forms. However, while the result state may either logically or actually be the result of some prior event, for reasons that will become clear I hold that the resultative (at least in Latin) does not

13. Where $|x|$ is the cardinality function returning the number of elements of a set x , rather than the absolute function, which (confusingly) has the same notation. See *Wikipedia* 'Cardinality' (<https://en.wikipedia.org/wiki/Cardinality>, accessed December 11, 2017).

necessarily relate the temporal trace of this eventuality to topic time, according to (20), where square brackets indicate that an element is optional.

$$(20) [\tau(e) < t_t \wedge] \tau(s) \supseteq t_t$$

2.7 The semantics ~ pragmatics interface

At various points I will have recourse to pragmatic considerations in the final resolution of the interpretation of the Latin perfect, in particular in regard to whether or not the perfect is taken to refer to a situation holding at topic time. It is beyond this paper to address this issue in detail. For these purposes, a given semantic description carries entailments particular to that description which cannot be cancelled, while a pragmatic implicature may be cancelled (see Grice 1975). To exemplify, consider the following cases from English:

- (21) I have stood here for many years.
- (22) I have stood here for many years, and I am still standing here.
- (23) I have stood here for many years, but no longer do.
- (24) I stood here for many years.
- (25) *I stood here for many years, and I am still standing here.

From Example (21) the reader is likely to infer that the subject is still standing at the location in question at topic time. However, the felicity of both (22) and (23) show that this inference may be said not to be a function of the semantic description of the perfect, but rather be a pragmatic implicature. By contrast, at least for this native speaker of (British) English, (24) asserts that the standing event terminated prior to topic time. This is shown by the infelicity (again for this speaker of British English) of (25), where the combination of 'still' with the simple past is jarring.

3. The semantics of the EL and CL perfect stems¹⁴

3.1 Synthetic present perfect

3.1.1 *Semantics and the sequence of tenses*

I propose that the perfect form in CL denotes past tense and perfective aspect.¹⁵ However, in order to make this case, it is necessary to address the most powerful argument against such a thesis, namely the behaviour of the perfect in respect of the sequence of tenses.

The behaviour of the perfect in regard to the so-called ‘sequence of tenses’ has generally been taken as decisive in favour of the perfect carrying two senses (Devine & Stephens 2013: 91f.; Pinkster 1983: 291; Comrie 1976: 53).¹⁶ According to the rules of the sequence of tenses, Latin tense forms may be divided into two groups: past, including imperfect and pluperfect, and non-past, including present and future. A past tense form (i.e. imperfect or pluperfect) in the matrix clause will introduce a past tense of the subjunctive in a dependent clause. This is termed ‘secondary’ or ‘historic sequence’. By contrast, in so-called ‘primary sequence’, a non-past tense (i.e. present or future) in the matrix clause will introduce a non-past tense of the subjunctive in a dependent clause (Clackson & Horrocks 2007: 59; see Pinkster 2015: 552–605 for detailed discussion). The EL and CL perfect is unlike other tenses in that it may introduce a verb in a dependent clause in either historic or primary sequence. This is usually explained with reference to polysemy of the present perfect, i.e. perfective and anterior:

- (26) *nunc prorsus hoc statui, ut [...] utri=que*
 now directly this.ACC.SG decide.PRF.IND.ACT.1SG that both.DAT=CONJ
a me mos gestus esse videatur
 by me.ABL custom.NOM.SG obey.PRF.PTCP.SG be.PRS.INF see.PRS.SBJV.NACT.3SG
 “I have right now come to the view that [...] in both (ways of life) I have kept
 the precepts [*lit.* that [...] it seems that the custom has been kept by me]”
 (Cicero *Epistulae ad Atticum* 2.16.3, text Purser 1903)¹⁷

14. Here only the indicative, infinitive and participle are described. For descriptions of the function of the subjunctive forms see Pinkster (2015: Chapter 7).

15. Such an understanding is in fact implicit in Pinkster’s formulation: “States of affairs that are presented as anterior to the time of speaking are at the same time presented in retrospect and as one complete, indivisible whole – in other words, they have perfective aspect ...” (Pinkster 2015: 442)

16. Pinkster also cites among others Harris (1970: 65) and Poirier (1978).

17. Cf. in narrative: *perduxit ... possent* (Livy 2.1.6, text Foster 1919).

- (27) *statuerunt* [...] *maiores nostri ut* [...]
 establish.PRF.IND.ACT.3PL forefather.NOM.PL POSS.1PL.NOM.PL that
sortito in quos=dam animadverteretur
 lot.ABL.SG against some.ACC.PL=PTCL censure.IPRE.SBJV.NACT.3SG
 “[O]ur forebears **determined** that [...] against a few punishment **should be brought** by lot”
 (Cicero *Pro Cluentio* 46.128, text Clark 1908)¹⁸

For us the question is the extent to which the matrix verb may be said fully to determine the tense of the subordinate clause. Only if this is the case is it possible to argue that the tense-aspect of the dependent verb sequence reflects the tense-aspect semantics of the matrix verb.

Certainly there is plenty of evidence of the alternation of primary and historic sequence after the perfect which might support this thesis. Thus in narrative it is normal to find a subordinate clause with a historic sequence verb after a perfect. However, historic sequence is also found where we might expect non-past.

- (28) *huic ego causae [...] accessi ut*
 this.DAT.SG I case.DAT.SG undertake.PRF.IND.1SG in_order_to
infamiae communi succurrerem.
 disgrace.DAT.SG public.DAT.SG aid.IPRE.SBJV.1SG
 “I **undertook** this case [...] in order **to bring assistance** to public disgrace (of the Senate).”
 (Cicero *In Verrem* 1.2, text Peterson 1917)

By contrast, on occasion primary sequence is found where we should expect historic on the basis of the rules of the sequence of tenses:

- (29) *in eodem (Lucullo) tanta prudentia*
 in same.ABL.SG Lucullus.ABL.SG so-great.NOM.SG prudence
fuit [...] ut hodie stet Asia
 be.PRF.IND.ACT.3.SG that today stand.PRS.SBJV.ACT.3SG Asia.NOM.SG
Luculli institutis servandis
 Lucullus.GEN.SG ordinance.ABL.PL keep.GDV.ABL.PL
 “There **was** so much prudence in the same (i.e. Lucullus) [...] that today Asia **stands** by holding to his arrangements”
 (Cicero *Academica* 2.1.3, text from Hale 1886: 447, translation based on Hale)

In this passage Cicero describes Lucius Licinius Lucullus, who died in 57/56 BCE (Badian 1999). The *Academica* is dated to 45 BCE (Corbell 2013: 22) well after Lucullus’ death.

18. Cf. Cicero *Pro Roscio Amerino* 32, cited by Pinkster (1983: 289).

Crucially, primary sequence can even be introduced by the imperfect, which never has present time reference. In the following example the primary sequence non-active perfect / resultative *sit appellatus* is introduced by the imperfect *excellebat*:¹⁹

- (30) *quamquam enim adeo excellebat Aristides*
 although PTCL SO_much excel.IPRF.IND.ACT.3SG Aristides.NOM.SG
abstinentia, ut [...] cognomine Iustus sit
 self-control.ABL.SG that name.ABL.SG Justus be.PRS.SBJV.3SG
appellatus [...] multatus est.
 call.PRF.PTCP.NOM.SG punish.PRF.PTCP.NOM.SG be.PRS.3SG
 “For, though Aristides **was so pre-eminent** in self-control that [...] he is (/ **has been**) named the Just [...] he was punished”
 (Nepos *Aristides* 1.2, text from Hale 1886: 450, translation based on Hale)

The following example is parallel, with imperfect *meditabar* introducing present subjunctive *accusem*:

- (31) *pol ego ut te accusem merito*
 indeed I how you.ACC.SG accuse.PRS.SBJV.ACT.1SG deservedly
meditabar
 consider.IPRF.IND.NACT.1SG
 “Indeed, I **was considering** how **to accuse** you, as you deserve it.”
 (Plautus *Aulularia* 550, text Leo 1895, translation de Melo 2007: 66)

Examples such as these show that the rules concerning the sequence of tenses after a present perfect are not hard and fast. For Pinkster (2015: 558) they are rather an “optional strategy, which has a semantic basis”, although he concedes that taking the temporal orientation of the matrix clause as the orientation point for the subordinate clause “seems to have been the ‘default’ option” (p. 557).²⁰ In other words, while it may be said that the subordinate clause very often takes its temporal orientation from the matrix clause, it is clearly not required to do so, and its temporal orientation has the possibility of being independently derived. This point is critical, since it shows that the tense form of the matrix clause cannot be any guarantee of a particular tense-aspect reading in the subordinate clause. Indeed, it shows that the relationship between tense-aspect reading of the subordinate clause and that

19. This example is also discussed in Pinkster (2015: 575–576), who gives it as an example of an author seeking to “avoid ambiguity”.

20. For more radical conclusions regarding the existence of sequence of tense rules, see Hale (1886: 447). For a summary of other arguments used to support the polysemy hypothesis, see Pinkster (1983: 291f.).

of the matrix clause lies in the domain of pragmatics rather than semantics, since the implicature that the temporal orientation of the matrix clause will be adopted by the subordinate clause can be cancelled.²¹

This means that the principal argument for believing that the Latin perfect might conserve two semantics, i.e. perfective and anterior, loses its strength. There is no reason in principle why a subordinate clause with primary tense forms and introduced by a perfect should not derive its temporal orientation from the discourse context more broadly, rather than rigidly depending on the matrix verb. Following this logic, the most economical explanation of the semantics of the Latin perfect is that it carries only one tense-aspectual value, namely perfective aspect and past tense, i.e.:

$$(32) \quad \tau(e) \subseteq t_t \wedge t_t < t_u$$

In what follows, I outline how such a description can explain the attested behaviour.

3.1.2 *Atomic predicates*

Perfects are frequently encountered heading accomplishment predicates where the subject does not change state, and describe events taking place and finishing prior to utterance time:

- (33) *maiores nostri [...] novam urbem tam
 ancestor.NOM.PL our.NOM.PL new.ACC.SG city.ACC.SG so
 brevi aedificarunt
 quick.DAT.SG build.PRF.IND.ACT.3PL
 “Our ancestors [...] built a new city so quickly”*

(Livy 5.53.9, text Foster 1924)

The perfect’s denotation of a completed event in past time leads directly to its predominant use as a narrative tense. However, the perfect can of course be used to describe an accomplishment or achievement whose resulting situation is perceptible beyond topic time, at utterance time:

- (34) *Dionysio plurimam salutem; cui quidem
 Dionysus.DAT.SG much.ACC.SG health.ACC.SG REL.DAT.SG indeed
 ego non modo servavi sed etiam aedificavi
 I NEG only keep.PRF.IND.ACT.1SG but even build.PRF.IND.ACT.1SG
 locum.
 place.ACC.SG*

21. Note that it does not matter how frequently counterexamples to the expected sequence occur. Rather it is important merely to show that they do occur to demonstrate that the subordinate clause can derive its temporal orientation independently of the matrix clause.

“My kindest regards to Dionysus; I **have** not only **kept** a place for him, but, actually **built** one.” (Cicero *Epistulae ad Atticum* 4.19.2, text Purser 1903, translation Shackleton Bailey 1999)²²

Note, however, that the availability of the anterior interpretation in this example is best seen as a function of the perfective semantics of the perfect combining with the pragmatics of the wider discourse structure, rather than part of the semantic definition of the Latin perfect: in (34) it is clear from the greeting that the temporal orientation of the wider discourse context is topic time. It is therefore highly likely that the effects of any event described by a perfect-headed predicate would be construed as holding or pertaining at utterance time. Indeed, in this example it would be odd in the extreme for Cicero to be stating that he built a place for Dionysius, but that that place no longer exists.

Note that the perfect of these predicates is not used to describe an activity starting in the past and continuing into the present. For this the present tense is used:

- (35) *multos me hoc pacto iam dies frustramini.*
 many.ACC.PL me in_this_way now day.ACC.PL trick.PRS.IND.NACT.2PL
 “You’ve been tricking me like this for many days already.”
 (Plautus *Mostellaria* 589, text from Pinkster 2015: 399,
 translation Pinkster)

3.1.3 States

As in the case of atomic predicates, the perfect of state predicates can be used to describe situations that terminate prior to utterance time. Consider the following example of the first case:

- (36) *habuit, non habet.*
 have.PRF.IND.ACT.3SG NEG have.PRS.IND.ACT.3SG
 “He had, he has no longer.” (Cicero *Tusculanae Disputationes* 1.87, text and translation from Ayer 2014: §474)²³

The fact of the state not holding at utterance time is made clear by the sentence following, *non habet* “he does not have”. This example is represented diagrammatically according to Figure 1.

22. Parallel: *scripsi antea* “I wrote previously” (Cicero *Epistulae ad Atticum* 1.2.1, text Purser 1903).

23. Ayer (2014) is an electronic version of Greenough et al. (1903).

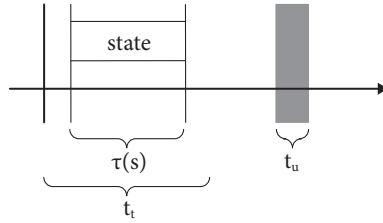


Figure 1. State (s) predicate

An interesting case ultimately of the same kind is the so-called ‘negative use’ of the present perfect:

- (37) *fuimus* *Troes,* *fuit* *Ilium* *et*
 be.PRF.IND.ACT.1PL Trojan.NOM.PL be.PRF.IND.ACT.3SG Ilium.NOM.SG and
ingens | *gloria* *Teucrorum*
 great.NOM.SG glory.NOM.SG Teucrian.GEN.PL
 “We Trojans **are no more**; **no more** is Ilium and the Teucrians’ great glory” [*lit.*
 “We Trojans **have been**, Troy **has been**, and the Teucrians’ great glory”]
 (Vergil *Aeneid* 2.325–326, text Greenough 1900,
 translation Horsfall 2008: 19; cited in Pinkster 2015: 446)

This has been interpreted as referring to present time in Horsfall’s translation, and could be seen as an anterior use, i.e. locating the subject in the postsituation of the predicate. However, our understanding of the Latin perfect as a past perfective offers an alternative, namely, to assert that the state terminated prior to utterance time, with the implicature that the state is terminated at utterance time. A literal translation would thus read, ‘We were Trojans (i.e. we are not now); Ilium was (and is not now)’.

However, unlike in the case of atomic predicates, the perfect does not **NECESSARILY** bound stative predicates:

- (38) *vadimonia* *deserere* *quam illum* *exercitum*
 bail.ACC.PL desert.PRS.INF.ACT than that.ACC.SG army.ACC.SG
maluerunt
 prefer.PRF.IND.ACT.3PL
 “[those who] **have preferred** to desert their bail rather than that army”
 (Cicero *In Catilinam* 2.3.5, text Clark 1908, translation Yonge 1856)

In this example, the perfect does not assert that at topic time those who preferred to desert their bail no longer prefer to do that. On the contrary, the assumption is that they have stuck with their original decision and still prefer that. The issue is explicit in the next example:

- (39) *equidem certo idem sum qui semper*
 truly certainly same.NOM.SG be.PRS.IND.1SG REL.NOM.SG always
fui.
 be.PRF.IND.ACT.1SG
 “I’m certainly the same I’ve always been.”

(Plautus *Amphitruo* 447, text Leo 1895, translation Pinkster 2015: 442)

However, there is a problem: according to our definition of the perfective, the eventuality described by the predicate must be included in topic time, which would require the state to cease prior to utterance time, since the entire eventuality would need to be included in topic time. As Examples (38) and (39) show, however, this is not the case. It seems, then, that our current definition of perfective aspect is inadequate, and that the Latin perfect interacts differently with state predicates from atomic predicates, in that in state predicates it allows for the possibility that the state in question continue after topic time, while in atomic predicates it does not. Why should this be?²⁴

Earlier we defined stativity and the perfective, respectively, as follows:

- (40) STATE: a state predicate X may be subdivided into an infinite number of sub- eventualities in the denotation of X, i.e. each subeventuality may itself be subdivided into eventualities in the denotation of X *ad infinitum*.
 (41) PFV: $\tau(e) \subseteq t_t$

As we have said, applying (41) to (40), should yield only one interpretation, namely that the state terminates within the bounds of, or coterminously with, topic time, the same interpretation we saw in atomic predicates. However, there is another way of understanding perfectivity, which still retains the observed behaviour in atomic predicates, but which still allows for state predicates, uniquely, to continue after topic time, as follows:

- (42) The perfective includes situation time in topic time for an eventuality e' in the denotation of a predicate X, where e' is a subpart of e which is also in the denotation of X.

For telic predicates, i.e. accomplishments and achievements, this is only true where e and e' are coextensive. In the case of activities, by contrast, the perfective may include either e or e' in topic time. Nevertheless, the fact that at least one subeventuality must

24. Devine & Stephens (2013: 71f.) do not address examples of this kind directly, but do mention inchoative readings of the perfect of stative verbs such as *amavi* “I loved” and *timui* “I feared” at Seneca *Epistulae* 3.2 and Livy 22.12.6: app. crit.

have finished prior to topic time yields the observed terminative readings in activity predicates. The same may be said to be the case with activity predicates.

In the case of states, however, the predicate is not divisible into atomic units. Accordingly, the perfective may include in topic time either the entire predicate, or any subpart of it. There is no requirement for a terminative reading since there are no discrete elements in the predicate that have a natural terminal point. Thus, in effect the perfective is able to isolate a subpart of a static situation, as in the case of *idem sum qui semper fui* “I am the same I’ve always been” quoted at (39).²⁵

Note, therefore, that the perfect of state predicates is fundamentally ambiguous as to what part of an eventuality is ultimately related to topic time. If an author wishes to state unambiguously that a state starts prior to utterance time and continues at utterance time, the present is used, as in many languages (e.g. Fischer, this volume, §3.4):

- (43) *is Lilybaei multos iam annos*
 DEM.NOM.3SG Lilybaeum.LOC.SG many.ACC.PL now year.ACC.PL
habitat
 live.PRS.IND.ACT.3SG
 “For many years **he has been living** at Lilybaeum”
 (Cicero *In Verrem* 4.38, text Peterson 1917, translation Pinkster 2015: 399)

By Late Latin the ambiguity of the perfect with respect to the continuing of the state of the predicate beyond topic time is exploited to the full with the advent of an ingressive sense, familiar from the Greek aorist (Pinkster 2015: 449f.):

- (44) *et Dorus evanuit, et Verissimus*
 and Dorus.NOM.SG disappear.PRF.IND.ACT.3SG and Verissimus.NOM.SG
ilico tacuit
 immediately be_silent.PRF.IND.ACT.3SG
 “and Dorus disappeared, and Verissimus at once **held his peace**”
 (Ammianus Marcellinus 16.6.3, text from
 Pinkster 2015: 381, translation Rolfe 1935)

It is worth comparing our reformulation of the perfective with that of the imperfective, given above at (7), repeated here for convenience.

- (45) IPFV: $\tau(e) \supset t_t$

Unlike the perfective, the imperfective includes topic time in a non-final subpart of situation time. Accordingly, the imperfective can yield in process readings for any

25. This account avoids the need for the application of a coercion principle, as employed by Bary (2009) in the case of the Greek aorist, and in Latin by Devine & Stephens (2013: 71f.).

predicate, regardless of its atomicity, whereas the perfective will only yield subpart readings for non-atomic predicates.

3.1.4 *Change of state*

As we saw at 2.5, change-of-state predicates can be characterised as complex eventualities, consisting of a change-of-state event *e*, followed by a poststate *s*. The interaction between the present perfect and such predicates is consequently more complex than that which we have so far encountered.

The synthetic perfect in these predicates is generally used where the verb accepts a single argument. It always denotes that the first eventuality, the change-of-state event, starts and terminates within topic time and before utterance time. It is, on the other hand, left open whether or not the poststate holds at utterance time. The following give examples of each use in the case of *corruo* ‘to fall down’:

- (46) “Then, in the hand-to-hand fight [...] *duo Romani, super alium alius, [...]*
 two Roman.NOM.PL upon another.ACC.SG another.NOM.SG
expirantes corruerunt.
 die.PTCP.PRS.NOM.PL fall.PRF.IND.ACT.3PL
 two of the Romans **fell** as they died [...] one upon the other”
 (Livy 1.25.5, text Foster 1919, translation based on Foster 1919)
- (47) “But you ask me why I have sent for Chryssipus:
tabernae mihi duae corruerunt
 shop.NOM.PL me.DAT.SG two.NOM.PL collapse.PRF.IND.ACT.3PL
 two of my shops **have collapsed** [and the others are showing cracks, so that
 even the mice have moved elsewhere, to say nothing of the tenants.]”
 (Cicero *Epistulae ad Atticum* 14.9.1, text Purser 1903,
 translation Shackleton Bailey 1999)

Since *corruerunt* in the first example occurs in narrative, it is clear that the change-of-state event and the poststate (i.e. being fallen) terminate prior to utterance time, and are in no way required to continue to the latter. By contrast, in the second example Cicero’s point is that at the time of writing, the shops underwent a collapse, and that they are still, at the time of writing, in a state of collapse: it is clearly not Cicero’s point that two shops have collapsed but have now been rebuilt. These examples show that the Latin perfect may be read as implying that the poststate holds at utterance time, or not. It is the pragmatics of the discourse, as we saw in §3.1.2 above, which establishes which is asserted in each case.

The temporal structure of these two examples is represented diagrammatically in Figures 2 and 3.

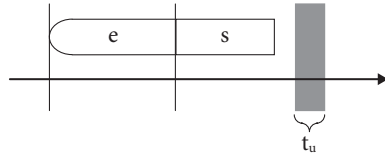


Figure 2. Poststate terminates prior to t_u

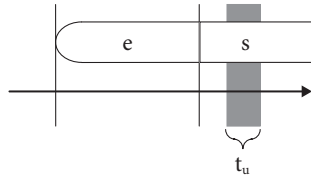


Figure 3. Poststate continues through t_u

3.1.5 *Gnomic uses*

The present perfect is attested in a gnomic use, which at first sight does not correspond well to our perfective analysis. However, perfectives are attested cross-linguistically with gnomic sense (Hildebrandt 2013; Rogland 2003: 20–23).²⁶ In some cases it is possible to understand a general time reference point relative to which another event must have taken place, as in the following example from Horace. In this example the perfect describes what the person who aims to reach the goal must previously have done:

- (48) *qui studet [...] contingere metam,*
REL.NOM.SG aim.PRS.IND.ACT.3SG reach.PRS.INF.ACT goal.ACC.SG
multa tulit fecit=que
many.ACC.PL bear.PRF.IND.ACT.3SG do.PRF.IND.ACT.3SG=CONJ
“He who aims [...] to reach the goal, first bears and **does** many things.”
(Horace *The Art of Poetry* 412, text Fairclough 1926,
translation Ayer 2014: §475)

In other cases the gnomic use can be derived from encyclopaedic knowledge:

- (49) *non aeris acervus et auri [...] deduxit*
NEG brass.GEN.SG pile.NOM.SG and gold.GEN.SG remove.PRF.IND.ACT.3SG
corpore febris.
body.ABL.SG fever.ACC.PL
“A mass of brass and gold **does not** [...] **remove** [*lit. has not removed*] fever from the body.”
(Horace *Epistulae* 1.2.47, text Fairclough 1926; cf. Ayer 2014: §475)

26. For Greek influence, see Pinkster (2015: 450).

3.2 Synthetic past and future perfects

3.2.1 *Semantics*

The Latin past and future perfects are traditionally understood as denoting relative past or future tense, that is, denoting that the event of the predicate takes place prior to some other event or reference point (Pinkster 2015: 455, 462). However, I argue here that the use of the Latin perfect outside of the present perfect indicative is better understood within the broader context of anteriority, as defined in §2. This, with slight modifications, as we shall see, has the capacity both to explain the relative tense uses, as well as independent uses where it is not clear relative to what event or reference point the event in question is being located. In specific terms, we start from the position that the past perfect is a past anterior, while the future perfect is a future anterior:

$$(50) \text{ PRF.PST: } \tau(e) < t_t \wedge t_t < t_u$$

$$(51) \text{ PRF.FUT: } \tau(e) < t_t \wedge t_t > t_u$$

3.2.2 *Atomic predicates*

The past and future perfects are very frequently encountered heading accomplishment predicates, where the subject does not change state. Here past and future perfects are regularly used to denote that the event of the predicate either took place prior to another event in the past, or will take place prior to another event in the future, respectively. This is a natural context for forms denoting that topic time is located after an event, since this semantic readily provides the context for talking about other events. Consider the following examples of the past and future perfects respectively heading accomplishment predicates. In the first Caesar writes that Pompey had previously written a reply, and in the second, Cicero asserts that he will write to Atticus at a point after he has looked through the nobles' wishes.

- (52) “[I]t was not possible for the matter to be covered and concealed any longer.

Pompeius *enim rescripserat* *sese*

Pompey.NOM.SG PTCL reply.PST.PRF.IND.ACT.3SG REFL.3SG

For Pompey **had written in reply** that he [...]

(Caesar *De bello civili* 1.19.4, text du Pontet 1901)

- (53) *cum perspexero* *voluntates nobilium,*
when look_through.FUT.PRF.IND.ACT.1SG wish.NOM.PL noble.GEN.PL
scribam *ad te.*
write.FUT.IND.ACT.1SG to you.ACC.SG

“When I **have ascertained** the wishes of the nobles, I will write to you.”

(Cicero *Epistulae ad Atticum* 1.1.2, text Purser 1903)

The relative arrangement of the events described may be represented diagrammatically as follows, where the eventualities marked e_1 and e_2 represent the events described by the predicates headed by the past perfect *rescripserat* and future perfect *perspexero* respectively:

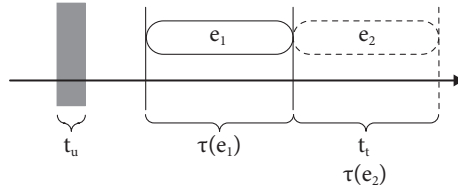


Figure 4. Future perfect

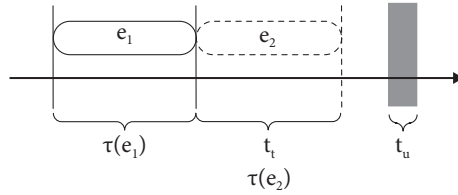


Figure 5. Pluperfect

Any situation pertaining after the terminal point of the event described by the predicate may still hold at topic time:²⁷

- (54) *et dum in unam partem oculos animos=que*
and while in one.ACC.SG part.ACC.SG eye.ACC.PL mind.ACC.PL=and
hostium certamen averterat [...] *capitur*
enemy.GEN.PL battle.NOM.SG turn.PRF.PST.IND.ACT.3SG
capture.PRS.IND.NACT.3SG wall.NOM.SG

“and while the battle **held the attention** of the enemy in one direction [...] the wall **was captured**”

(Livy 32.24.5, text Sage 1935, translation based on Roberts 1912–1924)²⁸

However, this is not part of the denotation, as shown by examples such as the following, where the postsituation (having scared the enemy) is not assumed to hold at topic time (winning the wars):

²⁷. See also Pinkster (2015: 447).

²⁸. Also quoted with comment equating *avertat* with *tenebat* [IPRF.IND.ACT.3SG “to hold”] in Allen & Greenough (1887: 198).

- (55) *nautium propter expeditionem qua magni*
 Nautius.ACC.SG on_account manoeuvre.ACC.SG REL.ABL.SG large.GEN.SG
agminis modo terruerat hostes
 army.GEN.SG size.ABL.SG frighten.PST.PRF.IND.ACT.3SG enemy.ACC.PL
 ‘Nautius [won his award] for the manoeuvre by which he **had frightened** the
 enemy by the size of his army...’
 (Livy 10.44.4, text Foster 1926, translation based on Roberts 1912–1924)

The past and future perfect of achievement predicates are usually used to describe a situation having taken place at some time point prior to topic time, in line with anterior interpretation. The following example shows this behaviour with the future perfect:

- (56) *igitur tum accedam hunc, quando quid*
 therefore then approach.FUT.IND.ACT.1SG this.ACC.SG when what.ACC.SG
agam invenero.
 do.PRS.SBJV.ACT.1SG find.FUT.PRF.IND.ACT.1SG
 ‘So I will approach him when I’ve found what to do.’
 (Plautus *Mostellaria* 689, text from Pinkster 2015: 467)

In the next example the same relationship of anteriority is present, although this may be transferred to the logical domain, since it is not necessarily clear that it is temporal anteriority is being asserted:

- (57) *cuicumque rei magnitudinem natura*
 whatever.DAT.SG thing.DAT.SG size.ACC.SG nature.NOM.SG
dederat dedit et modum
 give.PST.PRF.IND.ACT.3SG give.PRF.IND.ACT.3SG also limitation.ACC.SG
 ‘To whatever nature **had given** greatness it also gave limitation’
 (Seneca the Elder, *Suasoriae* 1.1, text Kiessling 1872,
 cited in Pinkster 2015: 456)

The future perfect, however, is occasionally found functioning much as one might expect a future perfective to function. These uses are particularly prevalent in Early Latin:

- (58) *deus sum, commutavero.*
 god.NOM.SG be.PRS.IND.1SG change.FUT.PRF.IND.ACT.1SG
 ‘I am a God, and **I’ll change** it (i.e. the subject of the play).’
 (Plautus *Amphitruo* 53, text Leo 1895, translation Riley 1912;
 cited in Clackson & Horrocks 2007: 211)²⁹

29. Cf. Plautus *Casina* 786, cited Clackson & Horrocks (2007: 211).

Although less frequent, the use is paralleled in Classical Latin:³⁰

- (59) "... but yours is the harbour from which I shall most gladly set out to my deliverance, or, if that is past praying for,
nusquam facilius hanc miserrimam vitam
 nowhere more_easily this.ACC.SG miserable.SUPERL.ACC.SG life.ACC.SG
vel sustentabo vel [...] abiecero
 either endure.FUT.IND.ACT.1SG or cast_off.FUT.PRF.IND.ACT.1SG
 nowhere else will I more easily either endure this most miserable life, or, [which is much better,] cast it off." (Cicero *Epistulae ad Atticum* 3.19, Latin text from Pinkster 2015: 468, translation based on Shackleton Bailey 1999)³¹

These examples have generally been taken as evidence of a putative former perfective denotation of the future perfect (Clackson & Horrocks 2007: 211). However, the fact that these instances are of the future perfect heading achievement predicates has not to my knowledge previously been observed. This fact allows us to derive the attested behaviour from an anterior semantic. In §2.1 we defined anteriority as follows:

- (60) ANT (1): $\tau(e) < t_t$

According to this definition, situation time occurs prior to topic time. However, in §2.3 we defined achievements in terms of two conceptual moments, the first where the state does not hold, the second comprising the first moment of the new state holding. Furthermore, in §2.5 we defined achievement change-of-state predicates such that the time of the poststate intersects by a single conceptual moment with event time. Accordingly, in the case of achievements, provided that in a particular instance topic time includes the first moment of the new state, event time and topic time can intersect by a single conceptual moment. The anteriority of the future perfect locates the prestate prior to topic time, which indeed the first conceptual moment of the prestate subevent (i.e. the non-holding of the state) is. However, the second and final conceptual moment of the prestate event is also the first moment of the poststate, which may legitimately be included in the postsituation. Accordingly, to account for this we should revise our definition of anteriority to the following:

30. Cf. the future perfect of *increpo* "make a sound" at Cicero *In Catilinam* 1.7.18. Devine & Stephens (2013: 99) also quote in this connection *coniecturam ... ceperis* "you will draw your conclusion" (Cicero *Pro Murena* 9) and *meum officium ... praestitero* "I will prove [the worth of] my office" (Caesar *De Bello Gallico* 4.25).

31. Against a perfective interpretation, see Pinkster (2015: 468).

- (61) The anterior locates topic time t_t after or concurrent with the temporal trace of e , and that the size of the intersection of topic time and the temporal trace of e cannot be greater than a single conceptual moment.

$$\text{ANT (2): } \tau(e) \leq t_t \wedge |\tau(e) \cap t_t| \leq 1$$

3.2.3 States

We saw in §3.1.3 that a key characteristic of the interaction of the present perfect with states is its ambiguity as to whether the state in question is understood as holding at utterance time. In parallel, the past and future perfect of state predicates is ambiguous as to whether the state holds at topic time.³² In the following example the state terminates immediately prior to topic time, when the needs are met.

- (62) *quae amicis suis opus*
REL.NOM.PL friend.DAT.PL their.DAT.PL need.NOM.SG
fuerant [...] *omnia ex sua re*
be.PST.PRF.IND.ACT.3PL all.NOM.PL from their.ABL.SG means.ABL.SG
familiari dedit
domestic.ABL.SG give.PRF.IND.ACT.3SG
“Whatever his friends **needed** [...] **he supplied** from his own means”
(Nepos *Atticus* 7.1, text & translation Pinkster 2015: 459)³³

By contrast, in the next examples the state starts, but does not terminate prior to, topic time:³⁴

- (63) *quae naves [...] in portum ad Ruspina, ubi*
REL.NOM.PL ship.NOM.PL into harbour.ACC.SG to Ruspina.ACC.SG where
Caesar castra habuerat, incolumes
Caesar camp.ACC.PL have.PRF.PST.IND.ACT.3SG safe.NOM.PL
pervenerunt.
arrive.PRF.IND.ACT.3PL
“these ships **arrived** safely [...] at the harbour of Ruspina, the town where Caesar **had** his camp.”
(*Bellum Africanum* 34.5, text & translation Way 1955;
cf. Pinkster 2015: 459)

32. As Kümmel (2013: 136f.) observes, penetration of the future perfect to the imperfective domain is restricted to stative verbs.

33. Parallel: *liber fueram* “I was [*lit.* had been] free” (Plautus *Captivi* 305, text from Pinkster 2015: 379).

34. Parallel: *praefuerat* (Caesar *De bello Civili* 2.6.4, text from in Pinkster 2015: 459).

This sense can be paralleled in the future perfect. In the following example, the sense requires that at topic time Menaechmus will continue to be pleasing to Erotium:

- (64) *at placuero* *huic Erotio*, | *quae*
but please.FUT.PRF.IND.ACT.1SG this.DAT.SG Erotium.DAT.SG REL.NOM.SG
me non excludet *ab se*
me.ACC.SG NEG shut_out.FUT.IND.ACT.3SG from self.ABL.SG
“But Erotium here **will like** me, who **will** not **lock** me out from her place” [*lit.*
“But I **will be pleasing** to this Erotium, who **will** not **shut** me out from herself”]
(Plautus *Menaechmi* 670–671, text Leo 1895,
translation Pinkster 2015: 467)

The continuing state in Example (64) can be represented diagrammatically as follows:

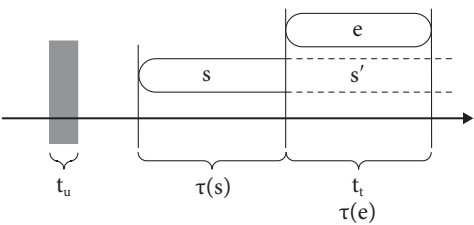


Figure 6. Diagrammatic representation of Example (64)

The next example can be analysed in the same way, except that the second event is also described by a future perfect predicate, which must be taken to be ingressive:

- (65) *tum vixero*, *quom te videro*.
then live.FUT.PRF.IND.ACT.1SG when you.ACC.SG see.FUT.PRF.IND.ACT.1SG
“Only when I **see** you **shall I live**.” (Fronto, *Correspondence*, Ad M. Caes.,
[Fronto to Marcus as Caesar] v. 40 (55), text & translation Haines 1919)³⁵

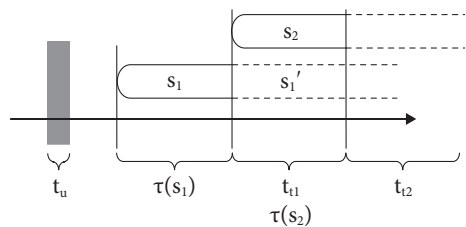


Figure 7. Diagrammatic representation of Example (65)

35. Cf. Pinkster’s text and interpretation (Pinkster 2015: 468).

The eventual sense very close to that of an imperfective is seen in independent uses of the past and future perfects of state predicates:³⁶

- (66) *ab iis qui eum maxime*
 by them.DAT.PL REL.NOM.PL him.ACC.SG most_greatly
timuerant maxime diligetur
 fear.PST.PRF.IND.ACT.3PL most_greatly.SUPERL.ADV love.FUT.IND.NACT.3SG
 “he will be most esteemed by those who [*lit. had*] feared him most.”
 (Cicero *Epistulae ad Atticum* 8.13.1, text Purser 1903)

The characteristic of an anterior gram appearing to denote a state at topic time rather than a state prior to topic time is paralleled cross-linguistically (Bybee, Perkins & Pagliuca 1994: 74). As with the present perfect, the possibility of two interpretations in state predicates can be explained with reference to the subinterval property, for which see §2.3 above. To account for the attested behaviour in state predicates, we can revise our definition of anteriority, as we did for the perfective, i.e.:

- (67) The anterior locates topic time t_t after situation time for an eventuality e' in the denotation of a predicate X , where e' is a subpart of an eventuality e and e is also in the denotation of X , and that the size of the intersection of topic time and the temporal trace of e cannot be greater than a single conceptual moment.

3.2.4 Change of state

The usual interpretation of the past/future perfect of change-of-state predicates is that the poststate holds at topic time. This is often exploited to provide the backdrop to another situation:

- (68) *quem ego hominem apolitikôtaton*³⁷
 REL.ACC.SG I.NOM.SG man.ACC.SG unstatesmanlike.SUPERL.ACC.SG
omnium iam ante cognoram, nunc vero etiam
 all.GEN.PL already previously know.PST.PRF.IND.ACT.1SG now truly also
astratēgētôtaton
 incapable_of_command.SUPERL.ACC.SG
 “whom I had previously come to know as of all men most unstatesmanlike,
 and (whom I know) now (to be) most incapable of command.”
 (Cicero *Epistulae ad Atticum* 8.16.1, text Purser 1903)

36. Parallel: *potuero* “I will be able” (Cicero *De Legibus* 2.18, in Pinkster 2015: 466); *habuero* “I will have” (Plautus *Casina* 786, text & translation Horrocks & Clackson 2007: 211). Other verbs that behave in this way, at least with the future perfect, include: *sum* “be”, as well as modals *volo* “want”, *licet* “it is allowed”, *oportet* “it is proper” and *placet* “it is acceptable” (Pinkster 2015: 466).

37. *apolitikôtaton* and *astratēgētôtaton* are Greek words.

- (69) *de quinque praefectis quid Pompeius*
about five prefect.ABL.PL what.ACC.SG Pompey.NOM.SG
facturus sit cum ex ipso
do.FUT.PTCP.ACT.NOM.SG be.PRS.SBJV.3SG when from him.ABL.SG
cognoro faciam ut
find_out.FUT.PRF.IND.ACT.1SG make.FUT.IND.ACT.1SG that
scias.
know.PRS.SBJV.ACT.2SG
“when I **know** from Pompey what he will do about the five prefects, I will let
you know.” (Cicero *Epistulae ad Atticum* 5.4.3, text Purser 1903)

Occasionally the pluperfect of achievements occurs in main clauses denoting a sequence of events:³⁸

- (70) *corrueat alter et plane,*
collapse.PST.PRF.IND.ACT.3SG other.NOM.SG and completely
inquam, iacebat.
say.PRS.IND.ACT.1SG lie.IPRF.IND.ACT.3SG
“The other (**had**) **collapsed** and, I say, he was completely lying on the floor.”
(Cicero *Epistulae ad Atticum* 4.17.2, text Purser 1903)

3.2.5 A note on the future perfect

It has been observed that the future perfect becomes increasingly restricted to subordinate clauses between Early and Classical Latin (e.g. Clackson & Horrocks 2007: 211f.; Pinkster 2015: 468), and its semantic scope is concomitantly restricted to anteriority. This is to say that we have a form with perfective denotation moving to anterior. However, this development is unexpected from a typological point of view: we should rather expect the opposite phenomenon, that an anterior would develop to a perfective. The notion that the anterior sense of the future perfect is an innovation (Clackson & Horrocks 2007: 211f.) also sits uneasily with two further points:

1. The cross-linguistic tendency for subordinate clauses to be morphologically and syntactically conservative (Bybee, Perkins & Pagliuca 1994: 231, citing Givón 1979: 85).
2. The maintenance of independent uses of the future perfect in colloquial varieties of Latin such as that seen in Cicero’s letters, vis-à-vis other genres, (Clackson & Horrocks 2007: 212): one might expect these uses to be lost here first.

38. Although in principle this could be taken as an epistolary use, for which see Devine & Stephens (2013: 47f.).

The behaviour can be explained, however, by taking account of the structural relationship of the future and future perfect: as persuasively argued by Kümmel (2013), the future can be seen to take over non-anterior perfective functions, leaving only anterior functions for the future perfect. This process is represented in Table 4.

Table 4. Path of development, adapted from Kümmel (2013: 136)

	IPFV	PFV	
		non-ANT	ANT
Pre-Latin	PRS.FUT	PRF.FUT	
Early Latin	PRS.FUT		PRF.FUT
Classical Latin	PRS.FUT		PRF.FUT

3.3 Synthetic perfect infinitive

The infinitive as a category lacks the category of absolute tense. This is to say, that the infinitive does not locate topic time with respect to utterance time, but only situation time with respect to topic time. In general, the perfect infinitive locates situation time prior to topic time (cf. Pinkster 2015: 536). The following are examples of an achievement/accomplishment and state predicate respectively:

- (71) *Eumolpus* [...] *iurat* [...] *nec ullum*
Eumolpus.NOM.SG swear.PRS.IND.ACT.3SG nor any.ACC.SG
dolum *malum* *consilio* *adhibuisse*
 deception.ACC.SG evil.ACC.SG design.ABL.SG use.PRF.INF.ACT
 “Eumolpus [...] swore that [...] and that he **had** not consciously **used** any evil deception”
 (Petronius *Satyricon* 101, text Heseltine & Rouse 1913)
- (72) *at ipsi tum se* *timuisse* *dicunt.*
 but they then REFL.ACC.PL fear.PRF.INF.ACT say.PRS.IND.ACT.3PL
 “But they say that at that time they **were afraid**.”
 (Cicero *Epistulae ad Atticum* 9.5.4, text Purser 1903)³⁹

While anteriority is clearly an important and required reading of the perfect infinitive in accomplishment/achievement predicates, in state predicates, in parallel with what we have seen in the indicative, the perfect infinitive may describe a situation holding at topic time. Such examples are first attested in Lucretius, i.e. early Classical Latin, and become more common in poetry of the imperial period,

39. Parallel: *habuisse* [have.PRF.INF.ACT] (Cicero *Pro Murena* 16.34, text Clark 1908).

even coming into prose works (Pinkster 2015: 539). Many of these examples can still be understood within the framework of anteriority, as at (73), where we have the perfect infinitive of a state predicate headed by *contineo* “to hold, surround”. Here the perfect infinitive can be read as describing an unbounded anterior state, so that the state still continues at topic time:

- (73) *quam iuvat* *immites* *ventos* *audire*
 how please.PRS.IND.ACT.3SG harsh.ACC.PL wind.ACC.PL hear.PRS.IND.ACT
cubantem | *et dominam tenero continuisse*
 lie.PRS.PTCP.ACT.ACC.SG and mistress gentle hold.PRF.INF.ACT
sinu
 bosom.ABL.SG
 “What delight to hear the winds rage as I lie and **hold** my love safe in my gentle
 clasp” (Tibullus 1.45–46, text from Pinkster 2015: 540,
 translation Postgate 1913)

In parallel with the behaviour in state predicates, we also find that the perfect infinitive of change-of-state predicates may also denote that the poststate holds at topic time. In the following example, note the contrast between *cognosce* and *fuisse* (the latter notably collocating with anterior adverb *antea* “previously”):

- (74) *quod si velim* *confiteri* *me*
 but if want.PRS.SBJV.ACT.1SG confess.PRS.INF.NACT me.ACC.SG
causam *A. Cluenti* *nunc cognosce*,
 case.ACC.SG A._Cluentius.GEN.SG now come_to_know.PRF.INF.ACT
antea fuisse *in ea* *opinion* *populari*
 previously be.PRF.INF.ACT in that.ABL.SG opinion.ABL.SG popular.ABL.SG
quis *tandem possit* *reprehendere?*
 who.NOM.SG finally can.IPRF.SBJV.ACT.3SG blame.PRS.INF.ACT
 “But suppose I were now to confess, that I had now **become acquainted** with
 the real merits of Cluentius’ case, but that I was previously **influenced** by [*lit.*
 was previously in] popular opinion concerning it, who could blame me”
 (Cicero *Pro Cluentio* 51.142, text Clark 1908,
 translation based on Yonge 1856)

3.4 Defective synthetic forms

Forms including *odi* “I hate” and *memini* “I remember” are notable for not carrying any reference to time prior to utterance / topic time. Such cases are, however, lexically restricted, as well as showing morphological idiosyncrasy in not having present stems. It is therefore best to regard these as lexicalised exceptions. There is some evidence that *(g)nosco* “come to know”, often grouped with these verbs, behaves differently, but there is not the space to elaborate here.

3.5 Participle in *-tu-* < **-to-*

This participle derives from what was originally an IE (verbal) adjective formation, for the origins of which form at the IE level, see e.g. Sihler (1995: 622) and Drinka (2009). In Latin this form had by historical times for the most part become grammaticalized as a resultative participle, denoting that the subject is in the poststate of the predicate at topic time. In most instances an event prior to topic time is in view, as in the following examples:

- (75) *animalia capta immolant*
 animal.ACC.PL capture.PRF.PTCP.ACC.PL sacrifice.PRS.IND.ACT.3PL
 “they sacrifice the **captured** animals” (Caesar *De bello Gallico* 6.17.3, text
 Holmes 1914, translation based on McDevitte & Bohn 1869)
- (76) *damnatus demum, vi coactus*
 convict.PRF.PTCP.NOM.SG finally force.ABL.SG force.PRF.PTCP.NOM.SG
reddidit mille et ducentos
 return.PRF.IND.ACT.3SG thousand[ACC] CONJ two_hundred.ACC.PL
Philippum.
 Philippiacs.GEN.PL
 “**having been convicted**, finally, and **put under coercion**, he returned the one
 thousand two hundred Philippiacs.”
 (Plautus *Bacchides* 271–272, text Pinkster 2015: 547)

Instances may also be iterated, as at (77):

- (77) *bis magna victi pugna*
 twice great.ABL.SG defeat.PRF.PTCP.NOM.PL battle.ABL.SG
 “**twice defeated** in great battle” (Vergil *Aeneid* 12.34, text Greenough 1900)

Notice, however, that, while in all these instances the poststate holds at topic time, they appear to differ as to the denotation of the change-of-state subevent: in (75) it is only the poststate that directly in view, while in (76) and (77) the participants are presented as passing through both prestate and poststate subevents. Pinkster (2015: 547) distinguishes between resultative and anterior uses of the participle respectively. It should be noted, however, that both examples given there for anterior describe result states holding at topic time. It is difficult to find examples of the participle in change-of-state predicates where the poststate has terminated prior to topic time.

There are two principal predicate types where the prestate subevent is not in view, however: predicates of extent (for whose general properties see Koontz-Garboden 2010), and those describing mental state, although especially in the latter case the uses are lexically restricted and the set of lexemes which participate varies with time (for a list arranged by period see Pinkster 2015: 549).

- (78) *habet ab ortu Arios, a meridie*
 have.PRS.IND.ACT.3SG from East.ABL.SG Arii.ACC.PL from South
Carmaniam et Arianos, ab occasu Pratitas
 Carmania.ACC.SG and Ariani.ACC.PL from West Pratiti.ACC.PL
Medos, a septentrione Hyrcanos, undique
 Medians.ACC.PL on north.ABL.SG Hyrcani.ACC.PL on_all_sides
desertis cincta.
 desert.ABL.PL surround.PRF.PTCP.NOM.SG

“[Parthia] has the Arii on the east, on the south Carmania and the Ariani, on the west the Median Pratiti, on the north the Hyrcani, **surrounded** on all sides by deserts.” (Pliny the Elder, *Naturalis Historia* 6.38, text Mayhoff 1906)⁴⁰

- (79) *itane patris ais adventum veritum*
 thus father.GEN.SG say.PRS.IND.ACT.2SG arrival.ACC.SG fear.PRF.PTCP.ACC.SG
hinc abiisse?
 from_here leave.PRF.INF.ACT
 “Thus do you say he left from here **fearing** the arrival of his father?”
 (Terence *Phormio* 315, text from Pinkster 2015: 548)⁴¹

Furthermore, where deponent verbs head accomplishment and activity predicates and the subject does not change state, the sense of the perfect participle is anterior:

- (80) *Sabinus suos hortatus cupientibus*
 Sabinus.NOM.SG his.ACC.PL encourage.PRF.PTCP.NOM.SG desire.DAT.PL
signum dat.
 signal.ACC.SG give.PRS.IND.ACT.3SG
 “Sabinus, **having** encouraged his (troops), gave the signal to those who desired it.”
 (Caesar *De bello Gallico* 3.19.2, text from Pinkster 2015: 548)

Occasionally the participle in *-tu-* carries apparently active semantics even in non-deponent verbs, such as *ceno* “dine, eat”:

- (81) *cum illa munera inspexisses cenatus*
 when those.ACC.PL gift.ACC.PL examine.PST.PRF.SBJV.2SG dine.PRF.PTCP.NOM.SG
 “when **once you had dined** you had examined those gifts”
 (Cicero *Pro rege Deiotaro* 43, text Watts 1931)

40. Parallel: *aperto mari* “open sea” (Cicero *De bello Gallico* 3.12.5, text Holmes 1914, translation McDevitte & Bohn 1869); *aperta loca lit.* “open places” (Livy 9.27.4, text Foster 1926). Although the possibility of lexicalisation should also be admitted here, the behaviour here is very much in keeping with what one might expect in extent predicates.

41. For a list of verbs showing this behaviour at different stages of the language, as well as further examples, see Pinkster (2015: 547–549).

While the subject is undoubtedly an agent in this case, unlike the passive use in (75), the subject also arguably changes state. A similar case to that in (81) is the following, involving *iuro* “swear”, where the *-tu-* participle *iuratus* describes as a result state for the subject, i.e. “having sworn” > “being on oath”.⁴²

- (82) *si diceret iuratus, crederes?*
 if speak.IPRF.SBJV.ACT.3SG swear.PRF.PTCP.NOM.SG believe.IPRF.SBJV.ACT.2SG
 “If he told them **on oath** [*lit.* having sworn], would you believe him?”
 (Cicero *Pro Quintio Roscio Comoedo* 16.46, text & translation Freese 1930)

To summarise, the perfect participle heading change-of-state predicates describes the result state at topic time of the participant changing state, with or without explicitly locating the prior event of change with reference to topic time. The exception to this is the participle of certain deponent verbs such as *hortor* “encourage”, which does not denote the result state of the subject, but rather present the event as anterior. The participle then differs from both the finite and infinite perfect forms in that resultativity / anteriority is lexically rather than contextually determined.

3.6 Analytic perfect

As outlined in the introduction, the Latin perfect is morphologically split into a synthetic form and an analytical construction with the participle in *-tu-* + *ESSE* “to be”, or alternatively as the simple participle in predicative position.

A major function of the analytic construction is to denote the passive of predicates with two or more arguments, with the same flexibility regarding whether or not the poststate holds at utterance time. In this construction the participle in *-tu-* agrees with the grammatical subject:

- (83) *ibi Orgetorigis filia atque unus e*
 there Orgetorix.GEN.SG daughter.NOM.SG and one.M.NOM.SG out_of
filiis captus est.
 son.ABL.PL capture.PRF.PTCP.M.NOM.SG be.PRS.IND.3SG
 “There the daughter and one of the sons of Orgetorix was **captured**.”
 (Caesar *De bello Gallico* 1.26.4, text Holmes 1914,
 translation based on McDevitte & Bohn 1869)

42. Examples found from a search of *Loeb online* (<http://www.loebclassics.com/>, accessed April 21, 2017).

- (84) *clamitans* ‘*arx*’ *ab hospitibus*
shout.PRS.PTCP.M.NOM.SG citadel.F.NOM.SG by enemy.ABL.PL
capta *est; [...]*
capture.PRF.PTCP.F.NOM.SG be.PRS.IND.3SG
“shouting, ‘The citadel **has been taken** by the enemy; [...]”
(Livy 9.24.9, text Foster 1926, translation based on Foster 1926)

Unlike the synthetic construction, however, but as with the participle in *-tu-*, the analytic construction especially of extent predicates need not denote that any event took place prior to utterance time:

- (85) *Britannia, quae contra eas regiones*
 Britain.NOM.SG which opposite those.ACC.PL region.ACC.PL
posita est
 place.PRF.PTCP.NOM.SG be.PRS.IND.3SG
 “Britain, which **is located** opposite those territories.” (Caesar *De bello Gallico*
 3.9.10, text Holmes 1916, translation based on Edwards 1917)

Note that examples like this are fundamentally different from a result state expressed by, for instance, the perfect passive of *inscribo* “entitle” discussed by Pinkster (2015: 446f.):

- (86) *nam et cohortati sumus [...] ad philosophiae*
 for also exhort.PRF.PTCP.NOM.PL be.PRS.IND.1PL to philosophy.GEN.SG
studium eo libro qui est
 study.ACC.SG that.ABL.SG book.ABL.SG REL.NOM.SG be.PRS.IND.3SG
inscriptus Hortensius
 entitle.PRF.PTCP.NOM.SG Hortensius.NOM.SG
 “For we urged to the pursuit of philosophy in that book which **has been named**
 ‘Hortensius.’” (Cicero *De Divinatione* 2.1, text Falconer 1923,
 translation Pinkster 2015: 446)

Examples such as the latter describe an event having taken place previously in time, while in examples like the former, there can never have been such an event. This kind of usage is of course consistent with the etymological origins of the construction, deriving ultimately from an adjectival formation in **-tos*. Furthermore, it is hard to find direct parallels for non-eventive readings, i.e. not denoting an event taking place in time, in the active.⁴³ Assuming that this accurately represents the distribution of the forms, there are three interpretations:

43. *consuevit* “is accustomed”, given in (5) above, appears to have similar tense-aspect semantics, but neither forms an extent nor mental state predicate.

1. Contra Embick (2000), the semantic derivation of the perfect passive in Latin is different from that of the active, so that the active is fundamentally eventive in a way that the passive is not, with the eventive interpretation of given instances of the passive being a function of the particular predicate type and discourse context.
2. The perfect passive (unlike the active) is polysemous, so that *positum esse* “be placed” represents two homophonous constructions, one adjectival and the other eventive.
3. All predicates are viewed as predicates of space-time (cf. the approach taken in Crellin 2016: 199–227) where, if the event described is not viewed as passing through the time dimension, a predicate headed by a perfect does not carry the denotation of a prior event taking place in time.

The ambiguity as to the denotation of a state holding at utterance time is eventually resolved in the course of the development of the language, since gradually the past perfective sense is taken over by *FUISSE* [be.PR.F.INF] formations, leaving *ESSE* [be.PR.S.INF] formations with resultative-only semantics. These constructions in *FUISSE* are attested already in Classical Latin:⁴⁴

- (87) *castra in agro, villa defensa*
 camp.NOM.PL in field.ABL.SG house.NOM.SG guard.PR.F.PTCP.NOM.SG
est.
 be.PR.S.IND.3SG

“There is a camp in the field; the house **has been guarded.**”

(Cicero *Epistulae ad Atticum* 13.52.1, text Purser 1903)

- (88) *sed opportunissime nuntiis allatis*
 but opportune.SUPERL.ADV messenger.ABL.PL convey.PR.F.PTCP.ABL.PL
oppidum fuit defensum
 town.NOM.SG be.PR.F.IND.ACT.3SG guard.PR.F.PTCP.NOM.SG

“But most fortuitously messengers had come and the town **was defended.**”

(Caesar *De bello civili* 3.101.4, text du Pontet 1901)

44. For more details on this development, also known as ‘shift’, for which see Pinkster (2015: 473–478). In Romance the perfect passive is formed with *FUISSE*, while *ESSE* is used for the present passive (Clackson & Horrocks 2007: 280). Clackson & Horrocks do not, however, talk about the resultative specifically in this context.

4. Conclusion: Unity in the semantics of the perfect system?

The elements of the perfect system have been seen to carry a variety of denotations, with the present perfect indicative denoting past perfective, while the past and future perfects, together with the perfect infinitive, have been shown to denote anteriority with respect to topic time. These may be expressed by the following general relations (omitting for the sake of simplicity the various qualifications and restrictions added in the case of state and achievement predicates):

$$(89) \text{ PRF.PRS } \tau(e) \subseteq t_t \wedge t_t < t_u$$

$$(90) \text{ PRF.PST } \tau(e) < t_t \wedge t_t < t_u$$

$$(91) \text{ PRF.FUT } \tau(e) < t_t \wedge t_t > t_u$$

$$(92) \text{ PRF.INF } \tau(e) < t_t$$

On the other hand, the perfect participle carries either resultative or anterior denotation according to the lexical item in question:

$$(93) \text{ PRF.PTCP (1) } [\tau(e) < t_t \wedge] \tau(s) \supseteq t_t$$

$$(94) \text{ PRF.PTCP (2) } \tau(e) < t_t$$

The definitions given in (89) through (94) have two elements in common which may be taken as the basis for understanding a unity in the Latin perfect system:

1. Perfectivity: Specification that a situation in the denotation of the predicate terminates prior to a specific point in time, either future or past.
2. Anteriority: Specification that a situation in the denotation of the predicate takes place prior to a specific point in time. In the case of the past and future perfects, this moment is topic time, while in the case of the present perfect this moment is utterance time.

While Klein's (1992, 1994) distinction between utterance time and topic time is helpful, it is not the case that, simply because utterance time is not the same things as topic time, no claim is being made for utterance time. Rather, any utterance may be said to make a claim for the time of utterance and topic time together, namely that from the vantage point of utterance time the claim being made regarding topic time may be said to hold. Seen in this way, the Latin perfect forms throughout antiquity have in common the denotation of anteriority with respect to a specific point in time, whether topic time or utterance time. This we can formulate as follows:

$$(95) \text{ PRF } \tau(e) < t_x$$

This analysis is nevertheless incomplete, in that it leaves unresolved the derivation of eventive semantics in participle phrases, as well as for the subjunctive forms to be incorporated into the framework, questions that I leave for future work.

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Formal semantics symbols and abbreviations

$\subseteq$	is included in
$\supseteq$	includes
$\supset$	is a non-final part of
$<$	precedes
$\leq$	precedes and/or overlaps with
$\supset\subset$	abuts
$\cap$	intersects
$\wedge$	and
t_t	topic time
t_u	utterance time
t_x	time marked with respect either to topic or utterance
e	eventuality variable denoting an event
e'	a subpart of an eventuality e
s	eventuality variable denoting a state
$ x $	cardinality function
$\tau(x)$	temporal trace function of an eventuality x

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Calquing a quirk

The perfect in the languages of Europe

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The HAVE-perfect, found almost exclusively in western Europe, has been identified as a “European quirk, unparalleled elsewhere in the world” (Cysouw 2011: 425). The spread of this highly marked construction to adjacent varieties provides us with an exceptional opportunity to observe the conditions under which this calquing occurred, and to assess the role of external as well as internal factors in the adoption of this structure in closely-related, distantly-related, and unrelated languages. After a general overview of the distribution of HAVE-perfect calques across Europe, three representative instances are presented: Old High German and Old Saxon, Portuguese, and Czech. These examples illustrate, respectively, three important principles of social conditioning connected with the grammatical calquing: the role of prestige in the operation of ‘roofing’, the linguistic repercussions of political and confessional realignment, and the capacity of social motivation to outweigh internal linguistic factors.

Keywords: perfect, stratification, Charlemagne Sprachbund, roofing, confessional realignment, sociolinguistic motivation, West Germanic, Ibero-Romance, Arabic, West Slavic

1. Introduction

The HAVE-perfect (Eng. *I have seen*, Germ. *ich habe gesehen*), found almost exclusively in western Europe (Dahl & Velupillai 2013), has been identified as a “European quirk, unparalleled elsewhere in the world” (Cysouw 2011: 425). What is remarkable and important to note, however, is that this construction is not at all rare within its own geographical area. Periphrastic perfects formed with a possessive auxiliary are extremely well-represented in the Romance and Germanic languages, and have spread to numerous languages which have come in contact with them: certain varieties of W. Slavic (Upper and Lower Sorbian, Czech, Polish, Kashubian), Baltic (Lithuanian), Celtic (Breton), and Basque. The spread of this highly marked

construction to adjacent varieties largely in the light of history provides us with an exceptional opportunity to observe the conditions under which this calquing occurred, and to assess the role of external as well as internal factors in the adoption of this structure in closely-related, distantly-related, and unrelated languages.

While a more comprehensive account of the development of the perfect in Europe is presented in Drinka (2017), what I present here are three representative instances of HAVE-perfects which grew up in Europe under varying circumstances:

- Old High German and Old Saxon, which, as part of the ‘Charlemagne Sprachbund’ (van der Auwera 1998, Haspelmath 2001), acquired their perfects especially through scribal and vernacular influence of Latin and Romance (Banniard 2004; Drinka 2013, 2017)
- Portuguese, which built its perfects on a vernacular model, with possible influence from Arabic (Fassi Fehri 2003), and
- Czech and Slovak, which underwent centuries-long influence from German, calquing a HAVE-perfect alongside the native BE-perfect and, in Czech, constructing a perfect/aorist contrast modeled closely on that of German (Dickey 2011).

In each case, the role of calquing is considered, along with an examination of possible motivations for these changes. These examples illustrate, respectively, three important principles of sociolinguistic conditioning connected with grammatical calquing: the role of prestige in the operation of ‘roofing’, the linguistic repercussions of political and confessional realignment, and the capacity of social motivation to supersede internal linguistic factors (Thomason & Kaufman 1988).

2. The distribution of the perfect

In his 2011 article, “Quantitative explorations of the worldwide distribution of rare characteristics, or: the exceptionality of northwestern European languages,” Michael Cysouw collects features which are rare in the languages of the world, in order to assess possible causes for these distributions. Collecting data from the *World Atlas of Language Structures* (WALS, Dryer & Haspelmath 2013), he discovers that Northwestern Europe is amongst the macro-areas with the highest number of rare features in the world. Using a baseline rarity score of 1, with scores higher than 1 representing increased rarity in the languages of the world, Cysouw provides as evidence the ten most exceptional features to be found in the languages of northwestern Europe (Table 1). Ranked third among these rare features is the HAVE-perfect.

Table 1. Top 10 of the rarest characteristics as found in northwestern Europe (Cysouw 2011: 425)

Rarity	Feature	Exceptional value present in Europe
8.39	Polar Questions	Interrogative word order
7.96	Uvular Consonants	Uvular continuants only
7.93	The Perfect	Perfect of the ‘have’-type
7.56	Coding of Evidentiality	Modal morpheme
4.58	Demonstratives	No distance contrast
4.32	Negative Indefinite Pronouns	No predicate negation present
4.15	Front Rounded Vowels	High and mid
3.46	Relativization on Subjects	Relative pronoun
3.14	Weight-Sensitive Stress	Right-oriented, antepenultimate involved
2.86	Order of Object and Verb	Both orders, neither order dominant

An examination of the WALS map of the perfects (Figure 1) demonstrates how truly rare the possessive perfects are: among the languages surveyed by WALS, the HAVE-perfect is found only in Europe.

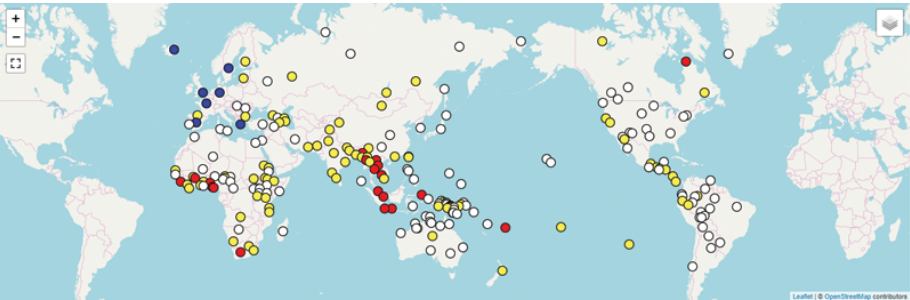


Figure 1. Map of the distribution of perfects, from WALS, Chapter 68 (Dahl & Velupillai 2013)

Focusing more pointedly on the geographical location of HAVE- and BE-perfects in Europe, as illustrated in Figure 2, we note several important facts about this distribution: the bold line around western Europe delineates the broad diffusion of the HAVE-perfect in the west, formed especially with HAVE + past participle (PST.P); the dotted line around some eastern European languages represents the spread of possessive perfects eastward; these western-style perfects are used to varying degrees alongside perfects and resultatives already in place in eastern Europe, formed especially with BE + past active participles (PAP). The bolded languages in the western area use both HAVE and BE as perfect auxiliaries.

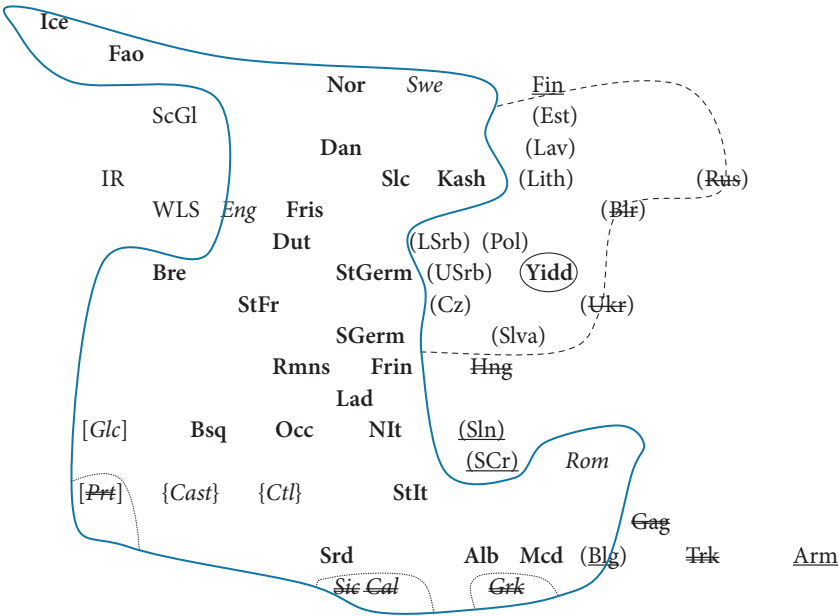


Figure 2. Map of HAVE-/BE-perfect auxiliation

Bold	BE + HAVE
<u>Underline</u>	BE only
<i>Italics</i>	HAVE only
[Brackets]	<i>ter</i> / <i>tener</i> used as AUX
{Curly brackets}	<i>haver</i> used as AUX; main verb > <i>tener</i>
CAPS	BE (+ 'after') + verbal noun (Ir, Wls, ScGt)
(Parentheses)	historically BE, with some exs. of HAVE (esp. W.Slav, Circum-Balt)
~~Strikethrough~~	BE-auxiliary lost (Rus, Blr, Ukr, Hung)
~~Double Strikethrough~~	No PRF (Gag, Turk) or PRET greatly preferred (Sic, Cal, Prt, Gk)

Abbreviations of languages

Alb	Albanian	LSrb	Lower Sorbian
Arm	Armenian	Mcd	Macedonian
Blr	Belarusian	NIt	Northern Italian
Blg	Bulgarian	Nor	Norwegian
Bre	Breton	Occ	Occitan
Bsq	Basque	Pol	Polish
Cal	Calabrian	Prt	Portuguese
Cast	Castilian	Rmns	Romansh
Ctl	Catalan	Rom	Romanian
Cz	Czech	Rus	Russian
Dan	Danish	ScGt	Scots Gaelic
Dut	Dutch	SCr	Serbo-Croatian
Eng	English	SGerm	Southern German
Est	Estonian	Sic	Sicilian
Fao	Faroese	Slc	Slovincian
Fin	Finnish	Sln	Slovenian
Frin	Friulian	Slva	Slovak
Fris	Frisian	Srd	Sardinian

Gag	Gagauz	StFr	Standard French
Glc	Galician	StGerm	Standard German
Grk	Greek	StIt	Standard Italian
Hng	Hungarian	Swe	Swedish
Ice	Icelandic	Trk	Turkish
Ir	Irish	Ukr	Ukrainian
Kash	Kashubian	USrb	Upper Sorbian
Lad	Ladino	Wls	Welsh
Lav	Latvian	Yidd	Yiddish
Lith	Lithuanian		

Is it possible to arrive at an explanation for this complex distribution? In Drinka (2017), I propose that we bring a stratificational approach to the analysis of this distribution, viewing the development of perfects in stages. By charting the distribution of HAVE and BE-auxiliaries on the map of Europe at various points in time, and then stacking these maps to represent three distinct stages, we obtain a stratified, three-dimensional view of how this complex linguistic area developed. The proposed stages of development, outlined in Table 2, are illustrated in Figure 3.

Table 2. The stages of development of perfects in western Europe

I	The widespread use of the HAVE-perfect across western Europe represents the diffusion of the Latin HABEŌ construction, inherited in Romance, calqued into Germanic.
II	Within the HAVE area, a division of labor between BE- and HAVE-auxiliaries later developed, corresponding to the increased use of deponents (i.e., verbs that are active in meaning but passive in form) seen in Carolingian documents. This reinforcement only occurred in the core area; in the peripheral area, HAVE prevails.
III	Within the HAVE / BE area, anteriors began to take on preterital value. First witnessed in the vernacular of twelfth-century Paris and its environs, this innovation spread to areas influenced by French culture, such as western and southern Germany and northern Italy, and eventually into contiguous areas such as the Slavic territories under the rule of the Habsburgs.

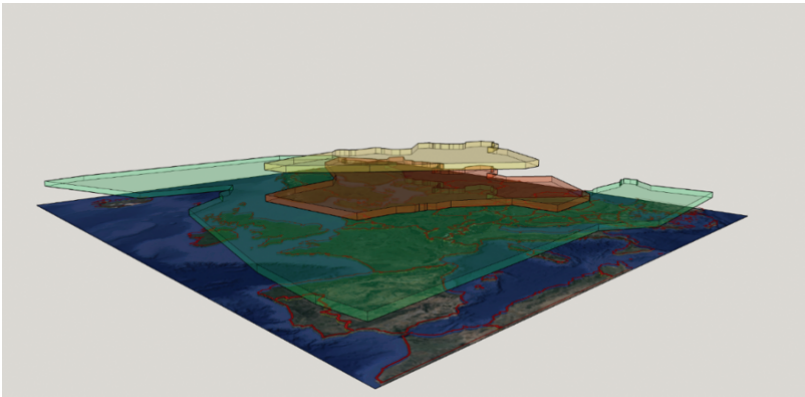


Figure 3. Stratified, three-dimensional map of the perfects (Drinka 2017: 149)

When these stages are flattened onto a two-dimensional map (Figure 4), we obtain a detailed synchronic depiction of the present-day distribution.

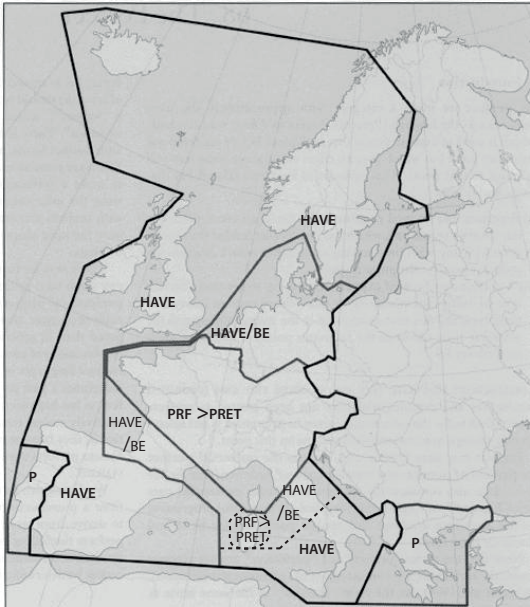


Figure 4. Revision of WALS map of the HAVE-Perfect¹
(adapted from Dahl & Velupillai 2013)

Stage I.	Present-day area where HAVE-perfects occur	[HAVE]+[HAVE /BE]+[PRF > PRET]
Stage II.	Within the HAVE area, division of labor between HAVE-perfects and BE-perfects	[HAVE/BE]+[PRF > PRET]
Stage III.	Within the HAVE/BE area, anterior meaning of perfect has developed into past or perfective	[PRF > PRET]
Peripheral area with less typical HAVE-perfects		P

Note that the boundaries of Stage II and III do not coincide exactly because the center of influence has shifted over time.

Focusing especially on Stage II, we make a noteworthy discovery: the distribution of the BE-/HAVE-auxiliaries coincides precisely with the extent of Charlemagne’s reign at the time of his death (marked in bold on Figure 5). The only exceptions are Danish, which has adopted the BE/HAVE dichotomy through extensive influence from German (Johannisson 1945), and Breton, which has, in similar fashion, undergone intense contact with French. This observation corroborates van

1. See Drinka (2017: 150) for details of the revisions.

der Auwera’s (1998) claim, based on his analysis of a number of morphosyntactic categories in present-day European languages, that a ‘Charlemagne Sprachbund’ must have existed.²

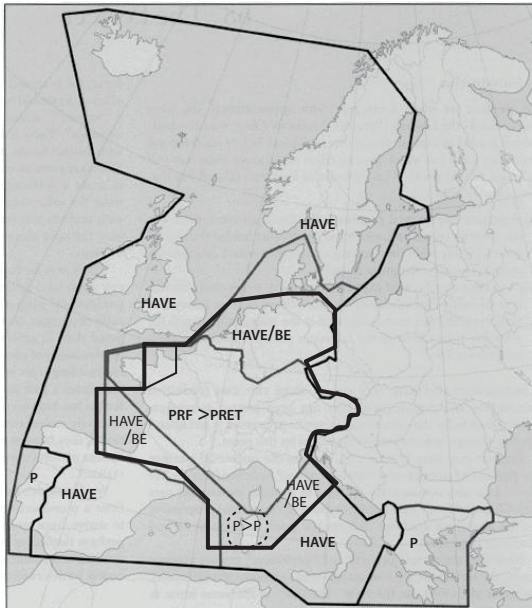


Figure 5. Revised WALS map of the perfect compared to Charlemagne’s Realm (814 AD)

Why should the innovative increase in periphrastic perfects correspond so well with the territory of Carolingian dominance, and what role does Latin play in this distribution? In Drinka (2017: 153–166), extensive evidence is provided for increased productivity of HAVE-perfects in Latin documents connected with the Carolingian realm (1), and for the heightened frequency of deponents (2) and their periphrastic correlates formed with BE + PPP (3), prefiguring the BE-perfects of the Romance languages.³

- (1) *Capitulary of Charlemagne* 175, 25; 183, 33 (Latin)
secundum quod iudicatum habemus
 following what judged have.PRS.1PL
 “in conformity with what we **have ruled**” (Thielmann 1885: 545–547)

2. Van der Auwera (1998) discovered that a larger number of the core temporal-aspectual features of the ‘Standard Average European’ languages (Haspelmath 1998, 2001) are to be found in French, German, Dutch, and northern Italian, all of which were located in the original territory ruled by Charlemagne in the 8th and 9th centuries.

3. See Crellin (this volume) for additional information on the role of Latin deponents.

- (2) *Rhythmus* 8, 19, 1 (Latin)
Tertia die resurgitur,⁴
In Gallilea praedicat.
 “On the third day he rises [3SG.PRS.DEPON]
 In Galilee he preaches.” (Norberg 1943: 154)
- (3) *Annales Regni Francorum*, 741 (Reviser) (Latin)
quo idem Carlomannus Romam profectus est
 until Carloman.NOM.SG Rome.ACC leave.PST.P.NOM.SG be.3SG.PRS
 “until Carloman left for Rome”

Deponents became especially productive in Late Latin, beginning especially in the 6th century, and culminating in a crescendo of increased frequency in the late 8th and 9th centuries, precisely at the time of Charlemagne’s reign. The result of these developments was the firmer establishment of HAVE- and BE-periphrastics, both in the Late Latin of Charlemagne’s time and in the early vernaculars of France and Italy. It is this fact, then, which is reflected in Figure 5. The effects of the Charlemagne Sprachbund persist to this day in the distribution of the BE and HAVE dichotomy.⁵

Having laid out the early history of the periphrastic perfects in Europe, we can now proceed to examine briefly the variable developments of the perfects in three representative languages or language families – in Old High German and Old Saxon, in Portuguese, and in Czech – to obtain a more comprehensive picture of the history of the construction in Europe across time.

3. Old High German and Old Saxon and the Charlemagne Sprachbund

While it is clear that the Romance languages inherited their periphrastic perfects from Latin, the origin of the perfects in the Germanic languages is more disputed: did the Germanic languages develop their perfects independently, as claimed most notably by Benveniste (1960[1971]: 178f.), or were they influenced by Latin, as argued by Meillet (1916[1970]: 70)? To what extent did these two varieties participate in the Charlemagne Sprachbund?

Examining the evidence from Old High German (OHG) and Old Saxon (OS), we note several significant facts:

4. An active present *resurgit* would have been expected in earlier texts.
5. See Drinka (2017: 158–166) for additional evidence for this development from the *Annales Regni Francorum* and the Strasbourg Oaths. See also Table 6.1 (p. 116) for a summary of the development of perfects, deponents, and periphrastic perfects in Latin and Early Romance.

- The earliest texts of Old High German did not contain the HAVE-perfect; this construction is not attested in Continental West Germanic until the ninth century. The first example of an OHG HAVE-perfect appears in a translation of the *Exhortatio ad plebem christianam* (c. 810), where a Latin synthetic perfect is translated as a periphrastic HAVE-perfect with *eigan* “have, own”:

(4) a. *qui christianum nomen accepistis* (Latin)
who Christian name receive.PRF.2PL
b. *ir den christiāniun namun intfangan⁶ eigut*
you.PL the Christian name.ACC.SG receive.PST.P.ACC.SG have.2PL
‘you who have received the Christian name’⁶ (OHG)

The distribution of HAVE and BE in the early OHG texts is given in Table 3.

Table 3. OHG HAVE- and BE-perfects (based on Dieninghoff 1904)

WORKS	HAVE		BE	
	TOTAL (%)	<i>haben/eigan</i>	TOTAL (%)	<i>uuesan/uuerdan</i>
Isidor (translated late 8th c.)	0 (0)	0/0	10 (100)	3/7
Tatian (translated 825–850)	5 (23.8)	5/0	16 (76.2)	13/3
Otfrid (composed c. 863–71)	43 (60.6)	26/17	28 (39.4)	28/0
Notker (late 10th –early 11th c.)	784 (60.5)	752/32	512 (39.5)	511/1

- While the translation of a Latin synthetic perfect by an OHG HAVE-perfect might be construed as counter-evidence to the claim that Germanic periphrastic perfects were formed on a Latin model, it should be noted that numerous examples of Late Latin HAVE-perfects existed in Carolingian documents, especially in a legal context (Drinka 2017: 230). It is in the legal documents of the Carolingian realm that OHG and OS use of HAVE-perfects, in fact, first appeared. Several examples from Otfrid, whether with the auxiliary *haben* “have” or *eigan* “own, have”, illustrates the strong similarity of the OHG HAVE-construction to that of legal Latin (5):

(5) Examples from Otfrid compared to Latin equivalents in legal documents
habet giheizan : *promissum habet* “he has promised” (V 23, 48; V 24, 3)
firnoman eigit : *compertum habet* “he has found out” (III 12, 21; III 20, 88)
habet gizeigôt : *ostensum habet* “he has shown” (III 3, 3)

6. The inflection of the participle in this and other early OHG texts signals the archaic connection of the participle to the direct object; later texts show loss of this inflection as the construction becomes more grammaticalized.

The most frequent and important of such calques is the use of *eigun gidân* to translate *factum habeo* “I have done” (Thielmann 1885: 546; Drinka 2017: 230).

- Virtually all major Old High German (OHG) and Old Saxon (OS) texts are produced in a Carolingian context, that is, under the ‘roof’ of Latin (Examples (6) and (7) respectively).
- (6) *Luke* 13: 6 (a. Latin) vs. *Tatian* 102, 2 (b. OHG)
 - a. *arborem fici habebat quidam plantatam in vinea sua*
 - b. *phigboum habeta sum giflanzotan in sinemo uuینگarten*
fig-tree had a_certain_man planted in his vineyard
“A certain man had a fig tree planted in his vineyard”
- (7) *Heliand* 771 (OS)⁷
nu habad thit liocht afgeben Erodes the cuning
now has this light given_up Herod the King
“now Herod the king has given up this light”
- As illustrated in Table 4 and Figure 6, the frequency of both HAVE- and BE-perfects increased over time, demonstrating the solid establishment of the BE/HAVE dichotomy similar to that found elsewhere in the Charlemagne Sprachbund.⁸ By contrast, the distribution of the perfects in English, which lies outside the Charlemagne Sprachbund, shows an increase in the relative frequency of the HAVE-perfect over time but an extremely low frequency and a virtually flat growth over time for the BE-perfect (Drinka 2017: 250–254).

Table 4. HAVE- and BE-Perfects in German from 1000–1650 (based on Oubouzar 1974)

WORKS	HAVE (%)	BE (%)	TOTAL VERBS
Notker Psalter III, 3 (early 11th c.)	79 (1.3)	73 (1.2)	6,186
Nibelungenlied (early 13th c.)	616 (5.5)	216 (1.9)	11,260
Das Märterbuch (early 14th c.)	237 (4.7)	70 (1.4)	5,090
Die Heidin (early 14th c.)	88 (5.6)	28 (1.8)	1,565
Chronik des Constanzer Konzils (early 15th c.)	184 (4.7)	104 (2.7)	3,900
Der Ackermann aus Böhmen (early 15th c.)	111 (8.7)	35 (2.7)	1,275
Fortunatus (early 16th c.)	711 (8.8)	323 (4.0)	8,110
Luther, An den christlichen Adel (early 16th c.)	324 (10.3)	98 (3.1)	3,147
Wickram (mid 16th c.)	904 (15.9)	390 (6.8)	5,695
Melanchthon (mid 16th c.)	279 (14.2)	102 (5.2)	1,967
Simplicissimus (mid 17th c.)	705 (12.6)	231 (4.1)	5,577

7. The *Heliand* relies heavily on the model of a pre-Vulgate Latin version of the *Diatessaron*, a Gospel Harmony which combines all four gospels into one narrative.

8. See Drinka (2017: 228–247) for additional examples and explication of grammatical details.

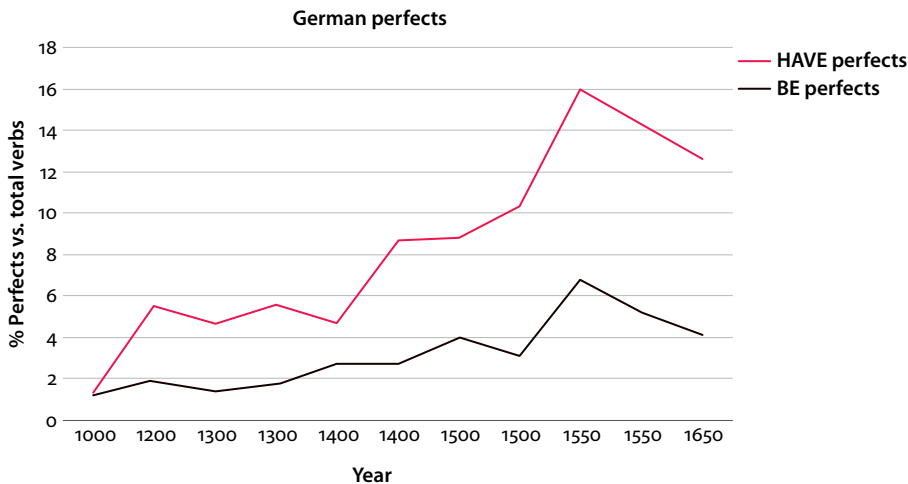


Figure 6. HAVE- and BE-perfects in German from 1000–1650 (based on Oubouzar 1974)

In summary, what is argued here is that the OHG and OS perfects were constructed on the model of Latin, first through contact with the vernacular Late Latin of Gaul in the sixth through seventh centuries (Banniard 2004: 347), and later through the influence of written Latin, especially that used in the Carolingian court and church.

4. Portuguese on the periphery

While OHG and OS played a central role in the Carolingian realm, as witnessed by their adoption of both BE and HAVE as perfect auxiliaries, the varieties of the Iberian Peninsula experienced limited exposure to Carolingian trends, and followed different paths of development. The perfects of Portuguese, in particular, show a number of ‘peripheral’ characteristics: the range of auxiliaries was reduced from a broader array to just one auxiliary, *ter* ‘hold, have, keep possession of’; the semantic value of the perfect came to be restricted to durative meaning, apparently fostered by the semantic value of the auxiliary in combination with atelic verbs; at the same time, the synthetic preterite came to take over some of the value of the anterior, as the perfect decreased in frequency.⁹ In contrast to a number of other Romance varieties, the Modern Portuguese *ter* construction is not used if the event is situated in the past, even if it occurred in the recent past, or is experiential, hodiernal, or represents

9. For a comprehensive discussion of the development of the perfects in the Iberian peninsula, see Rodríguez Molina 2010; for a summary of the major developments, see Drinka (2017: 193–216), especially Table 8.8.

hot news. It is restricted to durative, atelic situations which include the Reference Time (Squartini & Bertinetto 2000: 409f.). The synthetic preterite is used where many other European languages would use a periphrastic perfect (Sten 1973: 239).

Several key events in the history of the Iberian Peninsula were instrumental in creating this separation from the rest of Europe:

- Visigothic rule (6th–7th century) followed by Muslim control of three-quarters of the Iberian Peninsula (8th–11th century) hampered contact beyond the Pyrenees until the late 11th century.
- The Mozarabs (Christians of Al-Andalus) continued to practice the Visigothic rite.
- In 1080, Pope Gregory VII instituted the Roman Liturgy, but the county of Portugal refused to give up its practice of the Visigothic rite (Wright 1982: 210).
- As a result, Portugal seceded from Leonese rule, removing itself completely from trans-Pyrenean influence. While some varieties of Spanish adopted innovations from north of the Pyrenees, Portuguese remained isolated from these.

One eventual consequence of the political split between Spain and Portugal appears in the separate paths that Spanish and Portuguese auxiliaries HABERE and TENERE took in the centuries following this division. Examining the auxiliary data assembled by Harre (1991), reconfigured as percentages and arranged chronologically as in Table 5 and Figure 7, we note that speakers of medieval Spanish and Portuguese were following a similar trajectory in early times: each of these languages used both HABERE and TENERE at fairly similar rates to each other, with HABERE being used more frequently in each. But in the 15th century, the two varieties underwent a critical split. Castilian Spanish began to follow an upward trend in using *haber* “have” more frequently than *tener* “possess” / “hold, have, keep possession of”, while Portuguese took the opposite tack, and opted for increased use of *ter* “hold, have, keep possession of” at the expense of *haver* “have”.

Table 5. Comparison of rate of Spanish *haber* use to Portuguese *haver* use over time (based on Harre 1991)

	1200s	1300s	1400s	1500s	1600s	1700s	1800s	1900s
% Span. <i>haber</i> + PST.P	85.5	69.5	82.8	92.6	90.8	95.0	97.1	98.2
% Port. <i>haver</i> + PST.P	97.1	73.3	29.4	23.5	16.4	0	0	8.1

Why should it be that these two varieties diverged so radically at this precise moment? While many factors must have been responsible, it is important to note that Portuguese began to rely on more vernacular tendencies that had developed on the Iberian Peninsula. As proposed in previous work (Drinka 2016, 2017: 197–201),

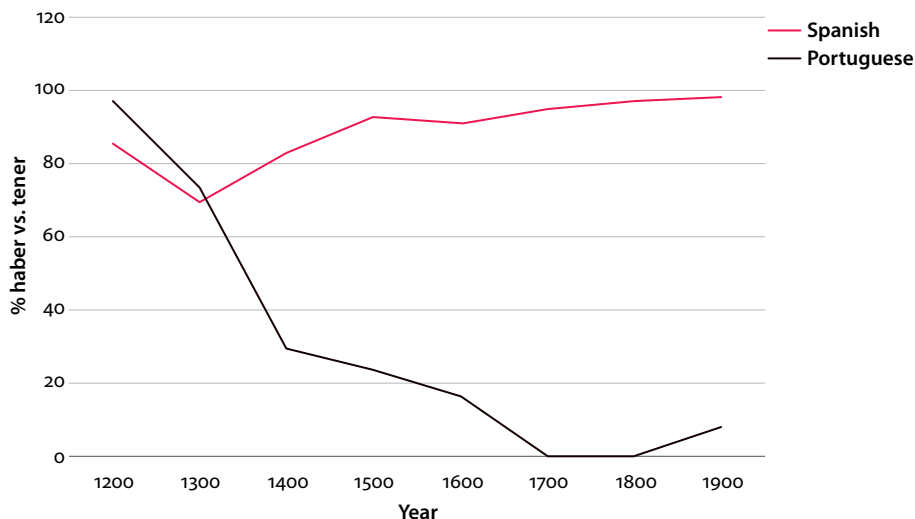


Figure 7. Comparison of *habere* and *tenere* in Spanish and Portuguese over time (based on Harre 1991)

I claim that Portuguese may have been influenced by contact with Arabic, while Castilian (Spanish), in contrast, moved in the direction of trans-Pyrenean Europe, reinforcing the use of *haber* as an auxiliary as the *Reconquista* progressed. Evidence for these claims will be examined in the next sections, as we assess the extent to which political allegiance and other sociohistorical factors could have been responsible for this outcome.

4.1 The influence of Arabic

Researchers usually downplay the role of Arabic influence in the history of Spanish and Portuguese: this variety is often viewed as a source of lexical borrowing, but seldom as a model for structural innovation. In recent work (Drinka 2016, 2017), I argue that the cultural and linguistic dominance of Arabic on the Iberian Peninsula, lasting for seven centuries, could not have vanished without leaving some remnant in the structural patterns of the Ibero-Romance varieties. I go on to suggest that the perfect may well provide evidence of that influence, specifically in the tendency of the perfect to express durativity or iterativity in a number of Romance varieties. As it turns out, the geographical distribution of this so-called “permansiveness” in the perfects (Mattoso Câmara 1972: 146) is remarkably co-territorial with the distribution of Muslim control in the Mediterranean: it appears in Portuguese and the nearby Spanish varieties, in Sicilian, where Arabic rule existed from 827–1091, and

in diasporic Judeo-Spanish and across many varieties of Latin American Spanish, reflecting the earlier variable presence of this feature in Castilian. In the following sections, I summarize the major arguments presented in Drinka (2016, 2017), and provide support for this claim.

4.2 Historical background of Al-Andalus

Most of the Iberian Peninsula was under Muslim control until the late eleventh century, with bilingualism and diglossia existing in the early years, and a considerable amount of language shift to Arabic in later years (Beale-Rivaya 2006: 66). Arabic was used extensively by Mozarabic Christians: Mass was conducted in Arabic in some congregations; expressions from the Qurʾān were used to introduce the Christian gospels (“In the name of God, the Compassionate, the Merciful”); juridical texts from the Cathedral of Toledo were produced in Arabic as late as 1391 (Beale-Rivaya 2006: 112–129). The Mozarabic community was completely Arabized, to the extent that the Reconquista of Toledo in 1085 did not have an immediate linguistic impact.

4.3 The perfects of Arabic

Standard Arabic¹⁰ does not have a unified perfect category, but can express anterior value in two ways in particular: by means of the Perfective with adverbial modification, especially with the particle *qad* “already” (8) (presumably deriving from the active participle *qāʿid* “sitting”, so ‘he is sitting, having written’) (Cuvalay-Haak 1997: 163; 239), or by means of an active participle deriving from the noun system (9) (e.g., *yaktub* “he writes” forms an active participle *kātib* ‘a person who writes/a writer’, which, when used as an adjective, can refer to a present state bound by a perfective event: ‘is a writing one’ → ‘has written’) (Kinberg 1992: 312–316; Cuvalay-Haak 1997: 175).

(8)	<i>qad kataba</i> “he has written”	(Classical Arabic) (Comrie 1976: 81)
(9)	<i>il-ġāhil mākil ġadā-h</i> ART-child eat.ACT.PTCP.M.SG lunch-his “The child has eaten his lunch” [<i>lit.</i> “is an eating one”]	(Gulf Arabic) (Ammann 2002: 333)

10. I follow Ammann (2002: 322) here in using the term ‘Standard Arabic’ (*al-luġatu l-fuṣṣḥā*) as a cover term for ‘Classical Arabic’, which is closely tied to the language of the Qurʾān, and ‘Modern Standard Arabic’, which refers to the present-day supraregional interdialect.

Crucially, both constructions which express the anterior in Arabic, the perfective, especially as reinforced by *qad*, and the active participle construction, show some potential or actual connection with the durative. (See Drinka 2017: 197–199 for additional examples and details.)

4.4 Possible influence on Romance perfects

Several researchers have pointed to the similarities between the Arabic constructions and the periphrastic perfects of western Europe. Fassi Fehri (2003: 72) notes the resemblance of the preterites and perfects of Portuguese to those of Standard Arabic. Portuguese, like Arabic, often uses the synthetic preterite to mark the anterior and the periphrastic perfect (*ter* ‘hold, have’ + PST.P) for habitual situations, like the *qad* and the active participle constructions (10). In fact, the durative/iterative meaning is obligatory in Portuguese.

- (10) *Agora já tem comido.* (Portuguese)
 now I have eat.PPP
 ‘Now I have taken on the habit of eating.’

To summarize, I argue that the Portuguese distribution may more accurately reflect the Romance varieties’ uninterrupted development spoken in Al-Andalus under the influence of Arabic aspectual distinction, as likewise witnessed in the remnants of modern-day Judeo-Spanish, and, apparently, in New World Spanish. In contrast, I propose that the Castilian distribution represents, to some degree, a marking of allegiance with the rest of Europe in its strengthening of *haber* as perfect auxiliary.¹¹

In sum, Portuguese provides an example of a prototypically peripheral language with regard to perfect use: the *ter* perfect is infrequent, semantically archaic in its reference to a present resultative state, and syntactically idiosyncratic in its use of an auxiliary which, by its nature, brings a ‘permansive’ connotation to the construction, and which may itself represent archaism.

11. Additional evidence for this northern orientation can be seen in the adoption by the Castilian monarchs Fernando I (1035–65) and Alfonso VI (1065–1109) of monastic traditions and clerical reform from the north, as well as in Alfonso’s above-mentioned introduction of the Roman rite to replace the Mozarabic liturgy. Probably most indicative of this affinity to northern traditions is the fact that, among all the monarchs of Europe, Fernando and Alfonso were the most munificent supporters of Cluny Abbey in France, using money obtained as booty from Muslim conquests (Gerhards 1992: 49f.).

5. Czech, Slovak, and the influence of German

Czech, along with Slovak and other West Slavic languages, has undergone extensive influence from western European languages, especially German. Like other Slavic languages, Czech inherited a resultative construction formed with a BE-auxiliary plus a past active participle (PAP) (11), but, as early as the 14th century, it also acquired a HAVE-perfect, clearly through contact with German (12).

- (11) *Vojáci jsou rozprchlí do všech stran* (Czech)
 soldiers be.3PL scatter.PAP.PL in all directions
 “the soldiers **have scattered** in all directions” (Wiemer & Giger 2005: 91)
- (12) *Czoz na nych wiecez zadate, nezli ulozone gmate* (Czech)
 what from them more ordered than impose.PPP have
 “What you demand from them more than you **have imposed**”
 (Wiemer & Giger 2005: 95)

A brief examination of the history of German-Czech contacts will illustrate how this influence arose.

5.1 Historical background of German influence

Settlers from western Europe began moving into Bohemia and Moravia in the 12th century, with a large influx from Bavaria and Austria in the first half of the 13th century. Relations between Bohemia and the Holy Roman Empire strengthened especially in the 14th century, when Prague became the capital not just of Bohemia but of the entire empire (Wünsch 2008: 12–16). It was also at this time, in the second half of the 14th century, that Czech began to be used in official documents, implying assimilation and a shift of many German speakers to Czech. Much of the extensive structural borrowing from German dates to this time and is due to this shift (Berger 2009: 137f.). In more recent times, variable levels of contact with German in Czechia and Slovakia have engendered different linguistic results:

Bohemian. In the first half of the 19th century, the influence of German in Czech cities remained especially strong: in Prague, the educated classes used German alone, while merchants and artisans used Czech; most of the population spoke both languages, with only the most elite classes not speaking Czech at all, and only the lowest classes not using German at all. With many more Czech-speakers moving into the city from other locales in Bohemia over the course of the century, the population became predominantly Czech-speaking. With regard to the development of the HAVE-resultative in Bohemian, German had a strong influence on vernacular patterns (Dickey 2013: 115). Possessive resultatives in Bohemian were

formed with the HAVE-auxiliary + past passive participle (*-n/t*-participle), with the PPP acting as an objective complement (as in ‘I had the soup cooked’) and agreeing in gender, number, and case with the object (13, 14).

- (13) Jan Hus (1414) (Czech)
svědky [...] jež mám všechny sepsány
 witnesses that have.1SG all note.PPP.PL
 “witnesses [who have spoken against me] all of whom I **have noted**” (= “I have them all noted”) (Wiemer & Giger 2005: 95)
- (14) *Sbírka kázání založených na legendách* (mid-15th century) (Czech)
A pro její velikú krásu měl ji ústavně
 and for her great beauty have.PRET.M.SG her continually
zamčenú na nějaké věži
 locked_up.PPP.F.SG in some tower
 “And because of her great beauty he **had** her continually **locked up** in some tower” (Dickey 2013: 115)

Moravian. In contrast to the Bohemian trend towards the predominant use of Czech in the cities, the two largest Moravian cities, Brno and Olomouc, had a majority of German speakers, even while the surrounding areas were largely Czech speaking (Thomas 2003: 206). This extremely strong German influence on ‘Hanakian’, the dialect area around Brno, is reflected in its HAVE-resultatives, which were formed not with the PPP but with the PAP (*l*-participle), and which could appear without an object (15).

- (15) *Mám rožlý* (Hanakian Moravian)
 have.1SG light.PAP
 “I have lit” (Wiemer & Giger 2005: 88)

As Wiemer & Giger (2005: 112f. et passim) note, the *l*-participle is rarely used in the possessive resultative structures of the Slavic languages, yet in several varieties – Moravian, standard Sorbian, some Ukrainian dialects, Kashubian, and the Baltic Sea Slavic languages – it has been drafted for use in the resultative and perfect structures (see also Arkadiev and Wiemer, this volume). Most of these varieties were subject to extensive contact with German, making the German participle the likely model for this innovative usage in Hanakian, as in these other varieties.

Slovak. While geographically contiguous to Moravia, Slovakia had a different history, as also witnessed in its HAVE-resultatives: Bratislava / Pressburg had a strong German presence, and many schools used German, but in 1867, the schools underwent intensive Magyarization, and German influence diminished. Ultimately, Slovak conforms more closely to Bohemian in the formation of its HAVE-resultatives

in using only the *-n/t-* participle, not the *l-*participle as in Hanakian (Wiemer & Giger 2005: 97).¹² The HAVE-resultative is not well-attested in historical texts of Slovak, but a few examples exist such as (16), dating to the 18th century:

- (16) *že stul ma wignednany z panem* (Slovak, 1769)
 that table has negotiate.PPP with gentleman
 “ [that he complained] that he **has negotiated** the table with the man”
 (Wiemer & Giger 2005: 99)

5.2 German influence on aspectual distribution of Czech

The perfects of German also influenced those of Czech in another way: they provided a model for the reshaping of the old Slavic perfect along western lines. Czech did not actually maintain the old aspectual tenses of aorist and imperfect, but, rather, retooled an older layer of the periphrastic perfect for aoristic, narrative use. The result was a verb system which was remarkably similar to that of German (17, 18):¹³

- (17) Narrative use: no auxiliary (=German preterite) (Czech)
Dne_včerejšího Jestřibský od V.M. přijel a psaní
 Yesterday Jestřibský from Your Grace come.PAP.M.SG and letter
mi dodal
 me give.PAP.M.SG
 “Yesterday, Jestřibský **came** from Your Grace and **gave** me the letter”

vs.

- (18) Current relevance: with auxiliary (=German perfect) (Czech)
Psaní V. M., [...] jest mne došlo, kterémuž
 letter Your Grace be.PRS.3SG to_me come.PAP.M.SG which
jsem porozuměla
 be.PRS.1SG understand.PAP.F.SG
 “Your Grace’s letter, [...] **has come** to me, which I **have understood**”
 (examples from Dickey 2013: 114)

12. In view of the many similarities in Czech and Slovak in the formation of resultatives, it is possible that these structures underwent a unified development across the Czech-Slovak dialect continuum, but it is also possible that they represent later influence of Czech upon Slovak (Wiemer & Giger 2005: 100).

13. See Dickey (2011: 201) for additional evidence of the conservatizing influence of German on the maintenance of older aspectual contrasts in Czech, due to “replica preservation”. Dickey (2013) likewise presents intriguing evidence of German influence on the aspectual patterns of Czech to be found in letters written by or to upper-class Czech women during the period of Habsburg influence, from 1365–1615.

5.3 Prescriptive reactions to German influence

In the 1870's, in an ambience of new antagonism toward German, a commission was established to analyze what was 'genuine' Czech, and what had been calqued on German (Thomas 2003: 209). Among the expressions catalogued was the HAVE-resultative (19):

(19) *máme vyhráno* "we have won" *wir haben gesiegt*

Despite these efforts to weed out Germanisms on the part of prescriptivists, the HAVE-resultative survived and continues to be widely used in speech. Thomas (2003: 211) notes that a "staggering" number of parallelisms remained in Czech.

Slovak shows a different development with regard to purism: as it struggled to form an identity in the face of Bohemian and Hungarian pressures, it was more accommodating to German in its vernacular dialects. But the standard was formed especially on Central Slovak dialects, which were the least affected by German. As a result, a resistance to German-based phrases and syntax was seldom noted (Thomas 2003: 211f.; 217).

The HAVE-resultatives have not, in general, become fully-grammaticalized perfects as in western Europe, either because the vernacular varieties of Czech, Slovak, and other West Slavic languages have resisted this shift for centuries or else the shift had begun to take place but was inhibited by pressure from the standard languages (Pontius 1997; Thomas 2003; Wiemer & Giger 2005: 109).

In summary, the influence of the Germanic languages, especially German, on the West Slavic languages was significant, and the possessive resultatives of Czech and Slovak reflect the variable degrees of intensity of that contact.

6. Conclusions

In each of the three representative examples of possessive perfects and resultatives in the languages of Europe examined here, we have witnessed the important role that calquing has played in the development of the HAVE-construction. In each case, sociolinguistic factors can be identified as playing an essential role in the replication.

- **The role of 'roofing'.** Evidence has been presented that Old High German and Old Saxon took part in the '*Charlemagne Sprachbund*'. As a result of the political and social ties established during the time of Charlemagne, innovative strengthening of the dyadic relationship between HAVE and BE tended to occur in the core area, with BE-periphrastics undergoing significant growth; in the peripheral areas, this growth did not occur. OHG and OS perfects were constructed on the model of Latin, first, through extensive contact with vernacular

Late Latin spoken in Merovingian Gaul in the 6th to 7th centuries and, subsequently, through the reinforcement of written Latin, especially connected with the Carolingian court and church. These Germanic languages located in the Carolingian realm came to adopt a perfect profile closely resembling that of French and northern Italian, with a HAVE-auxiliary for transitive verbs and BE for unaccusatives.

- **The linguistic repercussions of political and confessional realignment.** Due to their relative isolation from trans-Pyrenean centers of influence, the varieties of the Iberian Peninsula adopted external innovations to varying degrees, depending on their geographical and social distance from the Carolingian realm. The Portuguese perfects retain a number of archaisms which reflect the refusal of Portugal to adopt the Roman rite and its disaffiliation with the Carolingian realm; those varieties of Spanish which lie closer to the Carolingian territory, such as Aragonese, have developed the BE / HAVE contrast. It is suggested here that the development of durativity and iterativity as special features of the perfect on the Iberian Peninsula may have been modeled upon Arabic perfects formed with *qad* “already” or active participles, as a result of the seven centuries of contact between Arabic and the Romance varieties of Al-Andalus. Those varieties which developed this feature – especially Portuguese, Judeo-Spanish, and Sicilian – all experienced long-term contact with Arabic.
- **The capacity of social motivation to supersede internal linguistic factors.** Czech, which underwent centuries-long influence from German, calqued a HAVE-perfect alongside its native BE-perfect and constructed a perfect/aorist contrast modeled closely on that of German. Within the W. Slavic languages, we find the spread of the HAVE-resultative to different degrees, depending on the level of contact with German and on the threats to identity arising from other sources. Bohemian, Moravian, and Slovak all show different outcomes based on these factors. The importance of social motivation is clear: there was no ‘need’ for W. Slavic languages to develop a HAVE-resultative using a past passive participle, since past active participles were already available, in combination with a copula, to form a past resultative. But the PPP was pressed into active use in those languages, precisely where the HAVE-auxiliary was adopted. Both of these trends were connected with German influence; both were conditioned not by formal properties but by contact.

What this brief examination of a cross-section of perfects has demonstrated, then, is that the HAVE-perfects of Europe – ‘quirks’ in the languages of the world – did not develop independently in the languages where they appear, but originated in western Europe, and spread across the map of Europe, calque by calque, fueled by the forces of sociolinguistic motivation.

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The perfect in context in texts in English, Sistani Balochi and New Testament Greek

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English and Sistani Balochi are tense-prominent languages, and use the perfect mainly to elaborate on an existing topic by referring to a past state of affairs that is of relevance to that topic. English perfects also introduce new topics that the speaker wishes to address, while Balochi uses perfects with a mirative to introduce entities to a narrative and as a forward-pointing device in orienters that introduce reported speeches. New Testament Greek is aspect-prominent, which partly explains why English translates some Greek aorists (perfectives) with perfects. The Greek perfect often introduces restatements of past events or speeches. In passages with aorist-perfect alternation, it is also used in a marked way with added implicatures. Towards the end of a passage, assertions in the perfect often clinch the argument and/or are climactic. Near the beginning of a narrative passage, in contrast, the perfect, as in Balochi, is a forward-pointing device, highlighting what follows.

Keywords: Tense- versus Aspect-prominent, Default versus marked usages

This paper begins with a brief review of recent work on the two main ways that the present perfect functions in texts in English: in connection with the elaboration of an existing topic by referring to a past state of affairs that “is overtly connected to the *present* moment of speech” (Orriens 2009: 231)¹ and to introduce a new topic that the speaker wishes to address. §2 looks at the perfect in texts in Sistani Balochi (Iranian) and finds that it is used not only to elaborate on an existing topic, but also with the mirative marker *ta* to introduce entities to a narrative and as a forward-pointing rhetorical device in orienters that introduce reported speeches. §3 concerns the perfect in New Testament (NT) Greek and relates the mismatch between the use of the perfect in English and Greek to the languages

1. Orriens’ (2009: 231) definition relates to the “semantic value of the perfect” in Classical Greek, but is judged in this paper to be applicable also to English and Sistani Balochi.

being respectively tense-prominent versus aspect-prominent (Bhat 1999).² After noting the use of the Greek perfect with restatements of past events or speeches, it considers passages where there is an aorist-perfect alternation and readers/hearers might have expected the aorist to be used; in such situations, the so-called aoristic perfect is a marked form with added implicatures. When found at or towards the end of a passage, assertions in the perfect often clinch the argument and/or are of a climactic nature. When used at or near the beginning of a narrative passage, in contrast, the perfect is more of a backgrounding device, pointing forward to and highlighting what follows.

1. The perfect in context: English

There seems to be a consensus that the *majority* of instances of the present perfect in English create “an Elaboration structure in which the speech time S (or more generally: the larger utterance situation or writing context) provides the topic, and all sentences in the perfect are elaborations of this topic” (de Swart 2007: 2280). The perfect, in turn, “underlines the *actuality* that the speaker ascribes to the past SoA [State of Affairs] within the context of the present communicative situation” (Orriens 2009: 222).³ In (1) below, for example, *She has now returned to work* both elaborates on the topic of Berni’s past experience after suffering a stroke and relates the outcome to her current situation.

Passage 1 (*i* [news.co.uk], 20 February 2017: 9)

Berni spent seven days in hospital after her stroke and a full physical recovery took her around 18 months. ... She has now returned to work.

2. Bhat’s distinction between tense-prominent, aspect-prominent and mood-prominent languages is based on a corpus of at least twenty languages (1999: 91). He states (1999: 161) that, if a language is tense-prominent, “[T]he most prominent category would be represented by inflectional markers, which are closest to the verbal base, whereas other categories would be represented by particles or clitics, or by auxiliary verbs, which are less close to the verbal base than inflectional markers”. In Sistani Balochi, the imperfective marker is the enclitic =*a* “which attaches to the word that precedes the verb and not to the verb itself” (Barjasteh Delforooz 2010: 79), while the tense marker *t* is an integral part of the verbal base. In contrast, Ellis (2016: 133) argues that NT Greek is an aspect-prominent language because “The combination of the lexical core and the aspect markers forms the aspect stem”.

3. When Orriens asserts that the perfect attributes “*actuality status*” to a state of affairs, he means “that the speaker considers the SoA to somehow be part of the communicative situation and he wants his addressee to interpret this direct relationship” (2009: 230).

Newspapers frequently exploit this use of the perfect by introducing a topic in a title and then elaborating on it in the perfect, as in (2):

Passage 2 (*i* [news.co.uk], 20 February 2017: 9)

Spending on deaf slashed in past four years

Funding of specialist equipment for people in Wales with hearing loss has been slashed over the past four years because of budget cuts.

However, Nishiyama and Koenig's analysis of a corpus of texts in English revealed that 17 of the 600 instances of the perfect did not relate to the elaboration of an existing topic (2006: 274). Instead, "Speakers sometimes use a perfect at the beginning of a conversation to set up a topic" (2006: 271). For example, it is not unusual, early in a phone call, to say something like, *Oh, by the way, have you seen so-and-so recently?*, which implies that the caller wants to talk about so-and-so. 'Hot news' perfects are also used to set up topics, as in *The Reserve Bank has just announced an increase in interest rates* (Ritz 2012: 883).

Nishiyama and Koenig then examined the nature of the inferences that are to be drawn when a perfect is used. Entailed or continuative perfects (nearly 82% of the examples in their corpus – 2006: 273) "only require readers/hearers to draw trivial inferences, namely the presumed *persistence* of a situation" (Ritz 2012: 896). So, from *She has now returned to work* (passage (1) above), one infers simply that she is now working again.

A similar observation may be made with speech act perfects (8% of the examples in the corpus – Nishiyama and Koenig 2006: 273). "Speakers and authors may use a perfect to communicate that the complement of performative or epistemic verbs such as *say*, *promise*, or *see* presently holds or is likely to hold in the future" (2006: 260). So, *The First Minister, Nicola Sturgeon, has said another referendum is 'highly likely' ...* (*i*, 20th February 2017: 7) infers simply that another referendum is highly likely.

Nishiyama and Koenig's third category of inference is "common sense entailment" (5% of their corpus – 2006: 273). "Authors sometimes use the perfect to indicate that the occurrence of an event provides evidence or an explanation for the truth of a claim that she made or will make" (2006: 272). So, when *Iraq still keeps U.S. forces busy* is followed by the statement, *U.S. Air Force fighter jets have flown an average of 1,500 missions a month over southern Iraq since 1992*, "[t]he fact that the U.S. forces flew so many missions serves as proof that they were busy" (2006).

In summary, then, the English present perfect most often elaborates on an existing topic by referring to a past state of affairs that is judged to be of relevance to the present, though it may also set up a new topic. Typically, the inferences to be drawn from the use of the perfect are of a trivial nature.

2. The perfect in context: Sistani Balochi

Sistani Balochi is a dialect of Western Balochi spoken principally in parts of Iran, Pakistan and Afghanistan (Barjasteh Delforooz 2010: 22).⁴ The perfect “is derived from the past stem by adding the suffix of the past participle *-ag/-a*” (2010: 80). For example, the 3rd person singular past indicative of ‘go’ with the distal demonstrative pronoun *ā* “(s)he” is *šut* (go.PST “went”) and the 3rd person singular perfect indicative is *šut-a* (go.PST-PTCP “has gone”).

Barjasteh Delforooz claims that forms of the perfect that are past and/or not 3rd person singular “are periphrastic with forms of the copula” (2010). For example, the 3rd person singular past perfect is *ā šut-a(g)=at* (DIST go.PST-PTCP=COP.PST “(s)he had gone”) and the 1st person singular perfect indicative of “go” is *šut-a(g)=un* (go.PST-PTCP=COP.1SG “I have gone”). However, Barjasteh Delforooz’s data show that, if the subject is an independent pronoun, then the copula can be omitted. See, for instance, *man šut-a* (I go.PST-PTCP) “I have gone” (2010: 198).

Passage 3 (2010: 294) illustrates the use of the perfect to elaborate on an existing topic by referring to a past state of affairs that is overtly connected to the present. Its occurrence in clauses 97 and 98 indicates both that the speaker and his donkey ate the items (melons) in the past, and that those past acts elaborate on and have “current (present) relevance” (Bhat 1999: 168) for the topic under consideration; viz., that ‘These are very good things’ (96).

Passage 3 (*Xarmizza* “Melon” [m])

96. “These are very good things.
 97. *man=um wārt-a*,
 I=also eat.PST-PTCP
 I have also eaten (them),
 98. *ē ar-ā=um dāt-a=un=ō*
 PROX donkey-OBJ=also give.PST-PTCP=COP.1SG=and
 I have also given (them) to this donkey and
 99. *šumā=um bōr-it*.
 you.PL=also SBJV.eat-2PL
 you, too, should eat (them).”

4. For more precise information about where Sistani Balochi is spoken, see Nourzaei (2017: 32). Some of the texts referred to in this section are presented in interlinearised form in Appendix B of Barjasteh Delforooz’s doctoral dissertation (2010: 288–393). Others are part of the corpus of folktales and biographical tales collected by Nourzaei. The examples in this section are taken from Levinsohn and Nourzaei 2015, which contains the full text of each passage.

In Passage 4, ‘elaborate on an existing topic’ is a bit of a misnomer, as the speaker uses perfect *gošt-a* (say.PST-PTCP) ‘has said’ in 54a to ‘recall’ an existing topic; viz., an earlier speech of the same conversation in which he was told that he was an illegitimate child (41a).

Passage 4 (Three Brothers [f])

- 41a. “The third brother said [*gošt* say.PST], ‘This merchant is an illegitimate child.’
 54. The third one who (has) said [*gošt-a*], ‘You are an illegitimate child’; for sure he is right, I indeed am an illegitimate child.”

Passage 5 (Barjasteh Delforooz 2010: 288) illustrates the use of the perfect in a narrative context in the complement of a verb of perception or cognition and following mirative *ta*, whose “main function ... is to indicate that the author is presenting the information from the point of view of the person who perceives it” (2010: 105).⁵ The perfect indicates not only that the dragon had come (a past event), but also that it was still there (of current relevance to the observer) when it was shaking the lamp post.

Passage 5 (*Xarmizza* “Melon” [m])

9. *Yag rōč=ē dīst*
 one day=INDF see.PST
 “One day he noticed:
 10. *ta am=ē aždīyā=(y)ē āt-a=u*
 MIR EMPH=PROX dragon=INDF come.PST-PTCP=and
 Behold! This dragon has come and
 11. *am=ēš-ā takān=a dant*
 EMPH=PROX-OBJ shake=IPFV give
 is shaking this (lamp post).”

With verbs of position such as ‘sit’, the perfect in Sistani Balochi tends to be concerned more with the resulting position (in the present) than with the past event that produced it.⁶ This is illustrated in Passage 6 (Barjasteh Delforooz 2010: 311). Although the old man would have sat down at some time in the past, what is relevant to the observer was that he was sitting there in the present.

5. Definitions of mirativity usually refer to “the marking of *unexpected* information” (De Haan 2012: 1039), but unexpectedness appears not to be an obligatory element in the function of Balochi *ta*.

6. A similar observation can be made about verbs of position in other languages, including NT Greek (see fn. 11).

Passage 6 (*Baxt-ay padā* “Seeking the fortune” [m])

97. *pīramard=ē=rā dī;*
 old.man=INDF=OBJ see.PST
 “He saw an old man;
 98. *ta am=idā pīramard=ē ništ-a.*
 MIR EMPH=here old.man=INDF sit.PST-PTCP
 behold! an old man is sitting right here.”

A similar observation can be made about the perfect of *baxšā-* “bestow, give” when used as a performative. In one story, a husband says to his wife, *b-ra trā bi bādšāā baxšāt-ag=un* (SBJV-go you.SG.OBJ to king.OBL bestow.PST-PTCP=COP.1SG) “Go, I give you to the king” (Barjasteh Delforooz 2010: 353 ##238–239). It is difficult to conceive of the act of giving as being in the past; it seems only to be of current relevance.

Barjasteh Delforooz claims that, in narratives in Sistani Balochi, the “perfect indicative, at least in the provided data, marks background information” (2010: 102). This claim is consistent with my observation (Levinsohn 2015: 72) that the perfect is one of two verb forms that, in narrative, “lend themselves to being associated with backgrounding ... since the event concerned often results in a **state** which holds at the time of the theme-line events, and states are usually background information in narrative”. However, Barjasteh Delforooz’s published corpus of ten texts by male speakers does not include any occasion in which the perfect is used as a backgrounding device within the narrative itself, as it is only found in reported speeches (69 tokens) or, as we have already noted, following mirative *ta* (11 tokens).⁷

Nevertheless, there are occasions when events presented in the perfect can be viewed as backgrounded in relation to a following speech or event. Of particular interest are instances of reported speeches in Nourzaei’s corpus that are introduced with 3rd person *gošt-a* (say.PST-PTCP) “has said”. All are found in stories told by female speakers⁸ and appear to be used as a rhetorical device to direct the hearers’ attention to what will happen next in the story.⁹

7. Barjasteh Delforooz considers the information that follows mirative *ta* to be of a background nature (Barjasteh Delforooz 2010: 101f.). Because of the importance of the observations that *ta* introduces, however, it would seem better to treat this information as the complement of the verb of perception that usually precedes *ta*.

8. The female version of *Khan Bibi’s Life Story* was narrated by a 65-year-old lady who was originally from a village close to Zahak in the province of Sistan va Baluchestan. The female version of *The Three Brothers story* was narrated by a 60-year-old lady who was living in a different village close to Zahak.

9. Contrast the present perfect in English, which “is not used to express temporal progression” (Ritz 2012: 897).

Passage 7 illustrates the default pattern of reporting speeches with a ‘say’ verb in past tense within a “closed conversation” (Levinsohn 2015: 111); viz., one that involves only two speakers (or groups of speakers), each new speaker being the previous addressee, and vice versa. Barjasteh Delforooz and Levinsohn (2014: 217) concluded that “the synchronic motivation for using the third person PC [person marking clitic] is to indicate “referent continuity” (Givón 1990: 827). In particular, its presence implies the ongoing involvement in the expected role of any active third person participant who is not identified by a noun or independent pronoun in the current clause.

Passage 7 (*Khan Bibi’s Life Story* [f])

- 16a. “She went there to her father’s place.
- 16b. Then there her father said [*’gošt=e* say.PST=3SG.PC], ‘My dear, why have you come?’
- 16c. She said [*’gošt=e*], ‘Father, they have hurt me, they have hurt me.’
- 16d. He said [*’gošt=e*], ‘(If) they have hurt you a lot, stay here.’”

Passage 8 is not a closed conversation, as more than two speakers or groups of speakers are involved. Sentences 24b-c report a conversation between ‘friends and relatives’ and the husband who is divorcing Alam’s daughter, whereas Alam himself is the speaker in 24d. In 24b, no PC is used, as the speech is not directed to Alam. 24c could have been introduced with *’gošt=e*, since it constitutes a reply to the question of 24b. The effect of using the perfect *’gošt-a* instead, which implies that the speech concerned is in some sense currently relevant, is to direct the hearers’ attention to what will happen next in the story; viz., Alam’s agreement to take his daughter home with him (24d).

Passage 8 (*Khan Bibi’s Life Story* [f])

- 24a. “From here he sent someone, (saying) that Alam should come and take his daughter.
- 24b. When Alam came there, friends and relatives said [*’gošt-ant* say.PST-3PL] (to the husband), ‘Well, why did you divorce this girl for nothing?’
- 24c. He (has) said [*’gošt-a*], ‘No, she is useless.’
- 24d. He (Alam) said [*’gošt=e*], ‘Alright, I will take care of my daughter, now that you did like this. I will take care of her.’”

The reported conversation of Passage 9 occurred because, after the couple divorced, the woman was found to be pregnant. The speech of sentence 35 informs the ex-husband of this fact and his reply (36) is introduced with perfect *’gošt-a*. The effect is to direct the hearers’ attention to what will happen nine months later (38).

Passage 9 (*Khan Bibi's Life Story* [f])

35. "When they went there to the man who had divorced his cousin-wife, when they went there, they say [*goš-an* say-3PL],¹⁰ 'Look, such and such has happened.'
36. He (has) said [*gošt-a*], 'Don't be worried about this If the baby is born by the appointed time, this baby is mine. If this baby is born after this date, it is not mine.'
37. From there they stood up They came back to their own place and stayed there.
38. Nine months, nine days and nine hours passed, the baby was born two or three nights earlier than that date."

Passage 10 is similar, in that the final speech of the conversation is introduced with perfect *gošt-a*, thereby directing the hearers' attention to what the girl does next to resolve the problem.

Passage 10 (*Three Brothers* [f])

59. "The girl came to her father (and asked) that, 'Why are you looking like this?'
60. He said [*gošt=e*], 'My dear, look, these weird ones have come to my home like this. Now I have become disgraced. What should I say? How should I answer them?'
61. She (has) said [*gošt-a*], 'Father, do not be sad. I know how to answer them.'
62. This girl dressed up nicely, put a turban around her head and went to the guest room."

Passage 11 differs from the previous extracts in that all the speeches are introduced with perfect *gošt-a*. Each instance directs the hearers' attention to the next speech or, in the case of the final speech, to what happened as a result.

Passage 11 (*Khan Bibi's Life Story* [f])

- 45a. "When they took the baby and went, the girl (has) said [*gošt-a*], 'I will marry this cousin of yours who is a Persian.'
- 45b. He (her father) (has) said [*gošt-a*], 'No, my dear, do not marry him, since he is a Persian, a Shia, we are Sunni.'
- 45c. She (has) said [*gošt-a*], 'No, I will marry him.'
46. There was a quarrel; they became angry with her ... that night they beat her so much, she went to her neighbour's place."

10. Levinsohn and Nourzaei (2015: 7) suggest that the unmarked tense form is used when "the speech concerned sets the direction for the next section of the story. As such, it seems to function at a higher level than the perfect, which simply directs the hearers' attention to what happens next."

Lindstedt (2000: 371) asserts that, “When a perfect can be used as a narrative tense ... it has ceased to be a perfect”. Lindstedt is particularly concerned with the French *passé composé* which, as Ritz notes (2012: 884), “has become a compound past tense ..., allowing combinations with definite past adverbials”. When the perfect introduces reported speeches in narratives in Sistani Balochi, in contrast, it is readily recognisable as a marked usage, since the default verb form used in the stories in which it appears is the past.

I therefore conclude that, like the English present perfect, the perfect in Sistani Balochi has two default uses: (i) to elaborate on an existing topic by referring to a past state of affairs that is of current relevance to that topic and (ii) in connection with mirative *ta* to introduce new participants or situations to an existing scene in the complement of a verb of perception or cognition. In addition, some Sistani Balochi speakers use the perfect in a marked way to introduce speeches that point forward to and highlight the result of the speech concerned.

3. The perfect in context: New Testament Greek

This section concentrates on the use of the perfect indicative in NT Greek, particularly in the book of Hebrews (Heb).¹¹

At first sight, the Greek perfect appears to function in a similar way to its counterparts in English and Sistani Balochi; viz., to elaborate on an existing topic by referring to a past state of affairs that is of current relevance to that topic. In Heb 1:5c (citing the LXX of Psalms 2:7),¹² for instance, “I today have begotten (γενένηκά) you” elaborates on “You are my Son” (5b). However, if translations into English of the book of Hebrews are compared with the Greek text, it quickly becomes apparent that English often uses a present perfect when the Greek has an aorist. For example, a perfect is typically used in English in the second part of the opening sentence of the book (e.g., “In the past God spoke to our forefathers through the prophets at many times and in various ways, but in these last days he *has spoken* to us by his

11. This section only concerns Greek verbs for which the perfect is part of a set with *three* members (i.e., when there is a three-way contrast between the perfective [aorist], imperfective and perfect aspects). It does not discuss οἶδα “know” and intransitive ἵστημι “stand” because, for these verbs, the perfect is part of a set with only *two* members. As I have argued elsewhere (Levinsohn 2016: 192f.), such verbs are defective in that they lack imperfective forms, resulting in neutralisation between the perfect and imperfective; hence, the acceptability of translating such perfects with imperfectives.

12. ‘LXX’ refers to the Septuagint translation of the Hebrew Old Testament into Greek, produced in the 3rd and 2nd centuries BCE.

Son” – Heb 1:1–2a NIV),¹³ since the second clause elaborates on the topic of God speaking that was introduced in the first clause, and the event concerned took place in the past but has current relevance to that topic. Nevertheless, the verb in the Greek (ἐλάλησεν) is in the aorist (“spoke”).¹⁴

This discrepancy results at least in part from the fact that English is a tense-prominent language, whereas NT Greek is an aspect-prominent language (Ellis 2016: 130–132).¹⁵ Because English is tense-prominent, a verb form such as the present perfect is needed to indicate that a past event has current relevance. NT Greek, in contrast, is much more concerned with how the event is portrayed. In particular, the Greek aorist has perfective aspect, which “portrays the event as a whole” (Levinsohn 2016: 185) – “a complete and undifferentiated process” (Porter 1992: 21), “without reference to its internal structure” (Fanning 1990: 85). Furthermore, although the Greek aorist most often refers to actions that took place in the past, it is also used to present current events (see Levinsohn 2016: 188–190 for discussion of this point). Consequently, the need of a verb form that “underlines the *actuality* that the speaker ascribes to the past SoA [State of Affairs] within the context of the present communicative situation” (Orriens 2009: 222) is reduced.

It follows that, when NT Greek uses a perfect indicative, it communicates something more than the equivalent present perfect in English. Runge partially addresses this issue in his discussion of Luke 4:18 (a quotation from the LXX of Isa 61:1–2). The NIV uses the present perfect twice: “The Spirit of the Lord is on me, because he *has anointed* me to preach good news to the poor. He *has sent* me to proclaim

13. Translations of the Bible into English are based on the *New International Version* (1993; hereafter, NIV), adapted as appropriate to more closely reflect the Greek text.

14. Even though the NIV tends to reproduce the Greek tense forms, it also translates aorist indicatives in Hebrews with a present perfect in 1:9 (bis); 2:5, 6, 13; 3:10; 4:8; 6:10, 20; 9:20; 10:29, 11:16; 12:4, 9; 13:22. Aorist participles or infinitives are translated with a present perfect in 2:1; 3:15; 4:1, 3; 6:4 (thrice), 5, 10, 18, 20; 9:15; 10:26, 29 (bis), 36; 13:2, 23. Versions such as the *New Living Translation* (2nd edition, 2004) translate Greek aorists with a present perfect even more frequently, as in 2:2, 4:3, 4:10 (bis), 7:21, 26; 8:5, 9:11; 10:2, 5. See below for occasions when Greek perfects are translated into English with a simple past.

15. See fn. 2 (above). For Bhat (1999: 170), perfect in a tense-prominent language involves a “Temporal view: past event with current (present) relevance”. In an aspect-prominent language, in contrast, it involves an “Aspectual view: completed (perfective) event with continuing (imperfective) relevance”. Bhat continues (1999: 175), “My claim that the concept of ‘perfect’ is being viewed by languages from the point of view of their prominent category is supported by the various constraints shown by these languages on the occurrence of their respective perfect forms. These constraints appear to depend upon the most prominent category.”

freedom for the prisoners ...”. In the Greek of both Isa 61:1–2 and Luke 4:18, in contrast, only the second verb is in the perfect (ἀπέσταλκέν με “has sent me”), while the first is in the aorist (ἐχρίσέν με “anointed me”). Runge writes, “Based on the principle that choice implies meaning, the choice to render only one Greek verb [with] a perfect suggests a prioritization of the information Both provide background information for the governing clause, but only ἀποστέλλω is explicitly connected to the present situation using the perfect. The sending is what has the ongoing relevance, not the anointing” (2016: 468f.).

If Runge’s exposition of the passage is correct,¹⁶ then a comparison of the Greek and its translation into English would seem to suggest that there are two degrees of current relevance: a lower degree when English uses the perfect but Greek does not, and a more marked degree when both languages use the perfect. The next paragraphs suggest an alternative explanation for the mismatch between the languages.

The perfect is often used in the book of Hebrews in connection with ‘restate-ments’ (which are taken here to be a specific type of elaboration). This is particularly clear in Passage 12 (below).¹⁷ The perfects of 7:6 restate (in chiasmic order) information that was presented in 1 and 2 in the aorist.

Passage 12. Hebrews 7:1–2, 6

1. “This Melchizedek, king of Salem and priest of God Most High, met Abraham returning from the defeat of the kings and blessed [εὐλογήσας – aorist participle] him,
2. and Abraham gave [ἐμέρισεν – aorist] him a tenth of everything ...
- 6a. This man, however, did not trace his descent from Levi, yet he (has) collected a tenth [δεδεκάτωκεν – perfect] from Abraham
- 6b. and (has) blessed [εὐλόγηκεν – perfect] him who had the promises.”

In Passage 13, the material that is restated is a reported speech. Aorist εἶπον (“said”) in 7 and perfect εἶρηκεν (“has said”) in 9 introduce exactly the same words.

16. This article does not discuss how the perfect is used in the LXX, but notes that, if its primary function is to introduce material that elaborates on an existing topic by referring to a past state of affairs that is of current relevance, then “He has sent me to proclaim freedom for the prisoners ...” is to be understood as an elaboration of the topic “he (has) anointed me to preach good news to the poor”, rather than “the Spirit of the Lord is on me” (“The sentence structure shows clearly that *sent* and its indirect objects are functioning as an explanation of what ‘preaching good news to the poor’ means” – Oswalt 1998: 565).

17. See footnote 19 for discussion of the perfect in Heb 7:9.

Passage 13. Hebrews 10:5–9

- 5–6. “Therefore, when Christ came into the world, he says [λέγει – present]: ‘Sacrifice and offering you did not desire, but a body you prepared for me; with burnt offerings and sin offerings you were not pleased.
7. Then I said [εἶπον – aorist], ‘Here I am – it is written about me in the scroll – I have come to do your will, O God.’
8. First he said [*lit.* “above saying that”] ‘Sacrifices and offerings, burnt offerings and sin offerings you did not desire, nor were you pleased with them’ (although the law required them to be made).
9. Then he (has) said [εἶρηκεν – perfect],¹⁸ ‘Here I am, I have come to do your will.’ He sets aside the first to establish the second.”

The perfect is also used in connection with the FINAL elaboration of a topic, as Passage 14 (discussed below) illustrates.

Passage 14. Hebrews 1:3–5, 13

- 3b–4. “After he had provided purification for sins, he sat down at the right hand of the Majesty in heaven, having become as much superior to the angels as the name he has inherited is superior to theirs.
5. For to which of the angels did he ever say [εἶπέν – aorist], ‘You are my Son; today I have become your Father?’ Or again, ‘I will be his Father, and he will be my Son? ...
13. But to which of the angels has he ever said [εἶρηκεν – perfect], ‘Sit at my right hand until I make your enemies a footstool for your feet?’”

All the material from 5–13 is of a supportive nature, strengthening the assertions of 3–4. The contents of both rhetorical questions relate back to these assertions; 5 concerns “the name he has inherited”, whereas 13 relates to the assertion that “he sat down at the right hand of the Majesty in heaven”. It is not obvious that 13 has more ongoing relevance than 5 (14 reads, “Are not all angels ministering spirits sent to serve those who will inherit salvation?”). Rather, I suggest, the perfect has the

18. Although the Greek uses the perfect (εἶρηκεν) in Heb 10:9, it is not possible to use the present perfect in English because the sentence begins with the temporal adverb “then”, which indicates that the speeches of 8 and 9 are in chronological sequence, thereby forming an embedded narrative.

Other passages in which a reported speech introduced with the perfect restates an earlier citation that was introduced with the aorist include: John 4:18 (“This you have said [εἶρηκας – perfect] truly” relates back in the first instance to “You said [εἶπας – aorist] well that you have no husband” – 17); and John 14:29 (“I have told [εἶρηκα – perfect] you now before it happens” relates back to “You heard that I said [εἶπον – aorist] to you” – 28). In Heb 4:3, “just as he has said [εἶρηκεν]” relates back to “as the Holy Spirit says [λέγει – present]” in 3:7.

effect of clinching the argument of 5 as it terminates the sub-section of supportive quotations from the Old Testament.¹⁹

I turn now to three passages in Hebrews 11 in which the perfect appears to replace the aorist. What is noteworthy about these passages is that, in each instance, the so-called “aoristic perfect” (Turner 1963: 68) introduces the FINAL statement about the person concerned.

The first passage concerns Enoch. The initial statements about him are in the aorist or imperfect, but the final assertion (5c) is in the perfect. “Before he was taken” indicates that this event took place prior to those of 5a–b. The reason for this deviation from chronological order becomes apparent in 6, which builds on the assertion of 5c, rather than the earlier events.

Passage 15. Hebrews 11:5–6

- 5a. “By faith Enoch was taken [μετετέθη – aorist] from this life, so that he did not experience [μὴ ἰδεῖν – aorist infinitive] death;
- 5b. he could not be found [οὐχ ἠύρίσκετο – imperfect], because God had taken [μετέθηκεν – aorist] him away.
- 5c. For before he was taken, he was (has been) commended [μεμαρτύρηται – perfect] as one who pleased God.
6. And without faith it is impossible to please God, because anyone who comes to him must believe that he exists and that he rewards those who earnestly seek him.”

The second passage concerns Abraham. The main events of 8–16 are in chronological sequence and are in the aorist. However, the final assertion about him (17) concerns an event that took place prior to that of 13 and is in the perfect. It seems reasonable to deduce that this event, together with the comments about it (18–19) is to be understood as the climax of the passage.

Passage 16. Hebrews 11:8–19

- 8–10. “By faith Abraham, when called to go to a place he would later receive as his inheritance, obeyed [ὑπήκουσεν – aorist] ... and he went out [ἐξῆλθεν – aorist] By faith he made his home [παρώκησεν – aorist]
- 11–12. By faith Abraham, even though he was past age – and Sarah herself was barren – was enabled [δύναμιν ... ἔλαβεν – aorist] to become a father ...

19. Similarly, Heb 7:9 (“One might even say that Levi, who collects the tenth, [has] paid the tenth [δεδεκάτωται – perfect] through Abraham”) is the final elaboration of the topic of tithing that began to be addressed in 1–2 (Passage 12). In the case of Isa 61:1 LXX/Luke 4:18 (discussed above), ἀπέσταλκέν με “has sent me” could be said to introduce the final elaboration of the topic introduced earlier in the verse.

- 13–16. All these people died [ἀπέθανον – aorist] in faith without receiving the promises ...
17. By faith Abraham, when God tested him, (has) offered [προσενήνοχεν – perfect] Isaac as a sacrifice, and he who had received the promises was about to sacrifice [προσέφερεν – imperfect] his one and only son,
- 18–19. of whom he had been told [ἐλαλήθη – aorist], ‘It is through Isaac that your offspring will be reckoned’, having reasoned that God could raise the dead, and figuratively speaking, he did receive [ἐκομίσατο – aorist] Isaac back from death.”

The third passage concerns Moses. Once again, the initial events (24–27) are in chronological order and are in the aorist. And once again, the final event (28) took place prior to that of 27 and is in the perfect. This time, no commentary follows, but the shedding of blood has been a recurring theme in Hebrews, so it is reasonable to assume once again that 28 is the climax of the passage.

Passage 17. Hebrews 11:23–28

23. “By faith Moses was hidden [ἐκρύβη – aorist] by his parents for three months after he was born ..., and they were not afraid [οὐκ ἐφοβήθησαν – aorist] of the king’s edict.
- 24–26. By faith Moses, when he had grown up, refused [ἤρνησατο – aorist] to be known as the son of Pharaoh’s daughter
27. By faith he left [κατέλιπεν – aorist] Egypt
28. By faith he (has) kept [πεποίηκεν – perfect] the Passover and the sprinkling of blood, so that the destroyer of the firstborn would not touch the firstborn of Israel.”

I conclude from these passages that, in contexts in which the perfect alternates with the aorist, the perfect is to be viewed as a marked form. When it occurs at or near the end of a passage, one pragmatic effect of using it is to give prominence to the assertion concerned, because it clinches the argument or is of a climactic nature.²⁰

20. See also 2 Cor 12:9a (“and he has said to me [καὶ εἶηκέν μοι – perfect], ‘My grace is sufficient for you, for my power is made perfect in weakness’”), which clinches the argument of the supportive material of the preceding verses and is the basis for the following theme-line assertion (“All the more gladly, then, I will boast about my weaknesses, so that Christ’s power may rest on me” – 9b).

In Passages 15–17, a pluperfect could theoretically have been used to present the final event, instead of a perfect, to show that it is in the nature of a flashback. However, when a pluperfect is used in narrative, it implies that the event concerned took place *PRIOR* to the theme line events (Levinsohn 2015: §5.2.3 #1), whereas in Heb 11, the events presented with the perfect *ARE* theme line events.

It does not follow from the above statement that the perfect will always give prominence to the assertion concerned.²¹ If one verb form (in this instance, the aorist) is the most relevant way of presenting an event, but the author chooses to use another form instead, then, according to Relevance Theory linguist Ernst-August Gutt (1991: 103), he or she “must have intended to convey special contextual effects”. By choosing a marked form such as the perfect, “the communicator makes the utterance more costly to process ... [and] this would entail that she intended to convey additional implicatures to compensate for the increase in processing effort” (1991: 41). However, the NATURE of the additional implicatures has to be determined from the context.

This is evident when we consider passages in which the perfect is used in a narrative framework and the speeches or events ARE ordered chronologically. Because an aorist might have been expected, the perfect is a marked form with added implicatures which are to be determined from the context.

Passage 18 (below) presents a reported conversation in which the second speech is introduced with perfect εἶρηκα “I have said” instead of default aorist εἶπα “I said”. The parallel with the use of the perfect in reported conversations in Sistani Balochi (§2) is striking. As in Balochi, the effect of introducing the speech of 14a (“Sir, you are the one that knows”) with the perfect instead of the aorist is to direct the readers/hearers’ attention to and thereby highlight the speech of 14b, which answers the original question of 13.

Passage 18. Revelation 7:13–14

13. “Then one of the elders addressed [ἀπεκρίθη – aorist] me, saying, ‘Who are these, robed in white, and where have they come from?’
- 14a. I (have) said [εἶρηκα – perfect] to him, ‘Sir, you are the one that knows’.
- 14b. Then he said [εἶπέν – aorist] to me, ‘These are they who have come out of the great ordeal ...’”

I conclude with two narrative passages which Crellin (2016: 453f.) cites as instances of an aoristic perfect (in both passages, the verbs before and after the perfect form are aorist). Crellin notes that Robertson (1919: 899) describes the perfect in Rev 8:5 (Passage 19) as “a vivid dramatic colloquial historical perfect”, but comments, “it is difficult to see why the event of seizing the censer should be given particular prominence” (Crellin 2016: 453, fn. 55). A better explanation is that this marked use of the perfect has the same added implicature as in Passage 18; viz., to point

21. For passages in which the pragmatic effect of using the perfect is to give prominence to the assertion concerned, compare Porter’s (2009: 58) claim that “the perfect tense-form is used as a means for the foregrounding of supporting material”. However, such a claim is problematic for the instances of the perfect that are discussed in Passages 18 and 20.

forward to and highlight the next event. This means that the perfect in 5 is pointing forward to and highlighting the immediately following events: “filled it with fire from the altar, and hurled it on the earth.”²²

Passage 19. Revelation 8:3–5

3. “Another angel, who had a golden censer, came and stood [ἦλθεν καὶ ἐστάθη – aorist] at the altar. He was given [ἐδόθη – aorist] much incense to offer, with the prayers of all the saints, on the golden altar before the throne.
4. The smoke of the incense, together with the prayers of the saints, went up [ἀνέβη – aorist] before God from the angel’s hand.
5. Then the angel took (has taken) [εἶληφεν – perfect] the censer and filled [ἐγέμυσεν – aorist] it with fire from the altar, and hurled [ἔβαλεν – aorist] it on the earth.”

The use of the perfect in Matt 13:46b (Passage 20 below) is also marked, but this time the added implicature is different. It seems unlikely that the perfect in this passage points forward to and highlights the purchase of the pearl (46c), since such an action is to be expected from the context. Rather, as Crellin (2016: 453) notes, “one can see why the event of selling everything for the sake of buying the pearl might be emphasized”. So the added implicature of using the perfect is more likely to be the same as in the passages from Hebrews that I discussed earlier (Passages 15–17); viz., to give prominence to the event itself as the passage nears its end.²³

22. Campbell (2008: 47) cites Rev 8:5 as an example of “those perfects that don’t express any ongoing consequences, but only the past action”. However, Morris (1969: 118) points out that 8:3 describes the angel as already “having” (ἔχων) the censer. Rev 5:7 (“He came [ἦλθεν–aorist] and took [has taken] [εἶληφεν – perfect] the scroll from the right hand of him who sat on the throne”) is similar; the perfect points forward to the response of the four living creatures and the twenty-four elders: they “fell down before the Lamb” and worshipped him. The repetition of “he took the scroll” in a subordinate clause at the beginning of 8 (often referred to as “tail-head linkage” – Levinsohn 2015: §3.2.3) adds to the highlighting of 8 by slowing the story down and creating the expectation that something particularly significant is about to be narrated.

23. Crellin (2016: 453) wonders why the historical present (HP) would not be used in Passages 19 and 20. “The HP usually occurs prior to the event or group of events that are of particular significance” (Levinsohn 2000: §12.2), so would have been more appropriate in Passage 19 than in Passage 20. An influencing factor on the use of the perfect, rather than the historical present, may be the semantic relation between the action described with the perfect and the following aorist. In Passage 19, the angel is still holding the censer (the result of taking it) when he fills it. Contrast Rev 10:10 (“I took [ἔλαβον – aorist] the little scroll from the angel’s hand and ate [κατέφαγον – aorist] it”). In Passage 20, the purchase of the pearl is with the product of the sale (instrument).

Commentators agree that the combination of a historical present and perfect in John 1:15 (“John testifies [μαρτυρεῖ] concerning him and has cried out [κέκραγεν], saying”) is highly marked. For example, Alford (1883: I.686) states, “The testimony of John, so important as being

Passage 20. Matthew 13:45–46

45. “Again, the kingdom of heaven is like a merchant looking for fine pearls.
 46a. Having found [εὕρων – aorist] a pearl of great value, having gone away [ἀπελθὼν – aorist],
 46b. he (has) sold [πέπρακεν – perfect] everything he had
 46c. and bought [ἡγόρασεν – aorist] it.”

4. Conclusions

In tense-prominent languages such as English or Sistani Balochi, the perfect is mostly used as an actualising device to elaborate on an existing topic, presenting the event concerned as one that took place in the past and has current (present) relevance. It is also used in English to introduce a topic and, in the case of Sistani Balochi, in the complement of a verb of perception or cognition following mirative *ta* to introduce a relevant state that had resulted from a past event. Some speakers of Sistani Balochi also use the perfect in a marked way in narratives to introduce reported speeches that point forward to and highlight what follows. Because NT Greek is an aspect-prominent language and uses the aorist (perfective) verb form for present events as well as those that took place in the past, there is less need to actualise past events than in a tense-prominent language. This explains why English sometimes translates Greek aorists with present perfects. Rather than the perfect indicative being employed every time reference is made to a past event that elaborates on an existing topic, Greek tends to limit its use to restatements of past events or speeches, often with the implication that exposition of the topic is now completed. When aorist-perfect alternation occurs and readers/hearers might have expected the aorist to be used, the so-called aoristic perfect is a marked form with added implicatures. When found at or towards the end of a passage, assertions in the perfect often clinch the argument or are of a climactic nature. When used at or near the beginning of a narrative passage, in contrast, the perfect is more of a backgrounding device, pointing forward to and highlighting what follows.

the fulfilment of the very object for which he was ἀπεσταλμένος παρὰ θεοῦ, is in this prologue ranged, so to speak, parallel with the assertions and testimony of the Evangelist himself. So that this verse does not interrupt the train of thought, but confirms by this important testimony the assertion ὁ λόγος σὰρξ ἐγ., shewing that John *bore witness to His prae-existence*”. The perfect is appropriate because the speech act took place in the past, yet has continuing relevance for the assertions to which it relates by supplying the contents of John’s testimony, which was referred to in 1:7–8.

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CHAPTER 19

Indo-European perfects in typological perspective

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This chapter looks at Indo-European perfects in the light of recent typological research on TAME (tense-aspect-mood-evidentiality), in particular the work done at the Department of Linguistics at Stockholm University with the help of massive parallel corpora. The chapter starts with a survey of data sources and methods for multilingual linguistic research. Parameters of variation among perfects, both within Indo-European and elsewhere, are discussed: negated experiential uses, universal uses, combinations with definite time adverbials and words like ‘just’. Incipient grammaticalization of words for ‘already’ in the Indo-European languages is also considered.

Keywords: perfects, iamitives, multilingual research, parallel corpora, Indo-European

1. Introduction

This chapter looks at Indo-European (IE) perfects in the light of recent typological research on TAME (tense-aspect-mood-evidentiality), in particular the work done by my colleagues and myself at Stockholm University with the help of massive parallel corpora. Before turning to the concrete issues, I discuss the choice of data sources and methods for multilingual linguistic research.

2. Data sources for multilingual linguistic research

I am speaking here of ‘multilingual research’ rather than of ‘typological research’, to cover a wider range of investigations. By multilingual research, I understand any linguistic research that looks at more than one or two languages. The focus will be on synchronic studies.

There are several kinds of information sources that are potentially useful in multilingual linguistic research. To start with, any method or data source that is used in studying a single language – except purely introspective methods that presuppose that the investigator is a native speaker – can also be used in multilingual research, although it will not always be easy to apply them. Major sources for both kinds of research thus include:

- informal work with consultants
- corpus work
- questionnaires
- experimental work in the proper sense (adhering to general standards in behavioral research)
- secondary sources (grammars, research monographs and papers)

Obviously, there are no sharp boundaries between these. Thus, consultant work can rely partially or wholly on questionnaires or interview templates. The filling-out of questionnaires can take place under more or less controlled circumstances. What distinguishes multilingual from single-language research is the need to collect comparable or commensurable data from several languages. In large-scale typological studies, in particular, the availability of data and the cost in time and money become critical and may restrict the choice of methods very heavily. Direct contact with native speakers is often impossible in practical terms and, even if it can be arranged, presupposes a shared metalanguage. Such considerations are the reason why typological research tends largely to rely on secondary sources, typically reference grammars, especially when the goal is to investigate some phenomenon in a representative sample of the world's languages. (In a sense, typological work of this kind is similar to 'meta-studies' in experimental disciplines.) An obvious problem here is that the phenomenon under investigation may not be well described in available grammars. In fact, it may be argued that any problem worth a typologist's attention is likely to be underdescribed in grammars.

The verbal categories subsumed under the acronym TAME are particularly difficult to handle using only secondary sources, since they usually involve subtle semantic and pragmatic distinctions¹ that are often not well understood even by specialists. The terminology used tends to be inconsistent and confusing. Forms and constructions may be illustrated by a single example (often without context) or not at all. Bybee et al. (1994: 36) point to essential information that is often lacking in reference grammars: statements about the frequency of items, co-occurrence

1. I am using the expression 'semantic and pragmatic' to imply a maximally inclusive domain of study. It does not mean that I intend to emphasize the borderline between semantics and pragmatics, which can be drawn in many ways.

restrictions with lexical verbs, and details of meaning beyond simple labels such as Past Tense. All these factors make the comparison between languages more difficult. One particular difficulty that my colleagues and I have encountered is that grammaticalized words and morphemes may not be acknowledged as such but are rather reported only with their pre-grammaticalized meaning. Often, they are not mentioned at all in grammars but only in dictionaries. This is the case, e.g., with the items we call ‘iamitives’ (see in §5) which are often just listed as adverbs meaning ‘already’ or the like.

On the positive side, as noted by Bybee et al. (1994: 36), it is possible to validate the analyses given in grammars by checking them against the total set of example sentences provided in the grammars and texts added in appendices. In effect, this means that a reference grammar can serve, to some extent, as a corpus. However, one is often led to question the naturalness of many of the examples in grammars. For instance, when searching information about the use of TAME items, one frustrating feature of many grammars is the tendency for examples to be translated into English using the Simple Present (e.g. “the woman pounds the corn”).

As a way of getting more useful data, typologists and other cross-linguistic researchers relatively early on started using questionnaires. Most commonly, they are of one of two kinds: ‘expert questionnaires’, in which persons with expert knowledge about individual languages are asked to provide the answers to questions like ‘Do adjectives agree with nouns in language L?’, and ‘translation questionnaires’, in which native speakers (with or without the help of intermediary persons) are asked to translate expressions into their native language. One and the same questionnaire may obviously contain elements of both of these types.² Questionnaires can be helpful not only for cross-linguistic research but are also useful in linguistic fieldwork in general.

Of the two types of questionnaires, it is only the second type that guarantees access to relatively unfiltered primary data. Using an expert questionnaire may not be too different from reading reference grammars – in fact, the available experts for a language are not infrequently the same persons who wrote the reference grammar(s).³ On the other hand, what one gets in a translation questionnaire does not necessarily reflect natural speech particularly well. The expression to be translated may have to be translated twice, from the written formulation in the original language of the questionnaire (most commonly, English) to the local lingua franca and then to the language under investigation. If the native speaker is not literate,

2. A fairly large number of questionnaires of each type are available at <https://www.eva.mpg.de/lingua/tools-at-lingboard/questionnaires.php>.

3. Moreover, the same person may also be responsible for the Bible translation.

the field worker has to transform the oral form of the expression into a written representation. These extra steps increase the risk that the exercise turns into a 'broken telephone' game and add to the general problems with the use of translated discourse as data.

It is not always an easy task to construct a good translation questionnaire. As will be immediately clear as soon as a questionnaire is applied to languages from outside the constructor's own cultural sphere, it is very tricky to find good example sentences without any cultural bias. Giving sufficient information to make the examples immune to misinterpretation is another challenge.

A major advantage of using questionnaires is that one is not limited to information that is found in the literature. I said above that any interesting problem is likely to be underdescribed. Another way of putting it is that the advancement of knowledge requires asking questions that nobody has even thought of before. But the questionnaire methodology still has a limitation. The structure of a questionnaire has to rely on the researcher's prior understanding of the field of investigation. The examples in a translation questionnaire will cover the distinctions that the constructor is aware of at the outset, meaning that other phenomena may remain in the dark.

Using a translation questionnaire to obtain linguistic data can be said to be a kind of an experiment, although usually not a very well controlled one: we let our subjects react to a stimulus and study the outcome. The stimulus, then, is an expression in the source language, and the outcome a translated expression in the target language. There is in fact no sharp boundary between this methodology and more clearly experimental ones. Like in William Labov's classic sociolinguistic experiment (Labov 2006), a question ('Where is the shoe department?') can be used as a stimulus to elicit data in the form of answers ('Fourth floor'). Pictures and videos have been widely used as stimuli in multilingual experiments. These methodologies have obvious advantages. It is easier to avoid various confounding factors, and it is possible to obtain spoken data without any interference from the written language. However, the methods are usually quite costly, and it may not be practically possible to obtain data from more than a restricted number of languages. Moreover, if the object of study is something like TAME, using a task such as the retelling of a video does not favor the natural use of distinctions that have to do with temporal reference and source of information.

In recent decades, advances in information technology have made possible the creation of large corpora of written and spoken linguistic materials, which has resulted in a boom in corpus-based studies in linguistics. For cross-linguistic research, parallel corpora – primarily based on translated texts – are particularly important, even if monolingual corpora can also be used as data sources. In a sense, the dataset obtained by a translation questionnaire can be seen as a kind of parallel

corpus, although the size is normally much smaller. (The total length of the dataset used in Dahl (1985) is about 200,000 words.) This means that analogous methods of analysis can be used.

The advantages of using parallel corpora in cross-linguistic research are obvious, in that they give access to large amounts of directly comparable data from different languages. In many cases, researchers can use already existing corpora, meaning that the cost of obtaining the dataset is low. Even if no suitable corpus exists, the availability of texts on the Internet may make the creation of one relatively simple. There are two obvious limitations, however. One is that parallel corpora are seldom based on spoken materials. The closest one can get is by using subtitles of films and videos, but even then, it is only the source text that is oral, and it is not always spontaneous. The other limitation consists in the restricted choice of languages. It is no exaggeration to say that 99% of all texts suitable for inclusion in a parallel corpus derive from less than 1% of the world's languages, most of which are European and/or have a large number of speakers and a long literary tradition. Thus, a typologist who is looking for a representative sample of the world's languages has few alternatives. Except for the quite short and stylistically monotonous UN Declaration of Human Rights, which as of December 2019 is available online in 522 languages,⁴ the serious candidates are all religious texts, with the Christian Bible, in particular the New Testament, as the obvious first choice. Complete translations of the New Testament exist in almost 2,000 languages, with a good spread over families and regions. The limitations of using Bible texts are well known. Bible translators differ in their views on how the text should be translated, in the source texts they use, and in their degree of proficiency in both the source and the target language. The translations may be very far from everyday language. The texts do not cover more than a fraction of the styles and genres of a language. On the other hand, it should be remembered that there is a long tradition of using Bible translations as a means of obtaining knowledge about a language, and indeed, in many important cases, including ones that are crucial for the understanding of early stages of European languages, such as Gothic and Old Church Slavonic, it is the only, or at least the major, source of information. This has not stood in the way of lengthy descriptions of those languages. In the case of modern languages, we are in a position to compare the findings from Bible translations to what we know from other sources, and it is imperative to use that possibility.

For quite a few languages, there is a long time span between the earliest and latest Bible translations, which makes it possible to compare different diachronic stages of a language. A big caveat is necessary here, though, since religious

4. <https://www.ohchr.org/EN/UDHR/Pages/UDHRIndex.aspx>

language typically lags behind other forms of language in its historical development. Furthermore, translators sometimes try to imitate the language of earlier periods without fully succeeding, which means that translations may contain a mixture of elements from different diachronic stages. For similar reasons, translations only partially reflect regional variation, and the provenance of the translator may not always be informative.

3. Methods in multilingual corpus studies

It is not enough to have access to texts in many different languages, one must also have methods to analyze them. The general aim of multilingual research is to make valid comparisons between languages, identifying on the one hand, similarities between languages, manifested in cross-linguistic patterns, and on the other, differences in what patterns occur and variations within them. A key assumption in corpus-based work is that the distribution of items is indicative of their semantic and pragmatic properties. Applied to work with parallel corpora, this means that we expect items with similar meanings and/or functions to have similar distributions in parallel texts. In other words, we are looking for ‘translational equivalents’ across languages – a more general term, which does not assume that translation is involved, would be ‘distributional equivalent’.

The identification of distributional equivalents can be relatively easy or quite difficult, depending on the character of the items involved. Concretely, if we are looking at a certain type of grammatical marking, items that have a constant means of expression, such as a morpheme that always comes in the same shape, can easily be found by letting the computer analyze the frequencies of items that occur in the relevant contexts.

In this way, it is possible to discover grammatical elements that are not identified as such in existing descriptions of a language. It may even be possible to do so in an entirely undescribed language. However, as is well-known, grammatical marking is not always transparent in this sense. To take an example which is relevant to the topic of this paper, the German Perfect is marked by a combination of an auxiliary and a verb form. There is a choice between two different auxiliaries (*haben* “have” and *sein* “be”), each of which varies according to the person and number of the grammatical subject. The verb form (perfect participle) is marked by a combination of prefixing, stem alternations, and suffixing, all of which vary between verbs. In addition, the auxiliary and the main verb can occur in either order and be separated from each other by several words. Identical verb forms also occur with other functions. With the help of relevant knowledge of German grammar, it may not be so difficult to instruct the computer to pick out occurrences of the

Perfect in a text; without that knowledge, on the other hand, it is not at all obvious how to construct an automated method for establishing its existence. In this case, the obstacle is the complexity of the expression of the gram, but extreme simplicity may also be an obstacle: zero-marked grams demand at least some understanding of the workings of the grammar to be identified. In practice, then, the search for distributional equivalents has to involve both automated searches and 'educated guesses' on the basis of information from grammars.

As noted above, the aim of multilingual research is to identify and describe cross-linguistic patterns. A central claim in Dahl (1985) was that it was possible to assign the elements of tense-mood-aspect systems to a small set of 'cross-linguistic categories' – in later work referred to as 'cross-linguistic gram types', where 'gram' is a language-specific grammatical item with specific form and specific meaning and/or function (Bybee & Dahl 1989). An example of a gram would be the English Perfect, assumed to be a member of a cross-linguistic gram type 'perfect'. One way of thinking of gram types is as clusters in 'grammatical space' – a multidimensional space where each individual gram is represented as a point, and where the closeness of grams to each other represents the degree of similarity between their distributions, and – assuming that the distribution of an item reflects its semantic and pragmatic properties – similarities in their meaning and/or function. Grammatical space, understood this way, can be visualized by the technique of Multidimensional Scaling (MDS), which reduces the relationships between the distributions of the items to a small number of dimensions and makes it possible to display them in a scatter plot.⁵

According to Cox & Cox (2008: 316), "[t]he general aim of multidimensional scaling is to find a configuration of points in a space, usually Euclidean, where each point represents one of the objects or individuals, and the distances between pairs of points in the configuration match as well as possible the original dissimilarities between the pairs of objects or individuals." The input to an MDS analysis is thus a distance matrix, that is, a table showing the distances between all pairs of elements in the data set. An illustrative example which is frequently cited is that of the input being a table containing the geographical distances between a set of cities. By using MDS, it is possible to reconstruct a two-dimensional map of those cities. This example, however, may seem somewhat pointless, in that the dimensions are well-known in advance. A more pertinent illustration, particularly in the context of the present volume, is the plotting of the Indo-European languages shown in Figure 1. Here, the point of departure is the table provided by Dyen et al. (1992) showing the number of shared cognates in a list of 200 word concepts between

5. Croft & Poole (2008) contains a detailed discussion of the use of Multidimensional Scaling in linguistics.

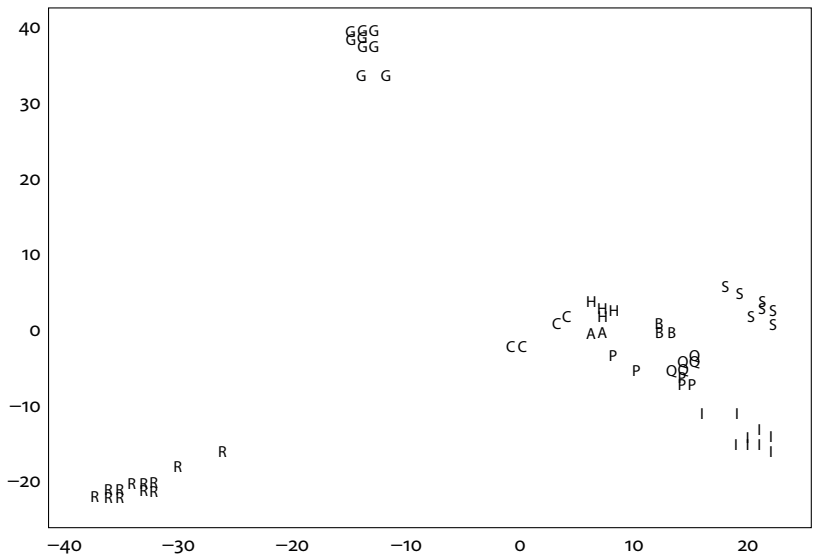


Figure 1. MDS plotting of Indo-European languages based on shared cognates

pairs of Indo-European languages. The input to the MDS analysis, then, is a matrix with the distances calculated as the number of non-shared items in that list. In the figure, each language is indicated by a letter identifying the branch of the family it belongs to.⁶ We can see that the branches are on the whole represented by cohesive clusterings in the figure. Thus, the aim defined in the quotation from Cox & Cox above – to make the distances in the figure fit the dissimilarities between the elements – can be regarded as fulfilled.

Clustering algorithms, which sort the items in groups based on similarity, may also be helpful. Examples of MDS and clustering techniques will be shown in §5 and §6.

However, I emphasize at this point that although these techniques show us which items are similar and which are dissimilar in their distributions, it is still up to the researcher to find out what semantic and other properties of those items are behind these patterns⁷.

In Dahl (1985), I described the cross-linguistic categories (gram types) as more or less discrete entities. However, work of the kind presented in Dahl & Wälchli (2016) suggests that grammatical space should be seen as a continuum and that the clusters representing gram types may be overlapping. Furthermore, one big cluster

6. A – Armenian; B – Baltic; C – Celtic; G – Germanic; H – Greek; I – Indic; O – Albanian; P – Iranian; R – Romance; S – Slavic.

may contain smaller sub-clusters. This is all consonant with what we know about the diachronic development of grammatical items, where paths of development may converge and diverge, and older uses of grams may be retained or lost during the development of new ones.

There are in principle three stages in studying a region of grammatical space. One is looking for potentially relevant grams, the second is identifying clusters, the third is characterizing the variation within and between the clusters and the factors behind it. In practice, these stages are not necessarily separate in time – a researcher will go back and forth between them. Quantitative methods are useful for all three stages, but their character and function will be somewhat different in each case. The quest for potentially relevant grams will necessarily be of a more heuristic kind, involving both automated searches and ‘educated guesses’ based on information in grammars. The identification of clusters should rely on stricter criteria, although borderlines are bound to be fuzzy. A cluster is characterized by what we call its ‘generalized distribution’, i.e. a vector that identifies, for each relevant location in a corpus, the probability that a member of the cluster will appear in that location. Such a vector can be seen as a statistical model of the gram type. To be included in a cluster, a gram has to conform to this generalized distribution to a sufficient extent. But what this should mean in practice is not wholly obvious. There are two basic parameters that go into such a measure: the ‘recall’ being the extent to which the distribution of a gram covers the generalized distribution, and the ‘precision’ being the extent to which the distribution of the gram lies within the generalized distribution.

In the third step, the goal is to identify the factors that are behind the variation among the grams in clusters. As noted above, an MDS analysis shows us how the grams are distributed along the major dimensions of variation, but it does not tell us what semantic, pragmatic and syntactic features are behind these dimensions. There are different possible techniques for identifying these features. One way is to find the locations in the corpus that are most highly correlated with the dimensions in the MDS analysis. A variation on this is to look for the examples whose frequencies differ most between two or more groups of languages. Another method is to compare the frequencies of grams in sets of contexts which are likely to be relevant: for instance, predicates of a certain type, e.g. statives, or specific syntactic environments such as relative clauses.

4. The corpora

This chapter builds on the study reported in Dahl & Wälchli (2016), which used a corpus consisting of translations of the New Testament (NT) in digitized form, in most cases available on the Internet. It contains 1267 translations representing 1107 different ISO 639–3 language codes (about 15% of the world's languages). The texts in the corpus have been linked at word-level and provided with word-class annotations using techniques based on Bayesian models developed by Robert Östling (Östling 2015). Although an automated linking of this kind cannot be perfect, it still enables us to identify the relevant locations in the corpus in a more precise fashion than is possible when linking is made at the verse level.

In addition, I have used a corpus consisting of subtitles to around 1900 TED and TEDx Talks (www.ted.com) translated into different languages by volunteers, downloaded from the Amara website (www.amara.org). The total number of languages in the corpus is about 100 but their representation varies widely, with a heavy bias towards languages with a large number of speakers, especially European ones. The largest language sub-corpora comprise between 3 and 4 million words, that is, more than ten times the length of the New Testament. Although the translation procedure includes reviewing, as described on the TED website, there is obviously no guarantee of the quality or idiomaticity of the translations. It seems fair to assume that the translators at least aim to using some standard variety of the language.

So far, there is no linking for the TED corpus. The smallest linked unit is what I below refer to as a 'line'. This corresponds to what is supposed to be shown on the screen at one time and is thus usually relatively short (average length about seven words). Lines are linked between different languages based on their timestamps.

The aim of Dahl & Wälchli (2016) was to obtain a general picture of perfects and the related grams we refer to as 'iamitives' in the languages of the world. In this chapter, the focus is on seeing the perfects found in the Indo-European languages in typological perspective. In the following sections, I will give an overview of perfects and iamitives and show how the methods outlined above can be applied in practice.

5. Perfects and iamitives

Iamitives (a neologism formed from Latin *iam* 'already'; abbreviated as IAM below) are items whose semantics can be said to combine features of perfects and words like 'already'. The latter are also frequently (maybe usually) the historical source of iamitives. Olsson (2013), the first cross-linguistic study of iamitives, looks at the function of markers such as Indonesian/Malay *sudah* and *telah*, Thai *lĕəw*, and

Vietnamese *đã*) discussing differences and similarities that can be found between iamitives, perfects and ‘already’.

In sentences with dynamic predicates such as ‘come’ or ‘die’, iamitives can often be translated into English using a perfect or a perfect combined with ‘already’, as in:

- (1) Indonesian
Elia sudah datang
 Elijah IAM come
 “Elijah has (already) come”

With stative predicates such as ‘be here’ or ‘be asleep’, on the other hand, sentences with iamitives rather translate into English sentences in the present tense, again with or without ‘already’, when occurring in a neutral context:

- (2) Indonesian
Maria sudah ada di sini
 Maria IAM COP in here
 “Mary is (already) here”

Notice that the Indonesian sentences do not contain any other tense-aspect marking. In fact, if the context indicates a reference time in the past, (1)–(2) could correspond to English sentences in the pluperfect and simple past, respectively.

Another salient property of iamitives is their propensity to be used with stative predicates such as ‘old’ and ‘ripe’, which describe situations which are expected to arise sooner or later, due to the way the world or society is organized. These are often used in contexts where using ‘already’ is possible but would seem redundant in English. Cf. the following Indonesian example from Olsson (2013: 18):

- (3) Indonesian
Kamu tidak bisa memakan-nya. Itu sudah busuk.
 you not can eat-it that IAM rotten
 “You cannot eat it. It is rotten.”

As we showed in Dahl & Wälchli (2016), there is great cross-linguistic variation within iamitives. In particular, they differ to what extent they share uses with perfects like the ones found in European languages. We hypothesize that as words with the original meaning of ‘already’ grammaticalize and acquire extended uses, they can expand into the territory of perfects to varying degrees. Thus, the differences in distribution between the most and the least perfect-like iamitives are greater than those between the former and the perfect in English. Furthermore, perfects and iamitives cannot be seen as disjoint concepts, but are rather overlapping categories with fuzzy edges.

In Dahl & Wälchli (2016),⁷ we used a sample obtained by joining the results of searches for grams with a distribution similar either to traditional European perfects or to grams treated as iamitives in Olsson (2013). As noted above, the aim of such a search is to find a cluster of grams characterized by being sufficiently similar to a generalized distribution both with respect to recall and precision. The criterion for recall was that a gram should occur in at least 13 (65%) of the locations with highest frequency in the generalized distribution of a cluster. The criterion for precision is not quite easy to formulate, in view of the ‘long tail’ that is typical of generalized distributions. Here, a definition was used which meant that not more than around 1,200 occurrences of a gram should fall outside the set of segments in which at least two members of the cluster occur.

An iterated search was performed on each of the two gram sets mentioned in the previous paragraph, meaning that in the first step, grams were searched that were similar to the generalized distribution of the original gram sets, then in the following step the resulting set of grams was used as the basis for a new search etc. Since later steps mainly resulted in a convergence of the two sets, we decided to use the result of the second step, where there were 59 grams in the expanded version of the ‘European’ gram set and 295 grams in the ‘iamitive’ gram set, out of which 40 were included in both sets, meaning that the overlap was considerable. Joining the two sets yielded a set of 305 grams (i.e. grammatical forms and constructions) representing 302 ISO-code languages and 48 families.

In this chapter, the set has been expanded somewhat. Since this chapter appears in a volume devoted to perfects in Indo-European languages, it seemed appropriate to include also some other grams from that family that are often regarded or labeled as ‘perfects’, irrespective of whether they matched the criteria for inclusion (i.e. sufficient recall and precision to a generalized distribution) in one of the clusters – precisely because it is of interest to see how they relate to these clusters.

With those further additions, the sample now consists of 326 grams, representing 320 ISO-codes (see Appendix). When there are separate (present) perfects and pluperfects (past perfects), they are here treated as one gram – in a language like English, this means including all finite forms of the perfect auxiliary. This is to make comparisons easier with grams where the distinction is not made, which constitute the majority of the sample.

It should be emphasized here that neither Dahl & Wälchli (2016) nor this chapter aim at a full account of tense-aspect marking in the functional domain of perfects, that is, there is no attempt to cover all the patterns which share functions with them. The goal of the previous paper was to look at the two overlapping gram types of

7. Klis et al. (2017) present work using a similar methodology although restricted to perfects in five European languages.

perfects and iamitives. In this chapter, I try to see how the forms and constructions in Indo-European languages that have been seen as perfects relate to those gram types.

An MDS diagram⁸ of the sample is shown in Figure 2, where each gram is represented by one of five symbols. The diagram represents the two first dimensions of the MDS analysis. The choice of symbol reflects the partitioning of the sample into clusters obtained by the Partitioning Around Medoids (PAM) algorithm.⁹ In Figure 3, we see another view of the same sample, where the size of the symbols corresponds to the frequency (the absolute number of occurrences) of the respective gram in the corpus.

Dahl & Wälchli (2016) attempted to identify the reality behind the dimensions of the MDS diagrams. One immediate observation is that both dimensions are linked to differences in frequency, which may reflect degrees of grammaticalization. We think that iamitives expand in two different directions from the upper right corner of the diagrams – downwards or towards the lower left corner. The latter direction represents a convergence with perfects from non-iamitive sources.

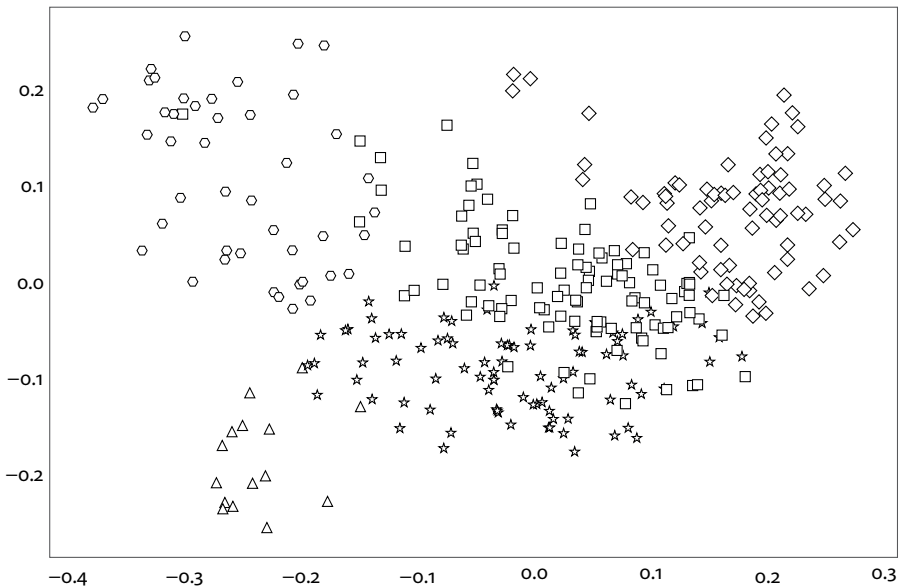


Figure 2. MDS plot of the NT perfect/iamitive sample showing groups

8. The algorithm used is *cmdscale* (Classical Multidimensional Scaling) available in the *stats* package of the core R distribution.

9. The algorithm is *PAM* in the R cluster package (<https://cran.r-project.org/web/packages/cluster/cluster.pdf>). A ‘medoid’ is a representative member of a cluster which is minimally dissimilar to all other objects in the cluster.

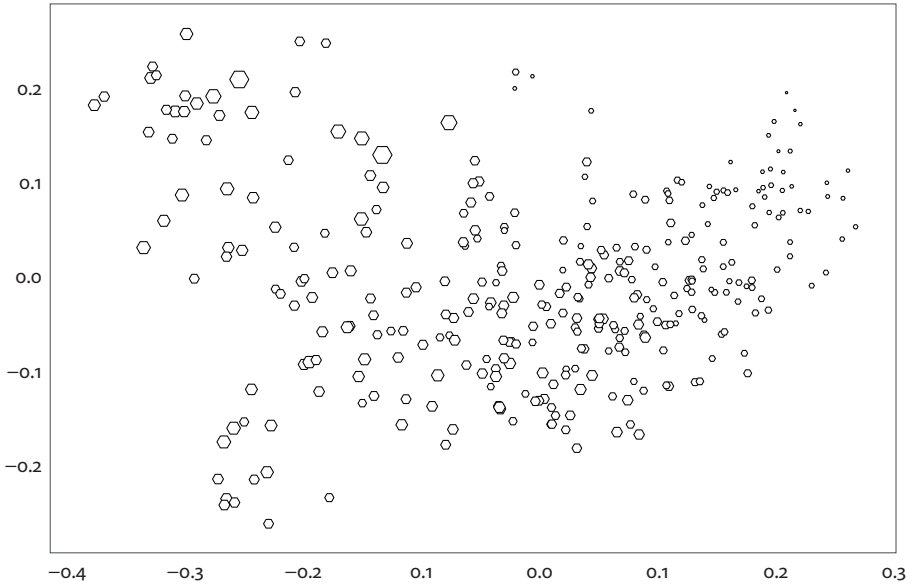


Figure 3. MDS plot of the NT perfect/iamitive sample showing frequency

The European perfects from Indo-European and Uralic languages are mainly found in the ‘hexagon’ group (symbol: ⬡) in Figure 2, where they form a relatively well separated cluster at the left-hand top of the diagram.

In keeping with the assumed paths of grammaticalization, the more typical iamitives form a fish-like shape in the lower and right-hand parts of the diagrams. The smallest and least grammaticalized iamitives are in ‘diamond’ group (◇) to the right, containing words for ‘already’ that have only started to expand, including some cases from Indo-European languages to be discussed in §7. At the other end of the fish-like shape, we find the ‘triangle’ group (Δ) with about ten highly grammaticalized iamitives converging with perfects, all from Austronesian languages spoken in Mainland Southeast Asia and Indonesia, e.g. Malay/Indonesian *sudah* and Sasak *sampun*. The ‘square’ (□) and ‘star’ (☆) groups represent a different pathway, including some relatively highly grammaticalized but less perfect-like grams, e.g. Cebuano and Waray *na* and other Austronesian languages spoken in the Philippines. But as was already suggested above, it is not possible to identify a sharp borderline between perfects and iamitives in the diagram. The ‘hexagon’ group contains not only European perfects but also e.g. Indonesian *telah* and Vietnamese *đã*, both mentioned in Olsson (2013) as examples of iamitives or ‘iamitive-like markers’.

Let us now see in more detail how Indo-European perfects enter the picture. To recapitulate what is generally known about perfects in Indo-European languages, most of them have or have earlier had periphrastic constructions – or in a few

cases, verb forms – which can be seen as perfects at least at some stages of their development. Typically, the periphrastic constructions are or were formed with auxiliaries originating in verbs meaning ‘have’ or ‘be’. In a central zone in Western Europe (Continental West Germanic, Danish, partly Norwegian, French, Italian), we find ‘split’ constructions, employing different auxiliaries depending on the type of predicate with the choice being partly lexicalized. In parts of the same zone, perfects have expanded their domain of use towards becoming perfective pasts or general pasts. A similar process has led to the demise of the ‘be’ perfects of most Slavic languages. More conservative perfects are found in the European periphery: Ibero-Romance, English, North Germanic, parts of South Slavic, and Albanian. The perfects of Portuguese and Greek stand out as having deviant distributions from other perfects in Europe; they did not qualify for inclusion in the original sample presented in Dahl & Wälchli (2016). The Portuguese Perfect, formed with the auxiliary *ter* ‘have’ and the Perfect Participle, is known to have a more restrictive distribution than other European perfects. It is somewhat elusive due to significant dialectal variation, but according to Laca (2012: 16) it is “overwhelmingly dedicated to universal readings, but with some additional felicity conditions, such as discontinuity and length of the XN-interval [‘Extended Now’ interval] in the Brazilian varieties”. The Perfect in Modern Greek has a much more restricted distribution than most perfects, and there is also great variation between different translations in the Bible corpus, which suggests that the use of the Perfect is largely optional. There may also be a competition between different norms. Among perfects from older historical periods represented here, both the synthetic Perfect of Koine Greek and the Perfect of Church Slavonic also have a more restricted distribution.

Figure 4 shows the position of perfects from Indo-European languages in the MDS diagram. In an MDS diagram the position of an element depends on its relationship to all other elements. This means that we should not expect Figure 4 to be simply a zooming-in of Figures 1–3, even if it represents a subset of the gram set shown there.

What is immediately striking is the somewhat extreme concentration to the upper left corner, with the majority within the ‘hexagon’ group. But notice that in the densest cluster of black symbols in Figure 4 we find a few others interspersed. Two of these are the Finno-Ugric languages Finnish and Estonian, suggesting that this cluster is as much an areal grouping as a genealogical one.

I have also constructed a gram set restricted to Indo-European languages but including perfects from all available translations of those languages. The total number of relevant texts is 102 and the number of languages is 34. An MDS plot is shown in Figure 5, where the first three letters of the labels show the ISO code of the language (as listed in Table 1) and the rest is a code identifying the translation. In Figure 6, the same plot is shown, with the size of symbols representing the frequencies of grams.



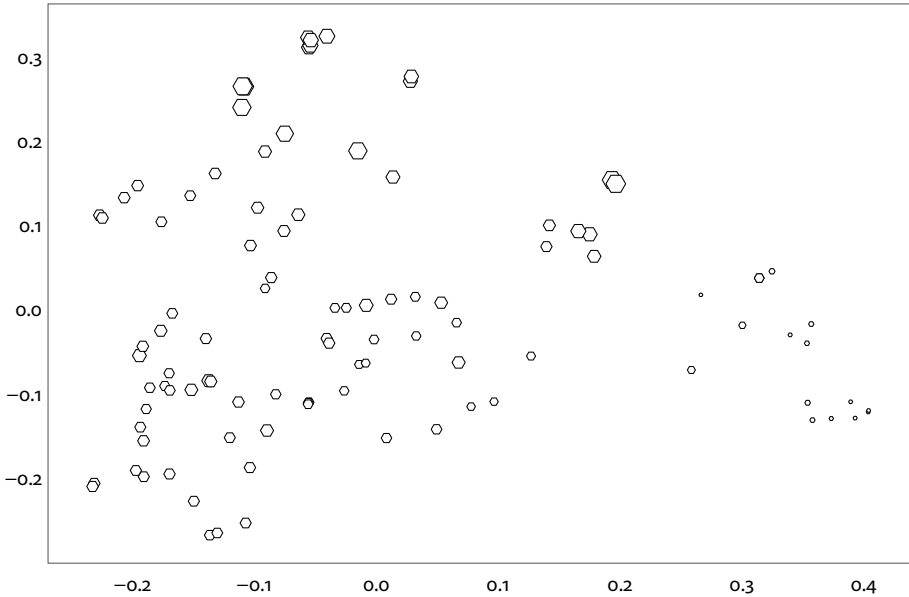


Figure 6. MDS plot of Indo-European perfects in the NT corpus showing frequency by size

There is a fairly clear structure to the MDS plot, with a number of clusters that are labelled by letters from A to E in Figure 5. The largest cluster, A, in the lower left part of the diagram, contains grams from English, North Germanic, and Spanish, that is, the more conservative European perfects. But near the apex of the cluster we also see Albanian, Bulgarian, and Welsh. The grams in cluster B, positioned above A, are ‘expanding’ perfects from German, Low German, Dutch, Catalan, and Breton, but also include Bengali from Indo-Aryan. German and Low German actually straddle the dividing line between clusters A and B. At the very top of the diagram we find cluster C comprising French and Italian, respectively. The diagram can thus be seen as reflecting the expansion process from perfects towards perfective or general pasts, which can also be seen in the increase in the size of the symbols in Figure 6, reflecting the frequencies of the grams. Another grammaticalization process reflected in the diagram is that of Welsh *wedi* developing from a preposition meaning ‘after’ to a perfect marker whose distribution is quite close to that of other perfects in Western Europe, in particular that of the English Perfect – a change reflected in the positions of *wedi* in the three Welsh NT translations, in that *wedi* in the two modern translations (*Beibl Cymraeg Newydd* and *Beibl.net*) are located at the edge of the cluster A, while the same marker in the 16th century William Morgan translation has an isolated position to the right of it.

Cluster D, a further quite tight cluster to the right, consists of perfects from the Indo-Aryan languages. Cluster E, at the extreme right, is a loose grouping with Koine, Modern Greek and Church Slavonic closest to cluster D and the Portuguese translations furthest away. It can be seen from Figure 6 that the grams in cluster E have considerably lower frequencies than all the others.

I have also excerpted perfects/iamitives from a number of languages in the TED corpus (see list in Table 1). This sample is much smaller than the previous one, comprising the 16 languages with perfects/iamitives which were sufficiently well represented in the corpus. Most of these turn out to be Indo-European, but included are also Indonesian, represented by the two markers *sudah* and *telah*,¹⁰ and Vietnamese, with the marker *đã*.

Here, I have only included (present) perfects, excluding pluperfects. An MDS plot is shown in Figure 7.¹¹

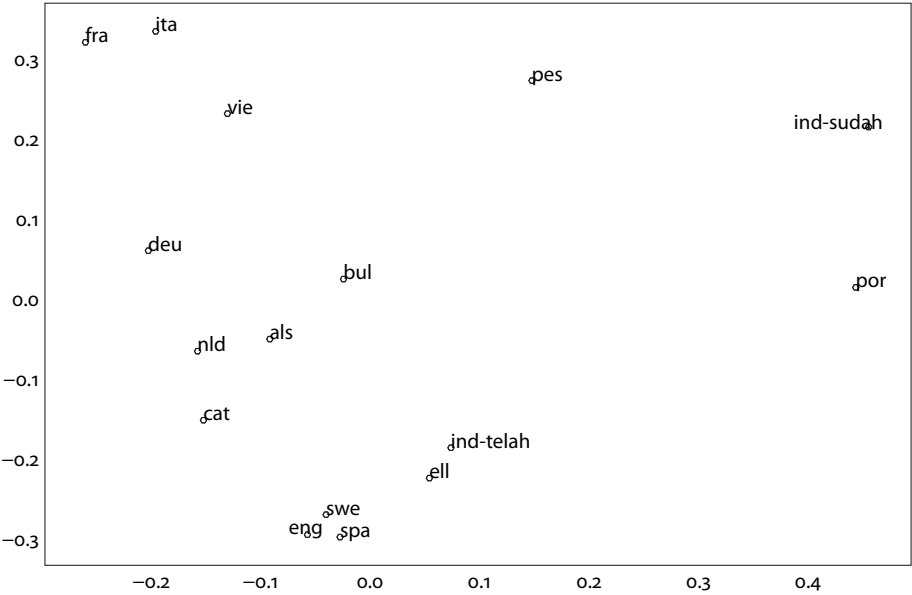


Figure 7. Perfects/iamitives in the TED corpus

10. The two particles *sudah* and *telah* partly compete for the same territory in Malay/Indonesian. Although both particles are used in almost all Bible translations, one of them tends to be dominant in each translation. There are indeed semantic and pragmatic differences between them, but it is hard to make absolute generalizations due to the large differences between the translations and the apparent tendency for the particles to converge in use. *Telah* is significantly closer to European-style perfects but seems to acquire iamitive-like uses in some of the translations. In the sample, *sudah* and *telah* have been chosen from translations where the respective particle is dominant.

11. To make comparisons easier, the MDS plot has been rotated 90 degrees.

A comparison of Figures 5 and 7 reveals that the general structure of the MDS analysis is shared between the two corpora, although there are differences in details. We thus see that English, Spanish, and North Germanic represented by Swedish still form one cluster at the bottom of the diagram. The expanding perfects in Catalan, Dutch, German, French and Italian are also still strung out in more or less the same order, although the distances are somewhat larger. It should be noted that since the TED corpus is considerably closer to modern spoken language than the Bible texts, the expansion of the perfects is bound to have advanced further at least in some of these languages, most notably perhaps in French, where the historical perfect (*Passé composé*) has completely ousted the *Passé simple* in the spoken language and can therefore be said to have lost its character as a perfect, being rather a past perfective. Albanian and Bulgarian are closer to the expanding perfects than before. The remaining languages are spread out over the rest of the diagram in ways that are not necessarily significant. We may note, however, that Indonesian *telah* is quite close to the European perfects, and that Vietnamese *đã* is between German and French.

Table 1. Codes used in Figures 5 and 7–9

Indo-European			
Albanian, Tosk	als	Gujarati	guj
Armenian, West	hye	Hindi	hin
Bengali	ben	Icelandic	isl
Breton	bre	Italian	ita
Bulgarian	bul	Latvian	lav
Catalan	cat	Marathi	mar
Church Slavonic ¹²	chu	Norwegian, Bokmål	nob
Danish	dan	Persian (Farsi)	pes
Dari	prs	Portuguese	por
Dutch	nld	Spanish	spa
English	eng	Swedish	swe
Faroese	fao	Tajik	tgk
French	fra	Welsh	cym
German	deu		
German, Low (Plautdietsch) ¹³	pdt	Other	
Greek, Koine	grc	Indonesian	ind
Greek, Modern	ell	Vietnamese	vie

12. The Church Slavonic version is from the ‘modern’ 18th century Elizabeth Bible (*Cerkovnoslavjanskij perevod*, Biblija onlajn 2003–2018). No complete NT text in Old Church Slavonic exists.

13. This refers to the Low German variety spoken by Mennonites in Canada, South America and elsewhere.

6. Parameters of variation in IE perfects and elsewhere

a. Negated experiential uses

In Dahl & Wälchli (2016), we found that there were a number of uses that tended to be restricted to the upper right quadrant of Figure 2, that is, the region that contains the perfects of western Europe. One very clear such tendency concerned statements about the non-occurrence of an event in a time span ending at reference time – negated experiential contexts, as exemplified in (4),

(4) *I have never been to England*

Accordingly, among the Indo-European languages with perfects, we find that all the modern Celtic, Germanic and Romance languages except Portuguese show high frequencies in these contexts, with a certain degree of variation, especially in older translations. Relatively high frequencies are also found in the Balkan languages, Iranian languages and Marathi. Low frequencies are found in Portuguese, Classical Greek, Church Slavonic, Armenian, Bengali, Hindi, and Gujarati, but also, strikingly, in the oldest English translation in the corpus. Thus, in the following example from that version, the simple past is used:

(5) Middle English (Wycliffe's Bible, Late Version, 14th century)

No man say euer God
no man see.PST ever God
"No man has ever seen God" (John 1:18)

This pattern is best shown in a geographical map – see Figure 8, where darker symbols indicate a higher frequency of perfects in negated experiential contexts.

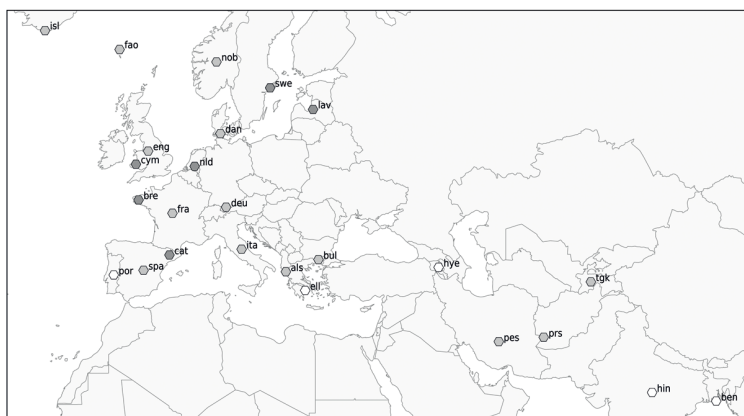


Figure 8. Map of Indo-European perfects showing negated experiential uses

b. Universal uses of perfects

Dahl (forthcoming) is based on the same samples as this chapter but focuses on so-called ‘universal’ (‘continuative’) uses of perfects, more specifically, on combinations of perfects with adverbials such as ‘for/since seven years’ and ‘always’. With the first type of adverbials, it has been conventional wisdom at least since Jespersen (1924: 272) that universal uses of the perfect are not found in languages such as Dutch, French, German, and Greek. This basically distinguishes those languages from the North Germanic languages, English, Spanish, Catalan, and Albanian. As I show in Dahl (forthcoming), however, it is not always easy to decide how to determine what should be seen as a universal use. It may also be noted that contexts containing ‘always’, behave very differently from those with ‘for’ and ‘since’ adverbials: here, basically all European languages consistently use either perfects or pasts. The iamitives of South-East Asia, on the other hand, show a different pattern: while they are commonly used with the counterparts of ‘for’ and ‘since’ adverbials, they are most often not used with ‘always’, meaning that expressions such as ‘is always’ and ‘has always been’ are translated in the same way. For details, see Dahl (forthcoming).

c. Definite time adverbials

Another point on which perfects are known to vary is their combinability with definite time adverbials. In English, there is a much-discussed constraint that precludes the use of the present perfect with time adverbials which refer to a time point or period which ends earlier than reference time, when reference time and speech time are the same. As is often noted, some other languages are more liberal in this regard, but exactly which those are is less clear.

This parameter is difficult to study in the NT corpus since there is a surprisingly small number of definite time adverbials in the NT text. The general impression is that perfects/iamitives are relatively seldom combined with such adverbials. Thus, there are only a couple of occurrences of ‘yesterday’ in the New Testament. This notwithstanding, the tendency is clear: less than 10% of the grams in the NT sample are attested in those segments, including among Indo-European languages: Bengali, Breton, Church Slavonic, Dutch, French, German, Gujarati, Tajik.

The TED corpus offers better possibilities than the NT corpus. Although it is not possible to demonstrate on the basis of corpus data that such combinations are ungrammatical, it can be shown that there are significant differences in the propensity to use them between languages. The following table shows the use of perfects in lines that translate English lines containing ‘this morning’, ‘yesterday’, and *in* + the number of a year, as in *in 1944*. It is displayed as n/m (q), where n is the number of occurrences of perfects, m is the total number of lines that translate the English ones, and $q=n/m$. Cells representing higher frequencies are shaded.

Table 2. Combinations of perfects and time adverbials in the TED corpus

Language	‘this morning’	‘yesterday’	‘in year X’
Albanian	1/15 (0.07)	4/35 (0.11)	15/327 (0.05)
Bulgarian	3/74 (0.04)	8/128 (0.06)	61/1152 (0.05)
Catalan	4/12 (0.33)	1/27 (0.04)	2/265 (0.01)
Dutch	10/78 (0.13)	23/130 (0.18)	60/1328 (0.05)
English	6/81 (0.07)	2/153 (0.01)	16/1556 (0.01)
French	24/74 (0.32)	65/136 (0.48)	458/1405 (0.33)
German	15/72 (0.21)	43/121 (0.36)	75/1136 (0.07)
Indonesian <i>sudah</i>	0/15 (0.0)	2/35 (0.06)	1/324 (0.0)
Indonesian <i>telah</i>	2/15 (0.13)	0/35 (0.0)	5/324 (0.02)
Italian	13/77 (0.17)	38/137 (0.28)	213/1412 (0.15)
Modern Greek	0/59 (0.0)	1/97 (0.01)	3/995 (0.0)
Persian	18/60 (0.3)	7/99 (0.07)	69/1037 (0.07)
Portuguese	1/39 (0.03)	0/70 (0.0)	1/729 (0.0)
Spanish	9/78 (0.12)	1/128 (0.01)	6/1323 (0.0)
Swedish	2/31 (0.06)	1/54 (0.02)	1/456 (0.0)
Vietnamese <i>đã</i>	14/15 (0.93)	34/35 (0.97)	142/324 (0.44)

(Light shading: at least 0.1; darker shading: at least 0.3)

There is a certain degree of noise in the figures here, since the presence of a time adverbial in a line does not necessarily mean that it modifies the verb that is in the perfect.¹⁴ Furthermore, English *this morning* does not unequivocally refer to a period in the past. (In this regard, it is different from Swedish *i morse* ‘this (past) morning’, which can only be used when the morning is over.) However, percentages higher than the English ones suggest that perfects are combinable with adverbials of the respective kind in the language in question. Among the Indo-European languages in the table, this is clearly the case across the board for French and Italian, and also for Dutch and German although with quite low figures for the ‘in year X’ column. The perfects in these languages, obviously, belong to the expanding group. At the other end, Modern Greek and Portuguese have lower values than English and Swedish is more or less the same. (Manual counts for Danish and Norwegian suggest that they are also at the level of English.) The figures for Bulgarian and Albanian are slightly higher but the difference may be within the error margin. For Catalan and Spanish, we can note that percentages are above 10% only for the ‘this

14. A probe of the French examples with ‘yesterday’ indicates that about 10% of the hits may be false positives. Obviously, there may also be false negatives, i.e. cases that have not been detected for one reason or another.

morning' contexts; this is compatible with the well-known fact that these languages (or some varieties of them) use the perfect as a hodiernal past, which means that the use of time adverbials referring to the day of speech is less restrained. Interestingly, Persian shows a similar pattern.

For comparison, I have also included Indonesian *sudah* and *telah* and Vietnamese *đã*. It can be seen that the figures for Indonesian are quite low but those for Vietnamese strikingly high. There are four NT translations of Vietnamese in our corpus; in all of them *đã* shows up at least once (in one, twice) in a 'yesterday' context.

The following map sums up what we have seen about the combinability of perfects with the time adverbial 'yesterday' in the Indo-European languages. Clear cases of perfect + 'yesterday' combinations are in black; grey denotes less well documented cases (only Albanian and Bulgarian), and white means 'no evidence for uses with 'yesterday'.

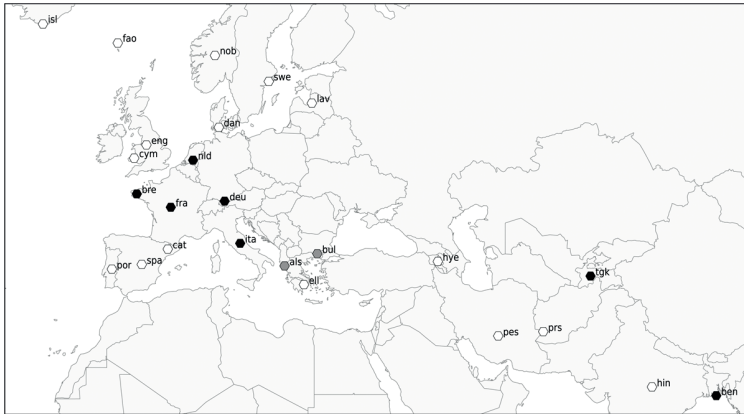


Figure 9. Uses of perfects with 'yesterday'

d. Uses in 'just' contexts

A further parameter of variation concerns the use of perfects in contexts like the following, where 'just' indicates that the event in question took place very recently:

- (6) *I have just bought five pairs of oxen, I must go and try them*
(New Century Version, Luke 14:19)

- (7) *Oh my God, a plane just crashed into the World Trade Center.* (TED corpus)

English perfects and simple pasts with *just* quite often correspond to the French *venir de* construction:

(8) French

Oh mon Dieu, un avion vient de s' écraser sur le
oh my God INDF plane come.PRS.3SG from REFL crush.INF on DEF
World Trade Center
WTC
“(7)”

Similarly, the Ibero-Romance languages use constructions with the verb *acabar* de “finish”:

(9) Spanish

(*La Palabra* translation)

Acabo de comprar cinco yuntas de bueyes y tengo que ir
finish of buy.INF five pair.PL of ox.PL and have.PRS.1SG COMP go.INF
a probar-las
to test.INF-3PL
“(6)”

(10) Portuguese

(*Nova Versão Internacional* translation)

Acabei de comprar cinco juntas de bois e estou indo
finish of buy.INF five pair.PL of ox.PL and have.PRS.1SG comp
experimentá-las
test.INF-3PL
“(6)”

Several languages use markers derived from words for ‘new’ in similar ways, e.g. Indonesian *baru* (which does not normally combine with other markers) and Welsh *newydd*.

(11) Indonesian

(TED)

Oh tuhan, pesawat baru saja menabrak World Trade Center
oh lord plane new just hit WTC
“(7)”

(12) Welsh

(*Beibl.net* translation, 2008)

Dw i newydd brynu pum pâr o ychen
COP.PRS.1SG I new buy five pair of ox.PL
“(6)”

In some North Swedish dialects, *ny-* “new” can be prefixed to the main verb in perfects to express a similar meaning.

(13) Västerbotten Swedish

(Ågren & Dahlstedt 1980)

Han har ny-komme
he have.PRS new-come.SUP
“He has recently arrived”

The constructions mentioned above do not have high frequencies in the NT corpus. Thus, in each of five French translations, there is in no case more than around 10 occurrences of the *venir de* construction, corresponding to less than one occurrence per thousand words. The frequency in the TED corpus is similar. Given that this is less than one per cent of the frequency of the *Passé composé*, any further quantitative comparison with perfects is rather pointless.

The term ‘recent past’ is sometimes used in this context. However, I am avoiding this term in order not to conflate distinct phenomena. Note that Catalan and Spanish have both hodiernal uses of perfects and the *acabar de* construction, and these are not synonymous. Hodiernal uses are by definition about what has happened on the same day, whereas the *acabar de* construction, like the other constructions discussed in this section, does not seem to involve objective time/measures but depends on the nature of the event spoken of, focusing on the current relevance of its result. ‘I have just had dinner’ and ‘I have just married’ imply quite different time-scales.

I have tried to see how perfects/iamitives are used in the contexts where we find the other constructions mentioned above. To begin with, I chose ten passages where at least one French or Spanish translation and at least two Indonesian translations used the constructions in question.

In Figure 10, grams in the NT corpus that are used in at least five of these passages are shown in black.

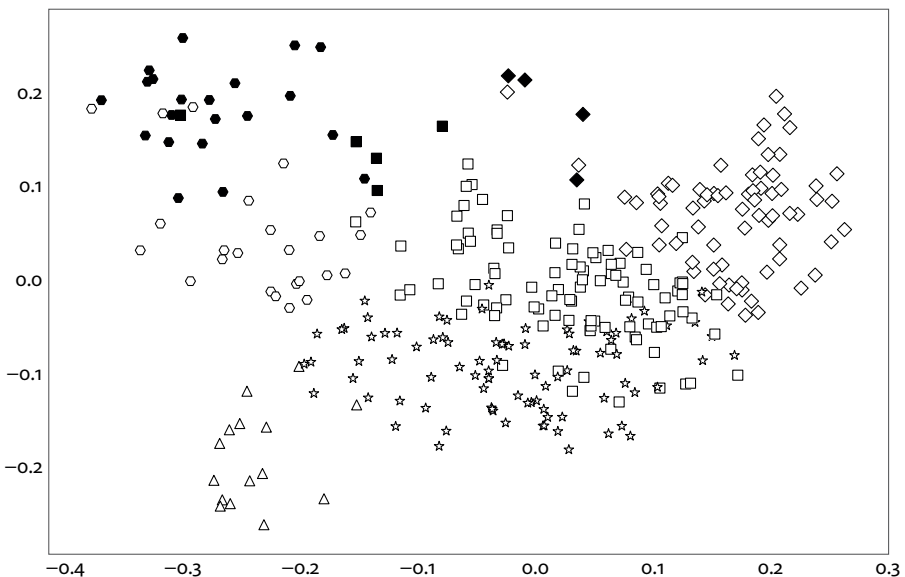


Figure 10. Grams in the NT corpus with at least five uses in ‘just’ contexts

It can be seen from Figure 10 that the grams that are used in a more regular fashion are concentrated in the ‘hexagon’ group or its immediate vicinity – largely European perfects. Zooming in on Indo-European, as shown in Figure 11 (cf. Figure 5 for the location of the languages), we find use in at least half the contexts in at least some of the translations from the Celtic, Germanic, Indic and Romance languages in the sample with only two exceptions: Portuguese and Welsh. Grams from the last-mentioned languages, like also the rest of the Indo-European grams, are used at most sporadically here.

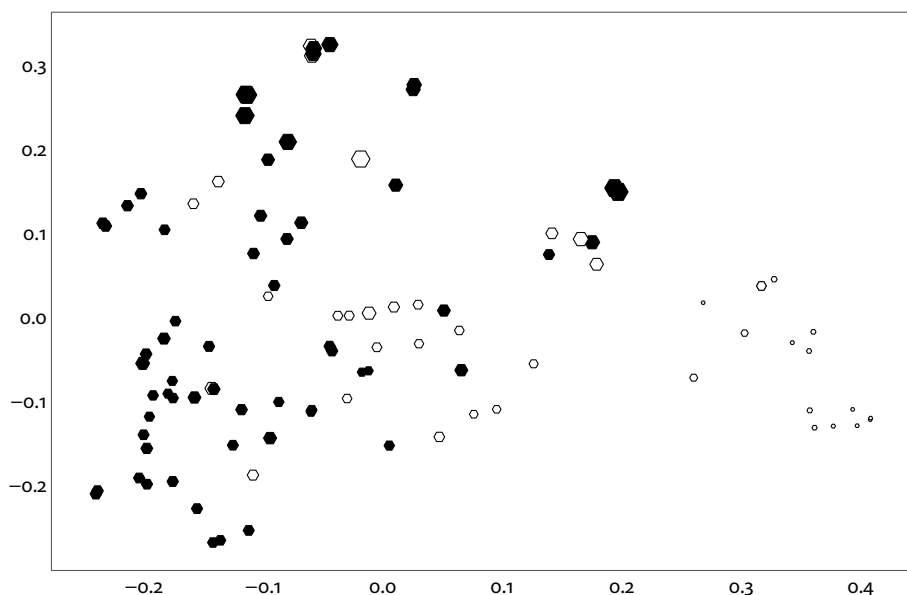


Figure 11. Indo-European perfects in the NT corpus with at least five uses in “just” contexts

Similar calculations were performed on the TED corpus, with 52 sentences chosen in an analogous way. The number of languages that could be taken into consideration was much smaller, however. The results showed the same tendencies although in a somewhat less pronounced way. Thus, English, Dutch, German, and Swedish perfects were all used in more than 30% of the sentences, while the perfects in Albanian, Bulgarian, Lithuanian and Persian were used in less than 20%. The highest figures are not unexpectedly from the Dutch and German expanding perfects.

The results from French, Spanish, and Portuguese were not meaningful since the TED corpus does not contain more than one translation from each language

and the sentences chosen were the ones where these languages used the alternative constructions.

Further analysis might shed light on the variation in the material, but it is clear that the use of perfects in contexts like the ones discussed in this section is not cross-linguistically uniform. Furthermore, the tendencies seem to have an areal basis – it may be noted that the Uralic languages Finnish and Estonian also have relatively high incidences of perfects here.

7. Incipient grammaticalization of ‘already’ in Indo-European languages

An issue that may seem somewhat tangential to the topic of this volume is the behavior of words for ‘already’ in Indo-European languages. However, in the light of the close relationship between perfects and iamitives discussed above, it is of interest to consider whether there are any tendencies towards grammaticalization of ‘already’ in the modern Indo-European languages. Indeed, it may be noted that one can observe considerable variation in the use of such words. At one extreme, there are languages such as Persian, which seems to lack altogether a counterpart to English *already* (Ghazaleh Vafaeian, p.c.).¹⁵ Something similar may have been true of Middle English. Although the Oxford English Dictionary quotes examples of *already* from the 14th century, the Wycliffe Bible from the 1380’s consistently either translates Greek *ēdē* “already” as *now* or leaves it untranslated.

At the other extreme, we find that the Spanish *Traducción en Lenguaje Actual* (TLA) translation uses *ya* “already” 439¹⁶ times, which is 7.5 times as often as the frequency of *ēdē* “already” in the original Greek text and 11.5 times as often as the mean frequency of *already* in 18 English translations, which is 38. Moreover, the fact that the traditional Reina Valera translation uses *ya* only 149 times, with several more modern translations showing much higher frequencies, suggests that this is a relatively recent development in Spanish, perhaps most pronounced in Latin-American varieties.

Similar developments can be discerned in translations from Portuguese and Catalan, with frequencies between 200 and 358 for Portuguese *já* and between 471 and 534 in Catalan. Outside Romance, words for ‘already’ with significantly

15. Words with a slightly different meaning such as *qablan* “previously” or *digar* “other” may sometimes make up for the lack of a word for ‘already’ in Persian but occur only in a small minority of the cases where English ‘already’ is found in the corpora.

16. This figure does not include occurrences of the expression *ya que* “since, inasmuch as”.

higher frequencies than in the original Greek are found in several Germanic (*al* in Dutch and Afrikaans;¹⁷ *aul* in Low German; *schon* in Standard German) and Slavic languages (*uže* in Russian, *już* in Polish and *už* in Czech). One particular context where these words tend to be used combined with a present tense and without a counterpart in English is in cases where English would use a ‘universal’ perfect (see §6.2), as in (14).

- (14) Dutch (TED)
Ik ben al 21 jaar in Afghanistan
 I be.PRS.1SG already 21 year in Afghanistan
 “I’ve been in Afghanistan for 21 years”

A fully developed iamitive such as Indonesian *sudah* occurs more than a thousand times in the New Testament. The words for ‘already’ discussed in the two last paragraphs have lower frequencies and also occur much less often in characteristic contexts such as (3) above. Still, they also differ markedly from, say, *already* in English and can be taken to represent the initial stages of a development which can lead to the full grammaticalization of a iamitive.

8. Conclusion

As we showed in Dahl & Wälchli (2016), the group of perfects found in the languages of western and northern Europe that have not undergone the expansion towards perfectives or general pasts – that is, those found in English, North Germanic and Spanish (cluster A in Figure 5) – stand out in a larger cross-linguistic perspective with respect to their distribution. By looking at the behavior of perfects in specific contexts in the corpora, we can highlight certain aspects of the distributions of perfects across languages. The picture that comes out is often unclear and confusing. One reason for this is that it is often hard to find a sufficient number of clear examples of a relevant type of context in the available corpora – partly simply because the uses we are interested in have a low frequency. This is probably unavoidable when working with corpora that are restricted as to their size and the diversity of their

17. According to the Oxford English Dictionary, *already* in South African English is used “redundantly, esp. after a word or phrase, for emphasis, or in order to indicate the completed action of a verb.” The following quotation from the *Cape Illustrated Magazine* (1891, I: 95) is given: “‘Already’ is used much oftener than Englishmen would use it, and frequently tacked on to a sentence needlessly; for instance, an Englishman would say ‘I have done it;’ an Africander [*sic*], ‘I have done it already.’” I have not been able to find any other documentation of this phenomenon, but it is paralleled by the more well-known use of *already* in Singaporean English (Bao 1995).

sources. But it is also the case that different parameters of variation do not always bundle together. The conservative perfects in cluster A and the expanding ones in clusters B and C differ with respect to combinability with definite time adverbials, but they behave similarly in negated experiential contexts. The Albanian perfect is similar to the ones in cluster A in several respects but differ in being more seldom used in 'just' contexts. Even if cluster A seems relatively homogeneous when compared to other perfects, there is also variation within this group – (Peninsular) Spanish thus shares with Catalan hodiernal uses of perfects not found in the rest of cluster A. It is well-known that perfects vary even within the same language, as between the varieties of Spanish and English on each side of the Atlantic.¹⁸

I therefore refrain from giving a more general characterization of the semantics of perfects in Indo-European as a whole or in its branches.

We have seen that the use of multilingual parallel corpora makes it possible to map similarities and differences between the distributions of grammatical items in languages, including previously underdescribed ones. Such an approach can add to our understanding of semantic and pragmatic distinctions that have earlier been studied only in a small number of languages. But we have also seen the limitations of the methods, which are partly inherent and partly due to the restricted availability of data. They therefore have to be used together with other ways of obtaining information about the use of grammatical items. It is also important to bear in mind that the methods applied here are still in their infancy and have so far only been applied by relatively few scholars to a limited number of problems.

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18. Such differences are not always reflected in Bible translations since they tend to adhere to conservative written language norms.

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Appendix. Languages represented in the NT gram set

(ISO 639–3 codes in square brackets)

Afro-Asiatic: *Biu-Mandara:* Kamwe [hig], Mofu-Gudur [mif]; *East Chadic:* Dangaléat [daa], Kera [ker], Kimré [kqp]; *Masa:* Marba [mpg], Masana [mcn].

Algic: *Algonquian:* Algonquin [alq], Severn Ojibwa [ojs].

Araucanian: Mapudungun [arn].

Arawakan: *Central Arawakan:* Parecís [pab]; *Eastern Arawakan:* Palikúr [plu]; *Northern Arawakan:* Garifuna [cab].

Austro-Asiatic: *Katuic:* Eastern Bru [bru]; *Viet-Muong:* Vietnamese [vie].

Austronesian: *Barito:* Inabaknon [abx], Ma'anyan [mhy], Malagasy [mlg], Ngaju [nij], Ot Danum [otd]; *Celebic:* Banggai [bgz]; *Central Malayo-Polynesian:* Alune [alp], Bima [bhp], Kisar [kje], Luang [lex], Manggarai [mqy], Sabu [hvn], Termanu [twu], Uab Meto [aoz]; *Chamorro:* Chamorro [cha]; *Greater Central Philippine:* Agusan Manobo [msm], Cebuano [ceb], Hiligaynon [hil], Kinaray-A [krj], Tagabawa [bgs], Waray (Philippines) [war]; *Javanese:* Caribbean Javanese [jvn], Javanese [jav]; *Lampungic:* Lampung Api [ljp]; *Malayo-Sumbawan:* Achinese [ace], Balinese [ban], Central Malay [pse], Iban [iba], Indonesian [ind], Madurese [mad], Malay [zlm], Minangkabau [min], Sasak [sas], Sundanese [sun]; *North Borneo:* Mainstream Kenyah [xkl], Western Penan [pne]; *Northwest Sumatra-Barrier Islands:* Batak Angkola [akb], Batak Dairi [btd], Batak Karo [btx], Batak Simalungun [bts], Batak Toba [bbc]; *Oceanic:* Auhelawa [kud], Bwanabwana [tte], Gapapaiwa [pwg], Gilbertese [gil], Hote [hot], Iamalele [yml], Iduna [viv], Iwal [kbn], Kahua [agw], Kara (Papua New Guinea) [leu], Keapara [khz], Kilivila [kij], Kwamera [tnk], Lote [uvl], Madak [mmx], Manam [mva], Manga Buang [mmo], Mangseng [mbh], Maori [mri], Marik [dad], Maskelynes [klv], Mbula [mna], Mengen [mee], Misima-Panaeati [mpx], Molima [mox], Motu [meu], Mutu [tuc], Nehan [nsn], North Tanna [tnn], Owa [stn], Paici [pri], Patpatar [gfk], Sinaugoro [snc], Southwest Tanna [nwi], Takia [tbc], Tawala [tbo], Tungag [lcm], Uripiv-Wala-Rano-Atchin [upv], Waima [rro], Wuvulu-Aua [wuv]; *Palauan:* Palauan [pau]; *Philippine:* Paranan [prf]; *Rejang:* Rejang [rej]; *Sangiric:* Sangir [sxn]; *South Halmahera – West New Guinea:* Ambai [amk], Biak [bhw]; *South Sulawesi:* Buginese [bug], Makasar [mak].

Baining-Taulil: *Baining:* Qaqet [byx].

Barbacoan: Chachi [cbi].

Basque: Basque [eus].

Border: Amanab [amn].

Camsá: Camsá [kbh].

Chibchan: *Kuna:* Border Kuna [kvn], San Blas Kuna [cuk].

Chiquito: Chiquitano [cax].

Cofán: Cofán [con].

Creoles and Pidgins: Belize Kriol English [bzj], Bislama [bis], Eastern Maroon Creole [dj], Hawai'i Creole English [hwc], Krio [kri], Nigerian Pidgin [pcm], Papiamentu [pap], Pijin [pis], Saint Lucian Creole French [acf], Sea Island Creole English [gul], Seselwa Creole French [crs], Tok Pisin [tpi].

Dagan: Maiwa (Papua New Guinea) [mti].

Guahiban: Cuiba [cui].

Guaicuruan: Pilagá [plg], Toba [tob].

Hmong-Mien: Hmong Daw [mwv].

Huitotoan: *Huitoto:* Murui Huitoto [huu].

Indo-European: *Albanian:* Tosk Albanian [als]; *Armenian:* Armenian [hye]; *Baltic:* Latvian [lav]; *Celtic:* Breton [bre], Welsh [cym]; *Germanic:* Danish [dan], Dutch [nld], English [eng], Faroese [fao], German [deu], Icelandic [isl], Norwegian Bokmål [nob], Plautdietsch [pdt], Swedish [swe]; *Greek:* Koine Greek [grc], Modern Greek [ell]; *Indic:* Bengali [ben], Gujarati [guj], Hindi [hin], Marathi [mar]; *Iranian:* Dari [prs], Iranian Persian [pes], Tajik [tgk]; *Romance:* Catalan [cat], French [fra], Italian [ita], Portuguese [por], Spanish [spa]; *Slavic:* Bulgarian [bul], Church Slavonic [chu], Macedonian [mkd], Russian [rus].

Lower Sepik-Ramu: *Mikarew:* Aruamu [msy].

Matacoan: Wichí Lhamtés Nocten [mtp].

Mayan: Chol [ctu], Chuj [cac], Kaqchikel [cak], Kekchí [kek], Mam [mam], Tzotzil [tzo], Yucateco [yua].

Misumalpan: Mayangna [yan], Mískito [miq].

Mixe-Zoque: Juquila Mixe [mxq].

Mosetenan: Tsimané [cas].

Niger-Congo: *Adamawa:* Dii [dur]; *Bantoid:* Bafut [bfd], Bulu (Cameroon) [bum], Denya [anv], Fang (Equatorial Guinea) [fan], Gogo [gog], Lenje [leh], Mahongwe [mhb], Mbunda [mck], Meta' [mgo], Noone [nhu], Oku [oku], Saamia [lsm], Suba [sxb], Swahili [swh], Swati [ssw], Tikar [tik], Tswana [tsn], Venda [ven], Yamba [yam]; *Cross River:* Bekwarra [bkv]; *Edoid:* Ivbie North-Okpela-Arhe [atg]; *Gbaya-Manza-Ngbaka:* Northwest Gbaya [gya], Southwest Gbaya [gso]; *Gur:* Bimoba [bim], Eastern Karaboro [xrb], Mampruli [maw]; *Kru:* Kuwaa [blh]; *Kwa:* Fon [fon]; *Mel:* Timne [tem]; *Platoid:* Kutep [kub]; *Ubangi:* Sango [sag]; *Western Mande:* Southern Bobo Madaré [bwq], Susu [sus], Yalunka [yal].

Nilo-Saharan: *Bongo-Bagirmi:* Gulay [gvl], Mbay [myb], Ngambay [sba]; *Nilotic:* Acoli [ach], Adhola [adh], Kakwa [keo], Kumam [kdi], Lango (Uganda) [laj], Luo (Kenya and Tanzania) [luo], Mabaan [mfz].

Oto-Manguean: *Chinantecan:* Comaltepec Chinantec [cco], Ozumacín Chinantec [chz]; *Mixtecan:* Magdalena Peñasco Mixtec [xtm], Ocoatepec Mixtec [mie], Silacayoapan Mixtec [mks], Tepeuxila Cuicatec [cux]; *Otomian:* Central Mazahua [maz]; *Popolocan:* Ayautla Mazatec [vmy], Chiquihuitlán Mazatec [maq], Huautla Mazatec [mau], Jalapa De Díaz Mazatec [maj], San Jerónimo Tecóatl Mazatec [maa], San Juan Atzingo Popoloca [poe], San Marcos Tlalcoyalco Popoloca [pls]; *Zapotecan:* Cajonos Zapotec [zad], Coatecas Altas Zapotec [zca], Isthmus Zapotec [zai], Nopala Chatino [cya], Santa María Quiegolani Zapotec [zpi], Santo Domingo Albarradas Zapotec [zas], Tabaa Zapotec [zat], Yalálag Zapotec [zpu], Yareni Zapotec [zae], Yatee Zapotec [zty], Zoogocho Zapotec [zpq].

Panoan: Shipibo-Conibo [shp].

Quechuan: Ayacucho Quechua [quy], Eastern Apurímac Quechua [qve], Inga [inb], North Junín Quechua [qvn], South Bolivian Quechua [quh], Tena Lowland Quichua [quw].

Sepik: *Middle Sepik:* Mende (Papua New Guinea) [sim]; *Upper Sepik:* Abau [aau].

Sino-Tibetan: *Burmese-Lolo:* Achang [acn], Lahu [lhu]; *Chinese:* Hakka Chinese [hak], Mandarin Chinese [cmn]; *Kuki-Chin:* Ao Naga [njo], Falam Chin [cfm], Haka Chin [cnh], Khumi Chin [cnk], Lamkang [lmk], Lushai [lus], Matu Chin [hlt], Mün Chin [mwq], Ngawn Chin [cnw], Sangtam Naga [nsa], Siyin Chin [csy], Yimchungru Naga [yim], Zotung Chin [czt], Zou [zom], Zyphe Chin [zyp]; *Northern Naga:* Konyak Naga [nbe].

Tarascan: Purepecha [tsz].

Tequistlatecan: Highland Oaxaca Chontal [chd].

Ticuna: Ticuna [tca].

Torricelli: *Marienberg*: Kamasau [kms].

Totonacan: Coyutla Totonac [toc], Highland Totonac [tos].

Trans-New Guinea: *Angan*: Angaataha [agm], Ankave [aak], Safeyoka [apz]; *Chimbu*: Chuave [cju]; *Eastern Highlands*: Alekano [gah], Inoke-Yate [ino], Kanite [kmu], Keyagana [kyg], Waffa [waj], Yaweyuha [yby]; *Engan*: East Kewa [kjs], West Kewa [kew]; *Finisterre-Huon*: Dedua [ded], Numanggang [nop], Rawa [rwo], Wantoat [wnc], Yau (Morobe Province) [yuw]; *Kamula*: Kamula [xla]; *Madang*: Amele [aey]; *Mek*: Nalca [nlc].

Tucanoan: Waimaha [bao].

Tupian: *Tupi-Guaraní*: Eastern Bolivian Guaraní [gui], Paraguayan Guaraní [gug], Western Bolivian Guaraní [gnw].

Uralic: *Finnic*: Estonian [est], Finnish [fin].

Uto-Aztecan: *Aztecan*: Central Huasteca Nahuatl [nch], Eastern Huasteca Nahuatl [nhe], Northern Puebla Nahuatl [ncj], Southeastern Puebla Nahuatl [npl], Tetelcingo Nahuatl [nhg], Western Huasteca Nahuatl [nhw], Zacatlán-Ahuacatlán-Tepetzintla Nahuatl [nhi]; *Cahita*: Yaqui [yaq].

Western Fly: Bine [bon], Wipi [gdr].

Yawa: Yawa [yva].

Zamucoan: Ayoreo [ayo].

Zaparoan: Arabela [arl].

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This volume provides a detailed investigation of perfects from all the branches of the Indo-European language family, in some cases representing the first ever comprehensive description. Thorough philological examinations result in empirically well-founded analyses illustrated with over 940 examples. The unique temporal depth and diatopic breadth of attested Indo-European languages permits the investigation of both TAME (Tense-Aspect-Mood-Evidentiality) systems over time and recurring cycles of change, as well as synchronic patterns of areal distribution and contact phenomena. These possibilities are fully exploited in the volume. Furthermore, the cross-linguistic perspective adopted by many authors, as well as the inclusion of contributions which go beyond the boundaries of the Indo-European family per se, facilitates typological comparison. As such, the volume is intended to serve as a springboard for future research both into the semantics of the perfect in Indo-European itself, and verb systems across the world's languages.

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