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Past Participle Agreement

A study on the grammaticalization of formal features

Jorge Vega Vilanova

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A study on the grammaticalization of formal features

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To Alexander

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List of abbreviations and symbols

1, 2, 3	Grammatical person
Abs	Absolutive
ACC	Accusative
Adv	Adverb
AgrO	Object agreement
AgrOP	Object agreement phrase
AgrS	Subject agreement
AgrSP	Subject agreement phrase
AP	Articulatory-perceptual
ART	Article
ASC	Absolute small clause
Asp	Aspect
AspP	Aspect phrase
C	Complementizer
C_{HL}	Computational system for human language
CI	Conceptual-intentional
CL	Clitic
CLD	Clitic doubling
CLLD	Clitic left dislocation
ClVoice	Clitic voice
COND	Conditional
CP	Complementizer phrase
D	Determiner
DAT	Dative
DEF	Default
DEM	Demonstrative
DIM	Diminutive
DO	Direct object
DOM	Differential object marking
DP	Determiner phrase
EA	External Argument
ec	Empty category
EPP	Extended projection principle
ERG	Ergative

EXPL	Expletive
F / FEM	Feminine
FUT	Future
GerSC	Gerundival small clause
iF	Interpretable feature
IH	Interface Hypothesis
IMPF	Imperfective
IND	Indicative
IP	Inflection phrase
LF	Logical Form
LI	Lexical item
LOC	Locative
M / MASC	Masculine
MP	Minimalist Program
N	Noun
Neut	Neuter
NOM	Nominative
NP	Noun phrase
NPST	Non past
O / Obj	Object
OBL	Oblique
PART	Partitive
Part°	Participant
PartP	Participant phrase
PF	Phonological Form
PL	Plural
PP	Prepositional phrase
PPA	Past participle agreement
PRF / Perf	Perfective
Prn	Pronoun
PRTC	Particle
PST	Past tense
PSTPRT	Past participle
REFL	Reflexive
REL	Relative
S / Subj	Subject
SG	Singular
SMT	Strong Minimalist Thesis
SO	Syntactic object
Spec	Specifier
SUBJ	Subjunctive

t	Trace
T/Tns	Tense
TP	Tense phrase
uF	Uninterpretable feature
UG	Universal grammar
V / Vb	Verb
v	Light verb
val	Value
VP	Verb phrase
vP	Light verb phrase
*	Ungrammatical
√	Grammatical
#	Infelicitous

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Introduction

Grammatical relations are one of the most pervasive and elusive concepts in linguistic theory and the application of these notions to the analysis of complex phenomena, such as verb-argument agreement (the topic of this book), is intricate. The labels of 'subject' and 'object' are intuitive designations for certain linguistic artifacts used, for example, to make typological distinctions. SVO and SOV languages show fundamental syntactic differences. However, the nature of grammatical relations as primitives of language has been challenged at least since Keenan's (1976) seminal paper. A subject is defined as the argument with the most properties from a list of subjecthood tests. Provided that the object is defined as a 'non-subject' argument, the properties of the object can be expected to be even more heterogeneous than those of the subject. Although subject-verb agreement is very common as a diagnostic for subjecthood, the role of object-verb agreement seems to be more difficult to characterize. In this book, I would like to take a closer look at object agreement in Romance languages, more specifically, in Catalan. In order to do this, I will focus on the feature composition of the object and how object features trigger different syntactic phenomena – scrambling, object shift, differential object marking, clitic doubling and past participle agreement. My main interest, however, will be the distribution and loss of past participle agreement (PPA), i.e., the agreement in number and gender between the direct object (DO) and the past participle in compound tense forms. This will be the starting point for some reflections on language change which will lead to a redefinition of the concept of grammaticalization according to new developments in syntax theory.

The distribution of PPA across Romance is quite variable: some languages (e.g., Romanian, Spanish and Portuguese) no longer have agreement; other languages (e.g., Italian and Standard French) have agreement which follows strict rules; in a third group of languages (e.g., spoken French and Catalan), PPA is optional. There are only a few authors who have investigated the problem of optionality in PPA. Obenauer (1992), for instance, argues that the use of agreeing morphology or default markings on the participle gives rise to different readings. Under the one reading, the object is discourse-linked; under the other one, it is not. If this applies to Catalan as well, the alternation between agreeing and default morphology would correspond to two different syntactic structures, so that the choice

between the two variants is not arbitrary. This would represent a move toward a more economical syntactic architecture, one in which there only existed one possible derivation for each of the two outputs and no place for 'true' optionality, i.e., a free choice among two or more parallel structures that are otherwise completely equivalent. But is it actually the case that any case of variation can be dealt with in this way? Is it possible to identify different syntactic derivations for past participle agreement in Catalan on the basis of syntactic effects or different readings associated with the morphological realization of the participle?

Not only has the problem of optionality been neglected for the most part, analyses of PPA in Old Romance are also scarce. In most diachronic accounts, there is a gap between a stage when PPA is obligatory without any restrictions whatsoever, and the modern variety, in which PPA follows a positional rule (i.e., agreement is only triggered by objects that precede the participle) and is constrained to a few specific constructions. The motivation for such a disparity between Old and Modern Romance, however, has not been thoroughly discussed. I will show that a more detailed look at the diachronic development of participle agreement is very rewarding as it reveals many interesting facts, not only with respect to the object syntax in Romance, but also regarding general questions of language change and syntactic theory.

Current linguistic theories, especially within the Minimalist Program (MP), have tried to reduce the syntactic apparatus to a minimum (e.g., Chomsky 1993 and subsequent work). Language is considered to be an optimal solution to legibility at the conceptual-intentional (roughly equivalent to LF) and articulatory-perceptual (roughly equivalent to PF) interfaces. The syntactic operations of Merge and Move do not distinguish among grammatical relations – the only restriction on Merge and Move is that the output must be legible at the interfaces. The question that arises then is how an overgeneration of ungrammatical structures can be avoided if the application of syntactic operations is almost unrestricted. The same question can be formulated concerning language change: Why does change seem to follow similar patterns in unrelated languages and with respect to independent phenomena? Why is change not random? The composition of formal features in lexical items imposes some limits on what can be merged or must be moved in narrow syntax. This way, certain limits on variation can be established. However, the consequences of the new insights on grammar brought about by the MP have not yet been fully articulated for a diachronic explanation of language. This means that modern syntactic theory and language change still need to be reconciled.

Language change cannot be understood as a unified process as there is a range of factors that are involved in it. One of the central claims with respect to parametric change in recent years is that the locus of variation resides in the lexicon (cf. the Chomsky-Borer Conjecture as described in Baker 2008: 353). Different

parameter values are encoded in the properties of lexical items (LIs), and, as is well known, LIs are also subject to processes of grammaticalization, e.g., semantic bleaching, phonological reduction, etc. Accordingly, one of the main new ideas in this monograph is that grammaticalization applies not only to LIs, but also to units larger than this (e.g., affecting pragmatically conditioned routines such as the use of topicalization or focalization procedures) or smaller than this (e.g., affecting the formal features contained in a LI). I will further argue that the organization of formal features among functional heads, bundled within or split over different heads, has syntactic effects that do not necessarily have to be defined as parametric effects or effects of grammaticalization. I agree that syntax itself is invariable in the sense that the syntactic operations included in universal grammar (UG) do not permit variation. However, different combinations of features in the lexicon can lead to quite different syntactic structures formed according to general constraints of Merge and Agree. I will call this kind of variation 'syntactic change' and am aware of the ambiguity of the term. Certain types of grammaticalization, (re-)parametrization and syntactic change can thus be considered to be intertwined to some extent since all three processes depend on the properties of the lexicon. One of the main goals of the present work is thus to shed light on the interrelation between these three processes of change by means of providing an analysis of PPA in Catalan.

Whereas syntactic structures can be more or less directly derived from the elements that enter the numeration – they are to a certain degree predictable – the outcome of language change is often unpredictable. Language change is sensitive to many factors, language-internal and language-external ones. For instance, it has been shown that the emergence and spread of clitic doubling (CLD) not only depend on the grammaticalization of the clitic pronoun, but also on the specification of the verb movement parameter (cf. Fischer et al. 2019). Hence, both parametrization and grammaticalization are involved in the development of CLD. Contact languages, cognitive pressures, normative models, the need for expressivity, etc. can also have an influence on the expected patterns of change. Language-internal factors, too, can lead to variability and optionality during language change processes. This has been suggested by the Interface Hypothesis (IH), which claims that phenomena that require the integration of information from different language modules (e.g., syntax, morphology, semantics…) are computationally more complex and therefore more vulnerable in language acquisition (cf. Sorace 2006; White 2011 and related work). According to this, optionality and variability are not unlikely to arise for phenomena positioned at the interfaces. As I will show, PPA can be analyzed from a morphological, syntactic or semantic/pragmatic perspective. Hence, there are good reasons to believe that PPA should be considered an interface phenomenon. Under this view, part of the variability across Romance

and within each Romance language, or variety, in which PPA is productive (Italian, French and Catalan) could thus be explained. But is the IH compatible with a syntactic theory according to which the different modules of grammar (i.e., narrow syntax, the conceptual-intentional interface and the articulatory-perceptual interface) are independent of each other? What role does morphology play in a minimalist view of grammar, and especially, in language change? These are interesting questions that, unfortunately, have not been explored in depth yet.

In this monograph, I will try to give an answer to the aforementioned questions. I will first examine the distribution of PPA in some of the Romance languages (namely, Italian, French and Catalan), trying to discern how the Interface Hypothesis accommodates the data. Subsequently, the IH will be critically reviewed on both empirical and theoretical grounds. In doing so, I will first show that the optionality and variability of participle agreement do conform to the expectations of the IH, although the proposed solution will differ in significant aspects from the original formulation of the IH. Crucially, I will show that the same features that correlate with PPA – i.e., definiteness, specificity and aspect – are involved in seemingly unrelated phenomena such as scrambling, CLD and differential object marking (DOM). However, recent developments in grammar theory conflict with the impression drawn from these data. If syntax operates unaware of how its output will be computed at the interfaces (i.e., semantic interpretation and the morpho-phonological realization of it), interface effects become spurious or even coincidental, since nothing that is located at the interfaces should affect the syntactic derivation. If this assumption is on the right track, it is necessary to explain the observed correlations between participle agreement and specificity, aspect and other object constructions in a different way.

The two ideas – the Interface Hypothesis and a strict separation between narrow syntax and the interfaces – make opposite predictions for the analysis of optionality. Under the IH, variability is due to processing difficulties derived from the cognitive complexity of phenomena that require an integration of heterogeneous information. In contrast, the proponents of a strict independence of narrow syntax from the interfaces assume that the correspondence between syntactic output and interface interpretation is quite strong and takes place regularly. In the first case, true optionality seems to be possible; in the latter case, true optionality is unwelcome.

The diachronic analysis of PPA provides more clues to understanding the link between the different grammar modules. Assuming a restrictive syntactic model and applying it to language change in the way illustrated above, I will reconsider how the emergence of interface effects can be ascribed to the basic operations of narrow syntax, which are also present at the onset of different processes of language change. My analysis will be based on a corpus search of Old Catalan up through the 19th century. A total of 2162 tokens were collected and coded for

several morpho-syntactic and semantic features, taken from prose texts that were supposed to reflect more or less accurately traits of spontaneous or spoken speech. The corpus was complemented by data from an acceptability judgment task for Modern Catalan. As I have suggested above, I assume that language change predominantly affects the properties of formal features, i.e., which features are instantiated in a language and the different ways of associating them with LIs. Additionally, I will claim that pragmatics and information structure constitute an important trigger for change. More concretely, pragmatics and information structure give rise to doubling structures, which represent the first step toward the grammaticalization of formal features. The pragmatic markedness of doubling may be reduced by converting the doubling construction into syntactic agreement. Once the doubled features have entered the syntactic derivation, grammaticalization applies to the newly formed features. The process ends in the deletion of formal features, as soon as they no longer provide relevant syntactic cues that make it possible for the language learner to acquire them – for example, movement.

In this proposal, syntax is preeminent. If language change primarily affects the lexicon – through grammaticalization, re-parametrization or other kinds of syntactic simplification – changes in the morphological realization follow syntactic change – an idea already supported by Cole et al. (1980) and Fischer (2010), among others. In this sense, variation may correspond to different syntactic structures (and trigger different semantic interpretations) in one period, but still be due to true optionality, understood as free choice among variants, in the next stage. Morphological markers can survive syntactic change for some time as a relic of a previous stage, as an 'embellishment' with stylistic connotations exclusively.

The analysis of how PPA got lost in Catalan will serve as a testing ground for the assumptions made about optionality, grammar architecture and language change. These are indeed crucial topics of research and can be summed up in three domains of interest, which will be dealt with throughout this monograph, namely: (i) the identification of the features involved in PPA, and the treatment of interface effects in the synchronic or diachronic analysis; (ii) the interaction between the different processes of language change; and (iii) the relationship between morphological and syntactic change. Keeping this in mind, I would like to formulate three hypotheses as a common thread for the following discussion (the hypotheses will be slightly modified in Chapter 4 and checked by means of an empirical study in Part Three).

(0.1) *Hypothesis 1: PPA as an interface phenomenon*
PPA is not governed by object position but rather by a semantic/pragmatic feature (specificity, aspect, etc.). Hence, PPA must be treated as an interface phenomenon, with all the consequences this has (i.e., instability, vulnerability to language change, optionality, etc.).

(0.2) *Hypothesis 2: different processes of language change that interact in PPA*
Economy pressures (i.e., 'syntactic change') interact with the grammaticalization of the feature(s) responsible for PPA (e.g., specificity?). This process is unavoidable and irreversible; the change process is cyclical.

(0.3) *Hypothesis 3: precedence of syntactic over morphological change*
Change begins with the grammaticalization of formal features, (re-)parametrization or 'syntactic change.' This means that the feature configurations encoded in LIs are the first ones to be affected by change. Morphology reacts to the new configurations, but may remain 'fossilized' in some cases, thereby giving rise to true morphological optionality as a transitory state after syntactic change has taken place.

The answer to these questions may represent an important contribution to our understanding of central issues of grammar theory – for instance, the possibility of true (morphological or syntactic) optionality; the structure of the lexicon, and its interactions with other language modules (syntax, morphology, semantics); the role of different types of language change under minimalist premises; the interplay between syntactic and morphological change; and a reinterpretation of the Interface Hypothesis.

This book is divided into three parts. In Part One, I will present an overview of what has been said so far about PPA in general as well as in Catalan. I will first discuss Italian and French data taken from the literature, as well as the most important accounts that have tried to explain the distribution of agreement in these languages (Chapter 1). These include traditional approaches based on the grammaticalization of the auxiliary verb and reanalysis of the small clause containing the past participle and the DO, sociolinguistic and stylistic approaches, semantic and pragmatic approaches, and syntactic accounts (classic generative accounts as well as accounts following minimalist premises). In Chapter 2, I will address the problem of optionality and show several interface effects on constructions with PPA. Catalan data are presented in Chapter 3, followed by a discussion of attested interface effects in certain Catalan varieties. The presentation of the data is rather exhaustive, but I believe this is necessary to understand the overall complexity of the phenomenon and why it has been addressed from so many different perspectives (the analysis, however, focuses on transitive clauses with the auxiliary HAVE, leaving unaccusatives and passives aside, which will be briefly discussed at the end of Chapter 10).

In Part Two, I will provide the theoretical background necessary for the subsequent analysis of object agreement (Chapter 5). On this basis, I will develop new ideas about language change and grammaticalization (Chapter 6), presenting some crucial innovations on the theory of grammaticalization. More specifically,

I will propose a grammaticalization cline for formal features that integrates the effects of information structure and pragmatics into the lexicon and, consequently, into the syntax. In Chapter 7, I will show that this proposal successfully explains the different parametric stages of subject-verb agreement in Romance.

In Part Three, I will apply the proposal to object-verb agreement, more specifically, to past participle agreement in Catalan. Methodological questions related to the corpus as well as the acceptability judgment task, and the results after analyzing the data collection, are presented in Chapters 8 and 9, respectively. These results can be summarized as a linguistic cycle, similar to some of the proposals for clitic doubling (e.g., van Gelderen 2011; Vega Vilanova et al. 2018). In Chapter 10, I will develop an analysis for PPA in Catalan combining the grammaticalization cline of formal features with some additional independent language change processes. I will conclude this monograph with some comments on further repercussions my analysis of PPA might have on general assumptions about grammatical theory and language change, for instance, what the role and the properties of the lexicon are in language change (e.g., ϕ-features and case), how optionality can be accounted for under strict minimalist assumptions, how interface effects are inserted in this framework, etc.

PART ONE

Past participle agreement in Romance languages

General properties and previous accounts

The linear order of a sentence does not always reflect the original connections between its different components. Underlying adjacency at deep structure may be altered by syntactic operations that apply to certain elements but perhaps not to other closely related ones. Hierarchical relations can thus be concealed if the governing element is displaced, moved to the left or right of the governee. Intervening constituents may give rise to discontinuous relations. All in all, the word string in actual utterances at the surface level may greatly differ from the base-generated structure. Syntactic tree representations are aimed at making these connections explicit, showing which elements are closer than others, for instance, which elements build syntactic chains. Speakers usually resort to positional or morphological cues to recover structural constituency. Hence, morphological agreement is considered to be one of the most common and successful mechanisms to guarantee the cohesion of the structure, making hierarchical relations between discontinuous constituents explicit (cf. Corbett 2006).

The distribution of morphological cues, however, is not completely predictable and reliable. It has been commonly assumed that word order (i.e., syntactic position) and overt morphology can be assigned the same function or, rather, they stand in an inverse relation. Both serve to identify grammatical relations and the hierarchical relations of the syntactic constituents to each other (see, e.g., Fischer 2010 and references therein). In this sense, when inflectional affixes (nominal case and verbal ϕ-features) are more and more reduced, the relatively free constituent placement shifts to a more rigid word order, as was the case in the transition from Old to Modern English and French. Position is certainly a strong means of designating grammatical relations to the different event participants: the subject, often the most agentive argument of the clause, is usually higher than all other object arguments – hence, the preference for SVO word order arises. The correlation between overt morphology and syntactic position seems to be quite strong and applies to a wide range of Indo-European languages. A gradual deterioration of case systems and, at the same time, increasing restrictions on word order, by

which both subject and object placement are affected, have often been observed (e.g., Roberts 1997). Alternatively, it is not the loss of case morphology that affects word order restrictions but rather the other way around, namely, syntactic changes render morphology obsolete. As Fischer et al. (2019) suggest, a change in verb movement, an assumed core parameter of language design, can lead to a limitation of the positions available to which the object can move. This ends in a configuration where the position of the arguments coincides with their case or theta-role position (e.g., their base-generated position). If, in addition, the object is focalized or, more generally, it receives any special pragmatic meaning, this information is expressed by particular syntactic constructions such as dislocations or cleft sentences. Clitic doubling also emerges under such conditions. Crucially, morphological changes in the clitics' category (from being pronominal elements to being reduced to heads or even smaller elements) are also attested in languages with clitic doubling. For many scholars (e.g., Suñer 1988), the clitic is a type of agreement marker attached to the verb, i.e., morphological marking of former syntactic constructions. In a word, the development of syntactic structures can be motivated independently of morphology, and morphology can react to the new syntactic conditions. Grammatical relations such as object or subject tend to be marked preferentially only in the syntax or only in the morphology, which guarantees a certain processing efficiency – language economy will be inclined to eliminate the redundant cues. It is however more difficult to determine which of both components will change first, giving opportunity to the other to assume the task formerly performed by the first one.

The interaction between syntax and morphology with respect to language change is by far not an uncontroversial issue. It is commonly assumed that the presence of morphological material can be associated with specific syntactic operations. However, it also seems to be the case that other syntactic operations and syntactic structures lack any morphological correspondence, i.e., they are covert. The question is thus whether morphology is necessarily an expression of syntax. If not, the first claim (the univocal attribution of morphological material to a syntactic operation) is nothing else but the generalization of a probably strong tendency, but the possibility of 'meaningless' morphological variation – 'true optionality' with morphological material that does not follow from syntax – still exists. This would have evident consequences for the analysis of certain phenomena. For example, the assumption that the subject agrees with the verb even in the absence of case marking and verbal inflection is rather uncontroversial. Pre-verbal subjects in languages without agreeing morphology are interpreted as a reflex of the subject raised to the specifier position – understanding agreement, for example, as a strict Spec-Head relation as in Kayne (1989a) or Koopman (2006) – to enter into a syntactic agreement relation with the verb. Overt morphology and word order are

cues for a syntactic operation. If the morphological marking is dropped through morphological change (probably due to phonological erosion), word order changes (i.e., the fixation of word order, as has been attested in English and many Romance languages) can be used to recover information otherwise lost. Rigid word order is thus a solid cue for the syntactic operation formerly marked by morphology. However, this account is faced with the problem of the relative simultaneity of both changes involved, since the opposite argumentation is also feasible – demonstrating a causal relation between the loss of morphology and syntactic change turns out to be an arduous task.

In this respect, object-verb agreement is an interesting case. First, systematic accusative case marking has disappeared in many languages, among them all Romance languages. Some elements that have been analyzed as accusative case markers (e.g., the preposition-like element *a*) are actually subject to quite different restrictions than regular morphological case markers. Animacy and/or specificity, as I will show in Chapter 2.3, are crucial for the analysis of the phenomenon known as differential object marking, which has often been interpreted under the viewpoint of Case. In addition, evidence for a specific syntactic position devoted to object agreement is far less convincing than evidence for a specifier position to which the subject is moved. What is more, the postulation of the existence of an 'object position' in Romance languages relies on the presence vs. absence of agreement morphology on the past participle (henceforth PPA, past participle agreement). In turn, agreement morphology is made dependent on the use (or not) of this object position. If no independent motivation for any syntactic operation concerning object agreement is provided, this kind of explanation runs the risk of being circular, a problem already pointed out by Müller (1999). The necessity of such a projection specialized for object-verb agreement emerged partly for theory-internal reasons – symmetry and uniformity of the theoretical machinery – and was inspired by observations on certain constructions in languages where object agreement is more or less consistently realized by overt morphology on the verbal inflection (e.g., Basque or Hungarian).

A closer look at object agreement phenomena, and especially PPA, is thus very promising: it might provide new insights into the nature and organization of the functional projections over the VP domain. This is useful information not only to understand other phenomena loosely connected with PPA, but also the diachronic path of the weakening and loss of participle agreement attested in all the Romance languages. Finally, this discussion will allow for a reconsideration of the interplay between morphological and syntactic change, which will be addressed in Part Three. On the basis of my analysis of PPA, I will claim that true morphological optionality, detached from any syntactic correlates, is possible under certain circumstances (cf. Fuß 2017).

In this section, I will present the main facts we know about PPA in Romance languages. In Chapter 1, I will review data from Italian and French, the languages in which PPA has been studied most. I will also introduce several accounts of PPA which have been proposed since it started attracting the attention of scholars in the 1980s. In Chapter 2, I will discuss some aspects of PPA to which, in my opinion, not enough attention has been paid so far. I will suggest that specificity is especially relevant to the understanding of how PPA works (although it does not necessarily trigger agreement). This has, in fact, far-reaching consequences, since many seemingly unrelated phenomena concerning the direct object can be linked through specificity. Under these assumptions, PPA should be captured as an interface phenomenon. But this will also require reconsidering the trigger(s) of language change and the status and source of optionality in Modern Romance – two issues that will be extensively discussed in Part Three. In this sense, I will conclude this chapter by presenting proposals that relate PPA to phenomena such as clitic doubling and differential object marking. In Chapter 3, I will apply the observations and explanations of French and Italian PPA to Catalan data. Chapter 4 sums up the section.

CHAPTER 1

General remarks on past participle agreement

1.1 Past participle agreement in French and Italian

Past participle agreement (PPA) can be defined as a construction in which the past participle within a compound tense form agrees in gender and number with a close enough direct object (usually, but not necessarily, in the same clause and/or subcategorized by the agreeing participle). PPA is, however, very sensitive to various properties of the sentence in which it appears. The auxiliary verb (BE vs. HAVE) and certain attributes of the direct object (e.g., position with respect to the verb) are involved in PPA in some way. Additionally, there are specific restrictions in each Romance language. The realization of the participle is not a categorical choice across Romance. On the contrary, it shows different conditions in each language. PPA has disappeared in Spanish, Portuguese and Romanian, but in standard/literary French, normative Italian and Catalan, the contexts of realization of PPA are quite divergent from one language to the other: in some cases, it is categorically obligatory, while in other cases agreement is optional or even ungrammatical, depending on the construction. PPA should thus be considered a complex phenomenon.

1.1.1 Basic data

Belletti (2006, 2008) offers a comprehensive overview of the general rules governing PPA in Standard Italian and Standard French, in an attempt to sum up the abundant data dispersed in the literature dealing with this construction. Her starting point is Burzio's (1981) idea that only moved objects can trigger PPA. In other words, passivization, reflexivization or ergative verb raising (cf. Perlmutter 1978) are the main operations that allow participles to agree. However, the presence of a trace bound by a displaced object is not enough to cover all cases where PPA is obligatory or banned in one language or the other. Crucially, we do not always find overt agreement when there is a chain between the moved object and its trace in French and Italian: movement is a necessary but not sufficient condition for agreement.

Basically, the following conditions have been identified for these languages:

a. PPA in Italian is:
   - obligatory with unaccusative verbs (verbs that require the auxiliary BE):
     (1.1) Maria è **partit-a/*-o**.[1]
     Maria be.3SG leave.PSTPRT.FSG/*DEF
     'Maria has left.' (Belletti 2006: 495)

   - obligatory with passive morphology (BE+participle, but also with impersonal *si*), both in the main verb and in the passive auxiliary. This also applies to causative verbs and other restructuring (modal) verbs as long as they are formed with the auxiliary BE (Belletti 2006: 513 fn. 3).
     (1.2) Maria è **stat-a/*-o** **assunt-a/*-o**.
     Maria be.3SG be.PSTPRT.FSG/*DEF hire.PSTPRT.FSG/*DEF
     'Mary has been hired.' (Belletti 2006: 495)

     (1.3) Ultimamente si sono **costruit-e/*-o**
     lately CL.REFL.3 be.3PL build.PSTPRT.FPL/*DEF
     molte case.
     many house.FPL
     'In the last time, many houses have been built.' (Belletti 2006: 496)

   - obligatory if a 3rd person accusative clitic precedes the verb:
     (1.4) a. L' ho **vist-a/*-o**.
     CL.ACC.3FSG have.1SG see.PSTPRT.FSG/*DEF
     b. Le ho **vist-e/*-o**.
     CL.ACC.3FPL have.1SG see.PSTPRT.FPL/*DEF
     c. Li ho **vist-i/*-o**.
     CL.ACC.3MPL have.1SG see.PSTPRT.MPL/*DEF
     'I have seen her/them.' (Belletti 2006: 495–96)

   - optional with 1st and 2nd person clitics:
     (1.5) Mi/ti ha **vist-a/-o**.
     CL.1SG/2SG have.3SG see.PSTPRT.FSG/DEF
     '(S)he has seen me/you.' (Belletti 2006: 496)

   - obligatory with reflexive/reciprocal clitics, both in accusative (1.6a) and in dative (1.6b).[2] This category also includes the inherent reflexive/ergative

1. In all examples of past participle agreement, the past participle is boldface and the controller of agreement is underlined.

2. The reflexive or reciprocal clitic forms a chain with the coreferential subject of the clause. It has therefore been discussed whether PPA is governed by the clitic (arguably in object position) or the subject (Le Bellec 2009). One additional and crucial argument for considering agreement with the subject in these sentences comes from the fact that reflexive and reciprocal clitics do not have morphological case distinctions. For further details, see below in this chapter.

si-constructions of Burzio (1986). Both types of constructions could be regarded as subsets of unaccusative constructions in Italian (cf. Sorace 2000). Like other unaccusatives, they require the auxiliary BE and trigger obligatory PPA.

(1.6) a. Mi sono **guardat-a/*-o** allo specchio.
CL.1SG be.1SG watch.PSTPRT.FSG/*DEF to-the mirror
'I have watched myself in the mirror.' (Belletti 2006: 496)

b. Gianni e Mario si sono **strett-i/*-o** la mano.
Gianni and Mario CL.REFL.3 be.3PL shake.PSTPRT.MPL/*DEF the hand.FSG
'Gianni and Mario have shaken hands.' (Belletti 2006: 497)

b. PPA in French is:[3]

– obligatory in unaccusative sentences with the auxiliary BE:

(1.7) Elles sont **venu-es/*-ø**.
they.FPL be.3PL come.PSTPRT.FPL/*DEF
'They came.' (Belletti 2006: 496)

– obligatory with passive morphology, but only on the lexical verb (the passive auxiliary requires HAVE to form compound tense forms):

(1.8) Ces sottises ont **été** **fait-es/*-ø**
this stupid thing.FPL have.3PL be.PSTPRT.DEF do.PSTPRT.FPL/*DEF
par les élèves de 5ème.
by the students of 5th grade
'These stupid things have been done by the 5th grade students.'
(Belletti 2006: 496)

– optional if an accusative clitic precedes the verb:[4]

(1.9) Ces sottises, Jean ne les a jamais
this stupid thing.FPL Jean not CL.ACC.3PL have.3SG ever
fait-es/-ø.
do.PSTPRT.FPL/DEF
'These stupid things, John has never done them.' (Belletti 2006: 497)

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3. Rebotier (2014) confirms most of the data presented by Belletti (2006) with the help of a quantitative study on PPA in French. She analyzes comments posted by readers in four French newspapers. However, in her study there are some hints pointing to a possible sociolinguistic (or even psycholinguistic) interference in the data, more concretely, the education level seemed to affect agreement.

4. This is irrespective of the person specification. However, Audibert-Gibier (1992) claims that PPA with 3rd person clitics is always more stable than agreement with 1st and 2nd person clitics, both in Italian (where agreement is optional) and in spoken French.

– optional with preposed wh-elements:

(1.10) Voilà les sottises que Jean n' aurait jamais
here are the stupid thing.FPL REL Jean not have.COND.3SG ever
fait-es/-ø.
do.PSTPRT.FPL/DEF
'These are the stupid things that John would never have done.'
(Belletti 2006: 496)

– obligatory with reflexive/reciprocal clitics referring to the direct object (again, these constructions can be understood as a subset of unaccusative constructions, as they are formed with the auxiliary BE, and show obligatory PPA):

(1.11) Elles se sont **repris-es/*-ø**.
they.FPL CL.REFL.3 be.3PL recover.PSTPRT.FPL/*DEF
'They have recovered.' (Belletti 2006: 497)

From these examples, it is clear that even closely related languages, such as French and Italian, do not fully coincide in the realization of PPA: what is optional in one language may be obligatory, or even banned, in the other. Furthermore, after a closer look at the data, two facts are apparent: first, in all contexts where PPA occurs the object is placed in pre-verbal position (but not all pre-verbal objects trigger obligatory agreement, i.e., object placement is a necessary but not sufficient condition); second, all clauses with the auxiliary BE have obligatory agreement, whereas only some contexts with auxiliary HAVE show agreement, and not always obligatorily. Other more fine-grained differences between PPA in French and in Italian are discussed in Kayne (1985) and Le Bellec (2009).

The data presented so far were mainly collected by grammaticality judgments, but these are not always reliable sources of information, since they are strongly oriented to the normative models. Grevisse (1993), for example, describes (or recommends) several rules for French participle agreement that are commonly felt to be 'artificial' by native speakers.[5] Taking this into consideration, Le Bellec (2009) offers an extensive overview of PPA in French and Italian, with an abundance of useful data – although without paying special attention to the optional/obligatory character of PPA in both languages. She first organizes the data according to the grammatical relation carried out by the agreement controller: the subject or the direct object. Unaccusative verbs and passives, as already mentioned in Belletti

5. Brissaud & Cogis (2008) argue that PPA is acquired very late in French, probably at the end of compulsory education. This fact suggests that it is not really part of current spoken French. Kayne (1985: 73), however, claims that even French speakers that do not usually use agreement are still able to judge in which contexts agreement would be possible or not. A similar idea is implicitly assumed by Obenauer (1992).

(2006), trigger obligatory agreement, not only in these two languages, but also in Spanish and Portuguese, provided that the auxiliary verb is BE. As for reflexive verbs, she discusses the role of the reflexive clitic and concludes that the past participle directly agrees with the subject, since the clitic is not a true pronoun, but rather the trace of an operation changing the valency of the verb (Dik 1985). She lists three arguments: (1) reflexive verbs are possible in impersonal constructions, in which transitive verbs are usually banned; (2) the embedded subject of a reflexive clause under the causative verb *faire* receives accusative case, and not dative case as in other transitive clauses; and (3) the reflexive clitic (or an equivalent strong pronoun) cannot be topicalized, unlike other direct objects. Hence, irrespective of whether the clitic marks a 'true' reflexive (or reciprocal) structure (1.12), middle voice or reflexive passives (1.13), or anticausativity (1.14), there is agreement of the participle with the subject when the auxiliary is BE, but only in verbs that are intrinsically transitive – hence the impossibility of participle agreement in (1.15). These verbs, however, all have a reciprocal interpretation. I presume that the clitic in these cases does not form a chain with the subject but is rather a true pronominal bearing (dative) case and occupying the argument position.

(1.12) Elles se sont **détestées**. French
they.FPL CL.REFL.3 be.3PL hate.PSTPRT.FPL
'They hated each other.' (Le Bellec 2009: 7)

(1.13) La maison s' est bien **vendue**. French
the house.FSG CL.REFL.3 be.3SG well sell.PSTPRT.FSG
'The house has been sold for a good price.' (Le Bellec 2009: 7)

(1.14) La tazza si è **rotta**. Italian
the cup.FSG CL.REFL.3 be.3SG break.PSTPRT.FSG
'The cup is broken.' (Le Bellec 2009: 7)

(1.15) a. Le ragazze si sono **mentito**. Italian
the girl.FPL CL.REFL.3 be.3PL lie.PSTPRT.DEF
'The girls lied to each other.' (Le Bellec 2009: 7)

b. Ces deux femmes ne se sont plus
this two woman.FPL not CL.REFL.3 be.3PL more
parlé. French
speak.PSTPRT.DEF
'These two women don't speak with each other any more.'
(Le Bellec 2009: 8)

Additionally, in Italian (but not in French) PPA with the subject is found whenever the reflexive clitic stands for the indirect (dative) object and the DO cannot trigger agreement (because it is a post-verbal DP or a relative pronoun) (1.16a–b).

This, again, illustrates that the reflexive forms a chain with the subject and that the agreement controller is the subject and not the clitic. In contrast, in French PPA is blocked when an accusative DP, a potential agreement controller, is present (1.16c).

(1.16) a. Maria si è **lavata** i capelli. Italian
Maria CL.REFL.3 be.3SG wash.PSTPRT.FSG the hair.MPL
'Maria washed her hair.' (Le Bellec 2009: 14)

b. I capelli che Maria si è **lavata**. Italian
the hair.MPL REL Maria CL.REFL.3 be.3SG wash.PSTPRT.FSG
'The hair that Maria washed.' (Le Bellec 2009: 14)

c. Marie s' est **lavé** les cheveux. French
Marie CL.REFL.3 be.3SG wash.PSTPRT.DEF the hair.MPL
'Marie washed her hair.' (Le Bellec 2009: 14)

Le Bellec also examines the conditions for PPA with preposed DOs when the auxiliary is HAVE, both in French and in Italian. Although in both languages there is often agreement, there are significant differences as well. Besides the restrictions for clitics and relative pronouns, she shows that partitive clitics trigger obligatory agreement in Italian in any configuration. Following Grevisse (1993: 1335), she claims that PPA controlled by partitive clitics in French is possible (yet optional) only when the entire object DP is pre-verbal (1.17). Mass nouns and atelic verbs (e.g., *goûter* 'to savor' as opposed to *recevoir* 'to receive') generally disallow PPA (1.18). In fact, restrictions based on verbal aspect are also found in other Romance varieties (see Chapter 3.3 below). Still, PPA with partitives is considered rather marginal in French (but see Daviau 2013 for a quantitative study on spoken French in Canada).

(1.17) a. Des poésies, il en a **écrit(es)**.
ART.PART poem.FPL he CL.PART have.3SG write.PSTPRT.DEF(FPL)
'He wrote many poems.' (Le Bellec 2009: 11)

b. Des poésies, il en a **écrit /*écrites**
ART.PART poem.FPL he CL.PART have.3SG write.PSTPRT.DEF/*FPL
des centaines.
ART.PART hundreds
'He wrote hundreds of poems.' (Le Bellec 2009: 11)

(1.18) a. De la bière, j' en ai **bu/*?bue**.
ART.PART beer.FSG I CL.PART have.1SG drink.PSTPRT.DEF/*?FSG
'I drank some beer.' (Le Bellec 2009: 13)

b. Des fraises, nous en avons **goûté/ ?goûtées**.
ART.PART strawberry.FPL we CL.PART have.1PL savor.PSTPRT.DEF/?FPL
'We savored some strawberries.' (Le Bellec 2009: 12)

Quantified wh-elements also show a different behavior in French and Italian. Only in French is PPA possible in sentences such as (1.19). Le Bellec argues that this kind of agreement occurs for pragmatic reasons (Le Bellec 2009: 13) and the presence or lack of agreement is associated with different readings (which will be extensively discussed in Chapter 2.2.2).

(1.19) Combien de truites as- tu **pris(es)?**
how many of trout.FPL have.2SG you catch.PSTPRT.DEF(FPL)
'How many trout did you catch?'

Finally, Le Bellec looks at the role of object position in two other structures: impersonal constructions and control/raising verb constructions. As for impersonal sentences (with an expletive subject *il*, see also Kayne 1985), she remarks that only true objects trigger agreement (1.20), even if the complement is placed before the verb.

(1.20) a. Quelle chaleur atroce il a **fait-ø/*-e!**
which heat.FSG terrible EXPL have.3SG do.PSTPRT.DEF/*FSG
'How terribly hot it was!'
b. Les négotiations qu' il a **fallu-ø/*es**
the negotiation.FPL REL EXPL have.3SG need.PSTPRT.DEF/*FPL
'The needed negotiations'
(Le Bellec 2009: 15, taken from Grevisse 1993: 1337)

In contrast, Italian impersonal constructions, with the reflexive clitic *si*, have agreement with an arbitrary plural subject in cases such as (1.21), but not in (1.22), with an unergative verb, which usually does not allow PPA (a similar case to (1.16)).

(1.21) Si è **uscit-i/*-o**.
CL.REFL.3 be.3SG leave.PSTPRT.MPL/*DEF
'One has (we have) left.' (Le Bellec 2009: 16)

(1.22) Si è **dormit-o/*-i** bene.
CL.REFL.3 be.3SG sleep.PSTPRT.DEF/*MPL well
'One (we) slept well.' (Le Bellec 2009: 16)

In the last example, the presence of the auxiliary BE is exceptionally not enough to license agreement; the status of the reflexive clitic could play an important role here. Modal and causative verbs in Italian show a parallel behavior: only when the embedded verb is transitive or unaccusative is PPA required (1.23). However, in this case auxiliary selection, too, is conditioned by the main verb class.

(1.23) a. Maria è **potut-a/*-o** venire.
Maria.FSG be.3SG can.PSTPRT.FSG/*DEF come
'Maria could come.'
b. Maria ha **potut-o/*-a** dormire.
Maria.FSG have.3SG can.PSTPRT.DEF/*FSG sleep
'Maria could sleep.' (Le Bellec 2009: 17)

For French control and raising verbs, it has been claimed that PPA depends on whether the controller of agreement can be reanalyzed as an argument of the control verb (modal, causative or perception verb) or not. In the first case, PPA occurs according to the preceding conditions (cliticization, wh-movement, etc.) (1.24a, *entendre la pluie* 'to hear the rain'); otherwise, PPA is banned (1.24b, **pouvoir les personnes* 'can the people'). As Kayne (1985) shows, Italian is much less restrictive with causative verbs than French. (1.25a) is grammatical in Italian, but the equivalent example in French (1.25b) is unacceptable.

(1.24) a. La pluie que j' ai **entendu-e/*-ø** tomber.
the rain.FSG REL I have.1SG hear.PSTPRT.FSG/*DEF fall
'The rain that I heard falling.'
b. Voici les personnes que j 'ai **pu-ø/*-es** accueillir
there the people.FPL REL I have.1SG can.PSTPRT.DEF/*FPL accommodate
chez moi.
at my house
'Here are the people I could accommodate at my house.'
(Le Bellec 2009: 17)

(1.25) a. Le ha **fatt-e/*-o** riparare da un amico.
CL.ACC.3FPL have.3SG make.PSTPRT.FPL/*DEF repair by a friend
'He made a friend repair them.'
b. *Il les a **fait-es/*-ø** réparer par un ami.
he CL.ACC.3PL have.3SG make.PSTPRT.FPL/*DEF repair by a friend
'He made a friend repair them.'

1.1.2 Descriptive generalizations

Several attempts have been made to capture the variation of PPA in Romance languages systematically. Le Bellec herself has proposed two implicational scales, one for subject-participle agreement and the other for object-participle agreement (Figure 1.1). Some languages show PPA in both structures, other languages have PPA only on the first scale (subject-participle). These scales are independent of each other. This allows her to account for the discrepancy between a more restrictive agreement with reflexive clitics (subject-participle agreement) and a more

expanded use of agreement with moved elements (object-participle agreement) in French compared to Italian. The common denominator of both hierarchies, however, is topicality: only actants (i.e., arguments) that are considered highly topical trigger participle agreement, both in Italian and French. This explanation, however, does not account for optionality, nor for language change.

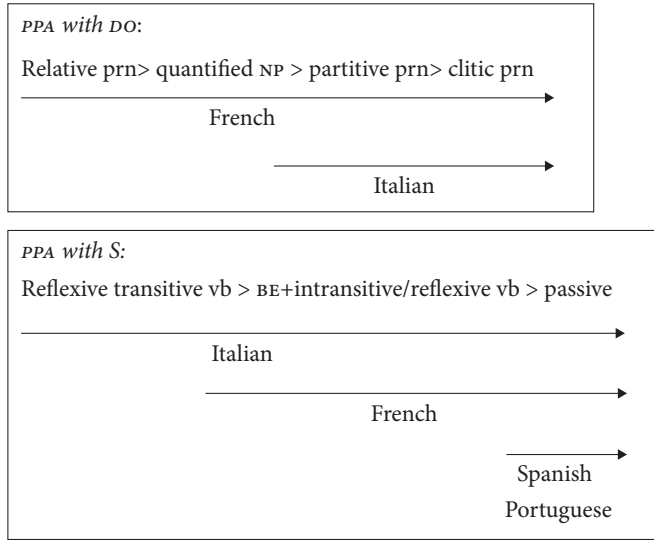


Figure 1.1 Implicational scales for PPA in Romance (Le Bellec 2009: 19–20)

Smith (1995, 1996) also tries to capture the distribution of ungrammatical, optional and obligatory contexts by means of a set of unified conditions under the vague concept of 'recoverability' (see also Chapter 1.2.3). He establishes four different implicational hierarchies, object position with respect to the verb being only one of them. Elements toward the left side of the hierarchies are more prototypical DOs and, as such, more easily recoverable. This is interpreted as follows: more canonical DOs are not compelled to maintain agreement morphology on the participle, but atypical objects (toward the right side of the hierarchies) are more reluctant to lose PPA, since agreement ensures that the DO is properly identified, i.e., 'recovered' (1.26).

(1.26) a. Position of the direct object:
Post-verbal > pre-verbal
b. Identity of the DO preceding the verb:
Topic, Interrogative, Exclamative > Relative pronoun > Clitic pronoun

c. Person of the clitic:
   1st and 2nd person, and 3rd person reflexive > 3rd person non-reflexive
d. Number and gender of non-reflexive pronouns:
   Masculine plural > all other forms

These four hierarchies taken together cover many relevant factors involved in PPA. However, taking 'recoverability' as a binding element for all instances of agreement does not seem to always be adequate. For instance, it is not clear how this applies to clitic pronouns, since accusative clitics can quite unambiguously indicate the referent of the DO – especially 3rd person clitics, which usually have different forms for case, gender and number distinctions. It is also difficult to understand why topical constituents (or interrogatives and exclamatives) should be more easily recoverable than clitics. In many Romance languages (Italian, French, Spanish and Catalan among them), topics are dislocated more or less frequently and require an additional resumptive clitic in a structure known as Clitic Left Dislocation (CLLD). CLLD should be tagged as a highly topical construction – hence highly recoverable and not likely to keep agreement – but precisely this structure is the classic example for PPA (as in Example (1.9)).

Building on a broad sample of Romance languages and varieties (Neapolitan, Friulian, Catalan…), Loporcaro (2010) represents the different configurations of PPA across Romance as a complex set of conditions within the framework of Relational Grammar. These are articulated in "incipit," "éxplicit" and "global" conditions around a core restriction ("the controller [of agreement] is a 2," i.e., agreement is triggered by the direct object complement) (Table 1.1). The less restrictive languages, on the left side of the table, require agreement in almost all transitive clauses. Languages on the right side of the table, such as Catalan and Spanish, show many restrictions, i.e., only few cases of PPA. Ultimately, passive sentences trigger PPA in all Romance languages (at least on the main verb, as in (1.2) and (1.8)).

Table 1.1. Overview of PPA in Romance (adapted from Loporcaro 2010: 229)

Conditions		Neapolitan	Italian	Friulian	Sardinian	Perginese	French	Catalan	Spanish
incipit	2 initialized by PstPrt						+		
	P-initial 2 of PstPrt						0	+	+
	a P-initial 2					+	0	0	0
	the first 2				+	0	0	0	0
the controller is a 2		+	+	+	+	+	+	+	+
éxplicit	ex 2		+	(0)	0	0	0	0	0
	non-acting-2			(+)	+	+	+	+	0
	final 1								+
global	non-multi-attached			(+)				+	+
	transitive 2							+	+

+ = the condition must be fulfilled
0 = the condition is subsumed under a more restrictive one

Le Bellec's (2009); Smith's (1995) and Loporcaro's (2010) implicational scales are only some of the possible representations of the variation in Romance languages with respect to PPA. These are concerned with descriptive adequacy rather than explicative adequacy. As mentioned above (and as will be discussed in more detail in Chapter 1.2.3), it is often assumed that agreement is only possible if the object forms a chain (i.e., it has been moved) and the head of this chain is in pre-verbal position as a clitic pronoun,[6] wh-moved constituent, expletive, derived subject, etc. But this can hardly be the whole story. PPA seems to require a multi-factorial analysis in order to account for the variability across Romance and the distribution of language-specific optionality. Another important question is how these agreement patterns have emerged over time. To what extent is the analysis of Old Romance data similar to the current analyses of PPA? Is it possible to trace back the diversification of the conditions for PPA to specific language change mechanisms? Are there clear tendencies in the development of PPA, helping us to better understand the variability of PPA?

In the remainder of this chapter, I will discuss the most important approaches to PPA, divided into traditional accounts (Section 1.2.1), sociolinguistic and stylistic considerations (1.2.2), accounts based on a semantic or pragmatic trigger (1.2.3), classic generative explanations (Section 1.2.4) and innovations of the analysis within the Minimalist Program (1.2.5), showing that all of them have some shortcomings, especially when one adds to the picture complex relations among object phenomena (PPA, clitic doubling, differential object marking, etc.) or between different grammatical modules (e.g., morphology-syntax-semantics), which will be dealt with in Chapter 2.

1.2 Previous accounts

1.2.1 Traditional approaches

One of the first attempts to explain PPA in Romance (mainly in French and Italian) is found in Macpherson (1967). His main idea is that PPA is a consequence of grammaticalization and reanalysis. He begins with the observation that, whereas Latin had a mostly synthetic verb paradigm, compound tenses in Romance had to develop from other constructions through reanalysis. The three

6. From this it follows that PPA requires a movement analysis for the clitic (e.g., Kayne 1989b; Uriagereka 1995). But in this case, it is not clear why CLD is excluded when PPA applies, and vice versa, as will be shown in Chapter 2. This analysis of PPA forces us either to consider with Jaeggli (1986) and Suñer (1988) that the clitic is base-generated as an agreement marker in clitic doubling constructions, or to postulate an additional motivation for this incompatibility.

components – auxiliary, past participle and direct object – originally had a different grammatical status than today. HABEO was a full lexical verb indicating possession. The DO expressed the possessed theme of this verb, while the past participle was a secondary predication to the object. The Example (1.27a) can thus be paraphrased as 'I have a letter which is completely written.' The brackets show that the object DP and the participle are considered a single constituent, but not the verb HABEO and the participle together. Since the main verb and the participle do not need to be adjacent, word order is relatively free. In a second step (1.27b), the whole structure is reanalyzed. The lexical verb HABEO is grammaticalized and becomes an auxiliary devoid of any semantic meaning. The finite verb and the past participle are now understood as a constituent, and the DO as depending directly on the lexical verb. The interpretation is thus approximately as it is currently in Romance languages ('I wrote a letter'). The finite verb and the participle, building a single unit, are now often placed together. Finally, morphological agreement markers disappear and default agreement (neuter/masculine) is used instead (1.27c, not attested in Latin data). Spanish (1.27d), Portuguese (1.27e) and Romanian (1.27f) have achieved this stage; other Romance languages are still in some intermediate phase between the second and the third step. Notice that Portuguese has grammaticalized another verb (TENERE) to form the auxiliary, but otherwise the grammaticalization process is the same.

(1.27) a. [LITTERAM SCRIPTAM] HABEO
b. LITTERAM [SCRIPTAM HABEO] /
[HABEO SCRIPTAM] LITTERAM
c. * LITTERAM [SCRIPTUM HABEO] /
[HABEO SCRIPTUM] LITTERAM
d. he escrito (*escrita) la carta
e. tenho escrito (*escrita) a carta
f. am scris (*scrisă) scrisoarea

Basically, the same approach is repeated by Smith (1995); Carmack (1996) and Berta (2015). Certainly, the description is empirically correct and probably covers the data observed in all (or almost all) Romance languages and their varieties. However, not very much is said about how and why the last step, the actual loss of PPA, comes to be. These approaches are thus not very far from the level achieved by the implicational scales. Of course, connecting PPA to the grammaticalization of the auxiliary allows predictions to be made concerning word order or the aspectual interpretation of the clause, but it is difficult to account for why the morphological component should undergo this kind of change. It thus makes sense to assume that factors other than the simple linear order or constituency must play a role.

1.2.2 Some sociolinguistic and stylistic considerations

The problem of the high level of variability (and optionality) across Romance has typically been addressed from a sociolinguistic or stylistic perspective. The focus of these studies (mostly about French) is the influence of the medium (spoken vs. written language) and how prestige constrains PPA (Berta 2015; Gaucher 2013; Rebotier 2014; Stark 2017; etc.). Implicitly, the discussion turns around the role of normative works – even in papers that try to offer an objective description of the phenomenon. The interference of prescriptivism has led to contradicting data, as well as a confidence in not very telling orthographic criteria. It is clear that PPA is a phenomenon about to disappear. Agreeing forms sound somewhat archaic and are confined to cultivated and written registers. Hence, what we see is that language change (the progressive loss of PPA) is more advanced in colloquial speech. In Chapter 3.2, I will discuss another interesting framework to analyze the sociolinguistic variation based on the concept of 'case of doubt' (cf. Klein 2003).

Sociolinguistic approaches, however, can only show some aspects of the variability of PPA according to register, and this does not really help to understand the motivation for agreement and the emergence of variation.

1.2.3 Semantic/pragmatic approaches

To illustrate the semantic-pragmatic perspective on the analysis of PPA, I will discuss two such approaches that propose quite different solutions: Smith (1995, 1996) and Lazard (1994) – repeated in Le Bellec (2009).

Smith (1995, 1996) suggests that the crucial factor that explains PPA is 'recoverability' (see the discussion above): non-recoverable objects do not easily abandon participle agreement; objects that show a more canonical behavior (i.e., that are more easily identified as an object in the clause) will be more likely to lose morphological markings. This might be true in some cases, but, once more, it hardly goes beyond the descriptive level. Unfortunately, the rather psycholinguistic notion of 'recoverability' is not easy to formalize.

Even more problematic is Smith's definition of 'ambiguous structures': PPA is not there to rescue ambiguous constructions, but potentially ambiguous ones. Preverbal clitics in Italian, French and Catalan often have an elided vowel when the adjacent verb begins with a vowel, which means that they cannot overtly show the gender feature of the object (1.28). This never happens (at least in cultivated and written registers) in Portuguese, Spanish and Romanian (1.29). In this sense, the 3rd person object clitic in the former group of languages is potentially ambiguous (it does not always unambiguously refer to the DO) whereas the referent of the object clitic in the latter group of languages is indicated explicitly. The referents of the

object clitics in (1.28) are less 'recoverable' than those in (1.29); PPA is thus possible in (1.28) but ungrammatical in (1.29). The unrecoverability of the object may arise through syntactic displacement (wh-movement, pronominalization, etc.) or through the morpho-phonological properties of the object (e.g., syncretism).

(1.28) a. L' ho **vist-o/-a**. Italian
b. Je l' ai **vu-ø/-e**. French
c. L' ha **vist-ø/-a**. Catalan
(I) CL.ACC.3SG have.1SG see.PSTPRT.MSG/FSG

'I have seen him/her.'

(1.29) a. Tenho -o / -a **visto**. Portuguese
have.1SG CL.ACC.3MSG / FSG see.PSTPRT.DEF
b. Lo / La he **visto**. Spanish
CL.ACC.3MSG / FSG have.1SG see.PSTPRT.DEF
c. L- am **văzut.** Romanian
CL.ACC.3MSG have.1SG see.PSTPRT.DEF
'I have seen him.'
d. Am **văzut** -o. Romanian
have.1SG see.PSTPRT.DEF CL.ACC.3FSG
'I have seen her.'

Besides the problems just mentioned, Le Bellec (2009: 11) points out that the behavior of the participle with respect to object relative pronouns (or even with other wh-elements) is not predicted by this account: in French, the relative pronoun has overt morphology to mark case (*qui* for nominative and *que* for accusative), whereas number and gender are not marked (except for the more formal form *lequel*); in Italian, the relative pronoun is always *che*, so there is no marking for any feature of the argument (except for the more formal form *il quale*). Thus, it would be expected that all these contexts are especially likely to maintain participle agreement. Yet on the contrary, agreement is usually optional or even lost with relative pronouns. In other words, precisely in those contexts with greater potential ambiguity, PPA is lost first.

For Lazard (1994), the crucial factor that triggers PPA is topicality. He argues that all contexts where PPA is attested in the Modern Romance languages can basically be interpreted as topical expressions. For instance, dislocation (with or without a resumptive clitic pronoun) is a common topicalization process. Promotion to the subject position (through passivization or with unaccusative verbs) can also be understood as a means of manipulating information structure: the subject of a sentence usually coincides with the most topical constituent (cf. Chafe 1976; Li & Thompson 1976; etc.). Cliticization applies exclusively to topical constituents,

and wh-pronouns that can trigger agreement (e.g., French *quel* 'which') refer to a presupposed set of referents, hence to known (topical) information. However, it is not clear why some other sentences under similar conditions of topicality do not trigger agreement. Indeed, the distribution of PPA does not fully overlap with topicality. This becomes evident in the hierarchies shown at the end of Chapter 1.1. They cannot simply be embedded in a 'topicality hierarchy.' If this were the case, 1st and 2nd person clitics should be more likely to trigger agreement than 3rd person clitics, since the former (the event participants) are potentially more topical than the latter, but this is not confirmed by the data. On the contrary, 1st and 2nd person clitics are less apt to permit PPA. In other words, the distribution of optionality and obligatoriness along the scales does not correspond to different degrees of topicality.

Lazard's intuition, however, is not completely wrong. As already mentioned, pre-verbal object placement has been considered a prerequisite for PPA. Still, topic positions are usually placed at the beginning of the clause, i.e., pre-verbally and quite high in the syntactic structure, while the right edge is reserved for focal constituents. Thus, in many cases, topicality and object placement overlap, and syntactic operations can have an effect on the interpretation. Now, it is necessary to elucidate which of these two factors – information structure or syntactic structure, or even a combination of both – is the actual motivation for PPA. Consequently, I will devote Chapter 2 to examining the interaction of the different language modules for the explanation of PPA.

1.2.4 Syntactic approaches: Position, Spec-Head relations and AgrO

Closely related to Macpherson's analysis based on the grammaticalization of the auxiliary (Chapter 1.2.1), Lois (1990) claims that PPA depends on auxiliary selection. She observes that there seems to be a correlation between the possibility of choosing alternating auxiliaries (BE vs. HAVE) and – at least optionally – having PPA with the auxiliary HAVE (remember that passives trigger obligatory agreement in all Romance languages). Some languages have both auxiliary alternation and agreement (e.g., French, Italian, Occitan), while other languages have neither of these properties (e.g., Spanish, Portuguese, Romanian, Walloon). Although this proposal sounds quite appealing, it faces several empirical problems. First, the possibility that these overlapping properties are due to another interfering factor or are merely coincidental cannot be ruled out. Besides auxiliary selection and PPA, the languages of the first group also show these characteristics, which set them apart from non-agreeing languages: they have a special partitive clitic (*en*/*ne*), they lack differential object marking (DOM), their different perfect past tenses do not have different meanings (*il a fait*, analytical form, and *il fit*, the synthetic

one, are selected for stylistic reasons only), and there are probably other resemblances. It seems as if there were a 'macro-parameter' setting with cascade effects in several (apparently) unrelated domains, rather than a simple correlation – an object-agreement parameter, mirroring in some way the null-subject parameter (Rizzi 1982; D'Alessandro 2015). However, this is not the perspective adopted by Lois (1990); rather, she argues on the basis of the subcategorization requirements of the different auxiliaries. The second empirical problem is the fact that the correlation of PPA with auxiliary selection does not always work (see below).

In spite of these problems, Lois's analysis has some interesting points. First, she connects the grammaticalization of the auxiliary HAVE to new theta-role and case requirements. She further unifies the analysis for unergative clauses, and passives and unaccusative ones. Building on Burzio's generalization (Burzio 1986), Lois suggests that the difference between agreeing and non-agreeing languages is that in the latter, the auxiliary HAVE is underspecified for the subject theta-role and thus not endowed with accusative case, but in the former (inherited from the subcategorization framework of the main verb HABERE) the auxiliary is specified for a thematic role in subject position and assigns accusative case to the object. In agreeing languages, there are two accusative case assigners in the same clause, the lexical verb and the auxiliary. As in passive clauses, in which the inflected passive suffix of the past participle is considered an argument (Lois 1990: 240), the participle in active sentences can 'absorb' the second accusative case when it is inflected for ϕ-features (especially, number) (1.30)[7] (cf. Müller 1999 for a different approach based on case absorption as well). PPA is thus needed to satisfy the case filter.

(1.30) … les$_i$ ai [[ec]$_i$ écrit-es [ec]$_i$ …]

Case Case

CL.ACC.3PL have.1SG write.PSTPRT.FPL

'I have written them.' (Lois 1990: 246)

7. This argument is based on data in Chomsky (1981): passive sentences can control an empty category in an embedded clause (i.b), but anticausatives cannot (i.c). This is due to the fact that in passive clauses the controller – the subject in the active clause (i.a) – is still present in the passive sentence through the passive suffix on the participle, but it is not available in anticausatives. The same effect can be obtained with secondary predications with respect to the 'missing' agent (the subject in the active voice). As such, the passive suffix is able to receive case features by a case assigner. Crucially, the passive suffix is considered argumental iff it carries ϕ-features, or, to put it another way, ϕ-feature agreement is taken as a manifestation of the passive morphology being an argument.

(i) a. They$_i$ decreased the price [PRO$_i$ to help the poor].
b. The price was decreas-**ed**$_i$ [PRO$_i$ to help the poor].
c. *The price decreased [PRO$_i$ to help the poor]. (Lois 1990: 239)

In this context, optionality is related to the coexistence of two different feature specifications for the auxiliary in the same language (in a sense, the concurrence of 'competing grammars,' see Chapter 2.1). In French and Italian, the verbs *avoir* and *avere*, respectively, are used both as auxiliary HAVE and as a full verb of possession with a DP complement (1.31).

(1.31) a. J' ai les lettres. French
I have.1SG the letter.FPL
'I have the letters.'
b. Les lettres, je les ai **écrites**.
the letter.FPL I CL.ACC.3PL have.1SG write.PSTPRT.FPL
'I have written the letters.'

In contrast, the Spanish auxiliary HAVE (*haber*) does not allow any nominal complements. Instead, *tener* is used as a verb of possession. Therefore, the possibility that *haber* assigns accusative case in compound tenses is banned.

As mentioned above, the cluster of properties shown in Lois (1990) is not categorical. Portuguese, for instance, uses *ter* both as an auxiliary and as a full verb of possession but has no PPA (and no auxiliary selection). Lois suggests that this is a case of homophony between two different lexical entries. Her classification of agreeing and non-agreeing languages according to auxiliary selection is also problematic. Piedmontese (as well as some varieties of spoken French) has no PPA although it does have auxiliary selection. The same problem appears when looking at Catalan, which has PPA but no auxiliary selection. Lois (1990) maintains that the examples of auxiliary alternation shown in Solà (1973) and Badia i Margarit (1981) are strong enough to analyze Catalan as an agreeing language, but in fact, these data are rather marginal and isolated: for most Catalan speakers, there is no auxiliary alternation; unaccusative constructions with the auxiliary BE are taken as fossilized and archaic expressions.[8] Also, it is still unclear why this categorization is only valid for Romance languages: German has auxiliary alternation in a similar fashion to Italian and French, but there is no participle agreement any more; some Slavic languages (Polish, Russian), in contrast, have extended participle agreement although they do not show auxiliary alternation.

Within most syntactic accounts, PPA relies on the syntactic position of the object. Originally, the intention was to find a unifying analysis for subject-verb and

8. Approaches focusing on the subcategorization framework of the auxiliaries could also be thought of as connected to analyses based on morphological decomposition: HAVE is the externalization of the auxiliary BE plus a preposition (cf. Cuervo 2003 for an application of this idea to the dative alternation in Spanish). The different behavior of the auxiliary HAVE could be ascribed to the presence of this preposition. Finding clear empirical evidence for such a hypothesis, however, might be problematic.

object-verb agreement: whereas it was assumed that the subject receives nominative case in Spec, IP under a Spec-Head relation, accusative case was assigned under government to the complement position – i.e., the sister of V°. In this context, Kayne (1985) claims that the past participle and the DO are inserted in a small clause [PstPrt – DO], in which the object behaves like the subject of the participle and receives its case in the specifier position, paralleling subject-verb agreement. From there, the DO optionally raises to a higher position within the IP (e.g., if it is a clitic) or CP (e.g., as a wh-element; the additional trace in sentence b, an empty category *ec* in the CP of the small clause, is related to the wh-operator) (1.32).

(1.32) a. Je $\underline{les}_i$ ai [[ec]$_i$ **écrites** [ec]$_i$].
I CL.ACC.3PL have.1SG write.PSTPRT.FPL
'I have written the letters.'

b. …$\underline{combien}$ $\underline{de}$ $\underline{tables}_i$ ils ont [[ec]$_i$ [[ec]$_i$ **repeintes** [ec]$_i$]].
how many of table.FPL they have.3PL repaint.PSTPRT.FPL
'… how many tables they have repainted.'

Although this analysis successfully accounts for many constructions with PPA, it is not without problems. Bouchard (1987), for instance, mentions that Kayne's line of reasoning is not very convincing with respect to two issues: why a lexical NP cannot trigger agreement (i.e., why it cannot be placed in the subject position of the small clause) (1.33a) and why the subject of the main clause cannot be coindexed with a resumptive element (perhaps an empty category) in the small clause, thus triggering agreement (1.33b).

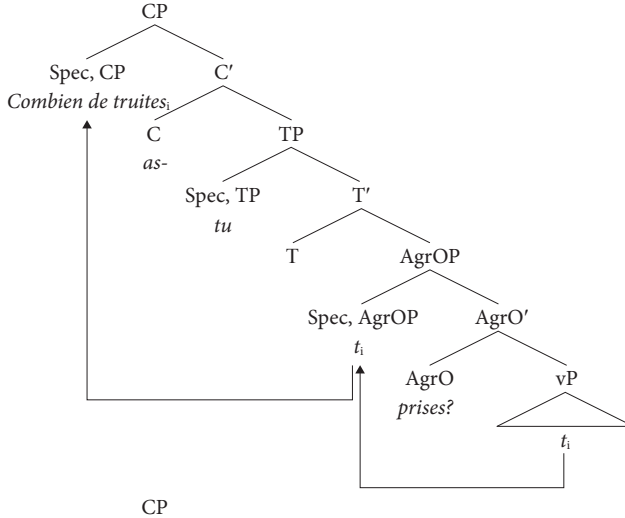
(1.33) a. *Ils ont [$_{\text{SmallClause}}$ $\underline{\text{des tables}}_i$ **repeintes** t_i].
they have.3PL ART.PART table.FPL repaint.PSTPRT.FPL
'They have repainted the tables.'

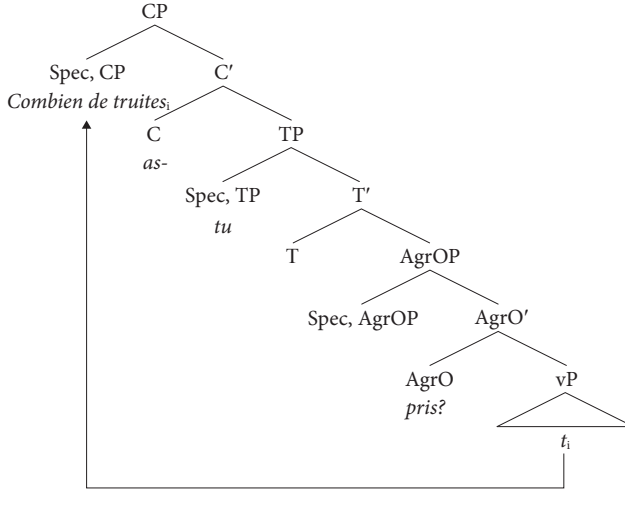
b. *$\underline{Marie}_i$ a [ec$_i$ **repeinte** le bureau].
Marie have.3SG repaint.PSTPRT.FSG the office
'Marie has repainted her office.' (Bouchard 1987: 451)

Under the influence of Pollock's (1989) Split-IP hypothesis, Kayne (1989a) revises his previous account of PPA with the aim of preventing the generation of ungrammatical clauses like in (1.33). He abandons the small clause analysis and assumes the existence of two parallel functional projections for agreement: a higher projection, AgrS, for subject-verb agreement, and a relatively low one, AgrO, for object-verb agreement. Most of the subsequent accounts of PPA are, in fact, modifications of this basic idea (e.g., Sportiche 1996; Friedemann & Siloni 1997; Paoli 2006; Belletti 2006; Poletto 2014). In these accounts, agreement in AgrO follows the same mechanisms as subject-verb agreement. Morphological agreement succeeds under a local relation, i.e., if the DO and the participle stay in a Spec-Head relation

(see also Koopman & Sportiche 1991). Clitics and wh-elements trigger PPA if they are first moved to [Spec, AgrOP] on their way up the tree to their landing sites (1.34b).[9] The participle has default agreement when the object remains in situ or moves to the landing site in one fell swoop, thus skipping [Spec, AgrOP] (1.34c).

(1.34) a. Combien de truites as- tu **pris(es)**?
how many of trout.FPL have.2SG you catch.PSTPRT.DEF(FPL)
'How many trout did you catch?'

b.


c.


9. Implicitly, a big-DP analysis with movement of the clitics to IP is assumed. See also fn. 6 in Chapter 1, and Chapter 2.3.1.

The positional restriction for PPA follows automatically from the preceding analysis: if movement to [Spec, AgrOP] is needed for agreement, only constructions that involve object movement are supposed to show PPA. Since full DPs generally stay in situ in Romance languages (but see my discussion in Chapter 2, especially in 2.3), cliticization, topicalization, wh-movement, passivization and movement to the subject position with unaccusative verbs are the clear candidates to make use of [Spec, AgrOP]. PPA thus tells us how the DO has raised to the pre-verbal position.

Apart from the questions of how and why diverging conditions have emerged in Italian and French (1st and 2nd person clitics vs. 3rd person clitics, wh-constituents, partitive clitics…), there is another issue that has attracted the attention of researchers, namely, the connection of AgrO with accusative case – a discussion already present in Lefebvre (1988), but see also Lois (1990); Cortés (1993) and Kempchinsky (2000), among others. However, if case assignment is located in the same projection responsible for PPA (i.e., agreement morphology is the externalization of case assignment), why is PPA not obligatory with post-verbal arguments as well? Or is case assignment optional in Romance languages? In Chapter 6 and 7.3, I will try to give an answer to some of these questions; in Part Three, I will discuss a possible analysis for the diachronic development of PPA that will have a new impact on the role of accusative case in the object syntax.

Optionality is another persistent challenge for approaches building on Kayne (1989a). An explanation for this runs the risk of being circular (see also Bessler 1995 and Müller 1999): what motivates the postulation of a new functional projection (AgrO) is the morphological effect on the past participle, whereby the explanation of PPA is notably reduced to the existence of that projection. If the DO moves to [Spec, AgrOP], agreement succeeds, but the evidence for this movement is morphological agreement – an absence of PPA implies an absence of object movement. However, there is still no clue why movement sometimes happens in different steps, while it sometimes occurs in one single step.

Muxí (1996) argues that, by virtue of the principle of 'economy of derivation,' true optionality has no room in a generative framework, even less from a minimalist perspective (cf. Roberts & Roussou 2003; van Gelderen 2004 for discussion on the role of economy in grammar and language change. See also the discussion in Chapter 6). The source of variation is seen in sometimes subtle contributions to the utterance due to different feature configurations that give rise to different readings. The possibility of two variants that occur under exactly identical conditions is a priori excluded. Therefore, dealing with variation means identifying minimal differences (some semantic or formal content, a felicitousness condition, etc.) among related structures in order to justify the necessity of such variants. In this context, Muxí (1996) tries to account for the optional use of participle agreement controlled by clitics following the division into two language types by Lois

(1990). In Catalan, clitics optionally trigger PPA on their way up to a pre-verbal position where they are adjoined to their host, i.e., the finite verb. A closer look at the grammatical status of the clitic offers a contradictory view. As Fontana (1993) and Fischer (2002) suggest, clitics in Modern Romance have to be considered head elements (X°) rather than phrasal ones (XP).[10] As such, clitics require head movement and cannot enter into a Spec-Head relation with the past participle, e.g., in AgrO, which would render PPA impossible. Furthermore, head movement cannot skip functional projections; hence, if a non-phrasal clitic can trigger agreement, this should be obligatory.[11] Muxí therefore claims that "an analysis that relies on head movement only is not adequate" (1996: 133). She then tries to motivate the optionality of agreement by the dual nature of the movement, as A- and A′-movement. According to her, the clitic first moves as a phrase to the specifier position of AgrO, resulting in overt agreement. If it is adjoined to AgrOP (i.e., A′-moved), agreement is out. This solution, again, runs the risk of circularity – agreement patterns are cues for certain kinds of movement, which, in turn, are used to explain these agreement patterns.

In subsequent chapters, I will come back to the discussion on optionality. In Chapter 2, I will consider it from the perspective of the Interface Hypothesis; in Chapter 3.2, I will discuss how the notion of 'cases of doubt' helps to better understand optional agreement; in Chapter 6 and following, I will take the interaction of morphological and syntactic change into consideration to account for optionality.

10. Recall that, when referring to clitics here and in the subsequent discussion, only syntactic/special clitics are meant and simple/phonological clitics are left out (see Zwicky 1977). Object pronouns in Romance were probably simple clitics long before they became special clitics (DP>D>ϕ).

11. Within a diachronic approach, clitics are assumed to have evolved from XP to X° (Fontana 1993). Old Catalan clitics are in a transition stage between XP and X°: they have some freedom of position and ordering, but have already lost interpolation of negation or other elements (see Fischer 2002; Vega Vilanova et al. 2018). At the same time, as I will show in Part Three, obligatory PPA in Old Catalan is gradually lost. There seems to be a correlation between PPA and the grammatical status of the clitic which could support the analysis discussed in the text based on a Spec-Head relation in AgrOP: phrasal clitics can occupy the specifier position and trigger obligatory agreement; if the clitic is only a head, PPA is excluded (cf. Franco 1994). Also, a defragmented account of the syntax of clitics (e.g., Bleam 1999; Marchis & Alexiadou 2013) could be used to account for (apparently) optional patterns of agreement, as has been discussed with relation to clitic doubling (cf. Anagnostopoulou 2005 for a comprehensive overview of this topic). For further details on the interaction between PPA and clitic doubling, see Chapter 2.3.4 below.

1.2.5 More recent accounts from a minimalist perspective

The Minimalist Program, henceforth MP (Chomsky 1993 and subsequent work), has changed our understanding of several fundamental syntactic operations, the notions of case and formal features, and other properties of the syntactic computation (e.g., merging constituents, derivation by phases, etc.). In Chapter 5, I will discuss these innovations in some detail. For the moment, it will suffice to call attention to some new concepts that have inspired new original approaches to PPA.

One of the leading ideas in the MP is that the 'computational system for human language' (C_{HL}) is optimally designed to satisfy the interface conditions – i.e., the articulatory-perceptual (AP) and the conceptual-intentional (CI) interfaces, roughly equivalent to PF and LF – which is known as the 'Strong Minimalist Thesis' (SMT). Under this view, the necessity of elements without any effects at the CI-interface is questioned. Several proposals have thus been made to eliminate EPP-features (e.g., Alexiadou & Anagnostopoulou 1998; Grohmann et al. 2000) or vacuous agreement projections (e.g., Fuß 2005: 64ff.) from syntactic descriptions. The motivation for the EPP and for Agr projections is merely syntax-internal – in fact, many recent theories dispense with these: since they are not required by interface conditions, they violate the SMT, so their existence is unmotivated – the C_{HL} would not be optimally designed because it would contain superfluous elements.

In this framework, computability, learnability and processing efficiency are crucial notions. The consideration of the limitations of our working memory has led to the postulation of cyclical derivation, i.e., derivation by phases (Chomsky 2000, 2008; Citko 2014, and many others). As soon as one phase is completed, all material dominated by the head of the phase is sent to spell-out, and the derivation proceeds with the next higher phase. If an element cannot satisfy all syntactic requirements within the complement of the phase head, it has to be displaced to the edge of the phase, as an escape hatch. Otherwise, it would be sent to spell-out before it complies with the interface conditions and the derivation would crash. Only elements at the edge of a phase are still active and available to syntactic operations in the higher phase – cf. the Phase Impenetrability Condition in Chomsky (2000: 108). Assuming that a phase is "the closest syntactic counterpart to a proposition" (Chomsky 2000: 106), there is general consensus in identifying v, C and D as phase heads.[12]

Although the interest in PPA seems to have decreased in the last two decades, several works have addressed PPA adopting these minimalist assumptions (e.g.,

12. However, theta-completeness is not the only possible criterion to define phases. It has also been suggested that phasehood is subject to language-specific parametrization (see Citko 2014 for discussion and references, as well as fn. 3 in Chapter 5).

Cortés 1993; Parodi 1995; D'Alessandro & Roberts 2008; Rocquet 2010). Since most of them take predominantly standard French and normative Italian data into consideration, their main concern is the explanation of object placement as a prerequisite for agreement. As an illustration, I will briefly comment on two accounts: Parodi (1995) and D'Alessandro & Roberts (2008).

Parodi (1995) makes use of the distinction between strong and weak features (Chomsky 1993) to derive the different conditions for PPA in Old Spanish. Strong features, responsible for overt movement, bring the DO to an appropriate configuration that triggers morphological agreement on the past participle. Weak features, however, are preferable according to the principle of economy – covert movement and agreement in situ are less costly options. Therefore, strong features become weak, and overt object movement and PPA disappear in language change. This account, in fact, translates older observations into a new framework. Feature strength is a way of parametrizing an observable difference between overt and covert morphology, or between overt and covert movement to [Spec, AgrOP]. In this sense, the function of feature strength is not substantially different from the function of an EPP-feature. An alternative feature-driven derivation will be shown in Part Two.

According to D'Alessandro & Roberts (2008), it is not necessary to have displaced objects in order to have PPA in Italian. This account does not take recourse to Spec-Head relations and Agr projections, but rather to phase conditions, more specifically to the Phase Impenetrability Condition. They argue that agreement is not structurally constrained but computationally: agreement succeeds when both agreeing constituents are sent to spell-out within the same phase. This leads to a reformulation of the locality condition as a morpho-phonological rule, derived directly from the Phase Impenetrability Condition:

(1.35) Given an Agree relation A between probe P and goal G,
morphophonological agreement between P and G is realized iff P and G are contained in the complement of the minimal phase head H.
(D'Alessandro & Roberts 2008: 482)

They then consider some different possible scenarios: (1) both the past participle and the DO are in the vP-phase, (2) both are in the CP-phase, (3) only the past participle is in the CP-phase and the DO remains in the vP, and (4) conversely, only the DO is moved to the CP whereas the participle stays in the vP-phase. In transitive clauses (1.36a) PPA is excluded because the participle raises to v, which is a phase head, but the DO is in the domain that is sent to spell-out. If the object is cliticized (1.36b), it is sent to spell-out in the next phase along with the participle in v, thus triggering agreement. Unaccusative clauses have a defective v° (i.e., there is no external argument and object case is unavailable), which does not qualify as

a phase head. Therefore, both the participle and the derived subject are part of the same phase (CP) and PPA succeeds (1.36c).

(1.36) a. Ho **mangiat-o/*-a** la mela.
have.1SG eat.PSTPRT.DEF/*FSG the apple.FSG
'I have eaten the apple.'

b. Le abbiamo **salutat-e/*-o**.
CL.ACC.3FPL have.1PL greet.PSTPRT.FPL/*DEF
'We have greeted them.'

c. Sono **arrivat-e/*-o** le ragazze.
be.3PL arrive.PSTPRT.FPL/*DEF the girl.FPL
'The girls have arrived.' (D'Alessandro & Roberts 2008: 480, 483)

This account captures the Italian data very nicely. However, it hardly explains why preposed objects and subjects of unaccusatives in Spanish, Portuguese and Romanian never trigger agreement without additional stipulations. It is also problematic for Old Romance data, where the past participle and the DO always agree, even if they are not in the same spell-out domain (see Part Three).

Summing up, object placement cannot be the only explanation for PPA in Catalan and, more generally, in Romance. The heterogeneity of the previous accounts shows that PPA is constrained by multiple factors: differences (or changes) in the properties of the auxiliaries and in object placement are two central components in many accounts, but certain semantic or pragmatic features seem to have an effect on agreement as well. Hence, an approach that focuses on the properties of the features involved in syntactic agreement is to be preferred over a strictly structural account: not only the structural position is important, but also what kind of features are placed there and what requirements must be fulfilled. Under such an approach, projections that are illegible to LF – e.g., Agr phrases – are dispensed with. A strictly feature-based approach to agreement, as will be discussed in Part Two and Part Three, could also be more adequate from a minimalist point of view. The question then is which features are involved in PPA and how they can account for the optionality without falling into circular explanations – i.e., postulating movement operations or syntactic positions that are exclusively motivated by the morphological effects they are supposed to explain. In this regard, the nature of optionality is of great interest. Different explanations for optionality, its relation to language change and the possibility of true optionality (i.e., purely stylistic variation without any syntactic or semantic repercussions) are dispersed throughout the following chapters. This issue is receiving increasingly more attention in academic research (cf. Fischer et al. forthcoming for some empirical and methodological observations on this matter). Is optionality a symptom of language change? Or can optionality trigger new changes? Is morphological

optionality linked to syntactic variation or can morphology be independent of syntactic structure and interpretation? How does optionality in general emerge? In my opinion, PPA is an ideal phenomenon for tackling these questions.

CHAPTER 2

Optionality and language change

PPA as an interface phenomenon

As I have shown in the preceding chapter, PPA can be addressed from very different perspectives: typological, morphological, semantic/pragmatic or positional considerations are possible. Mostly for (normative) Italian and (Standard) French, it has been proposed that the grammaticalization of the auxiliary verb, the availability of alternating auxiliaries, recoverability, topicality or pre-verbal object position are the factors that explain the distribution of PPA. Each of these accounts seems to rely on correct intuitions, which will be echoed in some way in the analysis presented in the third part of this book. The question then arises whether all these conditions are interrelated in some way: Are they a consequence or a manifestation of (an) underlying feature(s) or syntactic configuration? Or is PPA the output of a multi-factorial operation? In this case, all attempts to reduce PPA to one fundamental criterion are doomed to fail. PPA really seems to be sensitive to a variety of conditions and is hard to limit to a single linguistic domain.

The preceding approaches are thus able to account for different parts of the data, but they are probably missing some important facts. Each perspective poses questions that cannot be answered without going beyond the limits of the respective domains. A semantic or pragmatic account, for instance, offers a flexible framework for variability. Special emphasis is put on the effects of marking 'less canonical' objects (displaced or carrying atypical object features such as givenness, topicality, animacy, etc.) through agreement. This explanation resembles some accounts proposed to explain differential object marking (DOM) or clitic doubling (CLD). DOM has been claimed to correlate with animacy and definiteness/specificity – concepts closely related to givenness and discourse-linked topicality (see von Heusinger & Kaiser 2005 for an overview). CLD has sometimes been explained from this perspective as well (see Anagnostopoulou 2005). Is PPA another means of differentially marking DOs? Or are all these phenomena otherwise interrelated?

Structural approaches, in turn, often elude the problem of optionality and fall into circular explanations. In a theoretical framework where there is no room for optionality, morphological or syntactic variability can be correlated with different

readings, or analyzed from the perspective of language change. Most diachronic studies on PPA in Romance languages have focused on the emergence of PPA from the former small clause in Latin embedded under a full verb of possession HABERE. Through reanalysis, the full verb becomes an auxiliary and the past participle is no longer interpreted as a constituent with the direct object [PstPrt – DO] but as part of an analytical verb form [Aux – PstPrt]. Further details on the stages of the subsequent process up through the complete loss of morphological agreement have not attracted much attention. As I will show below, optionality is not completely randomly distributed. Hence, diachronic research is particularly meaningful to understand the general tendency of all Romance languages to lose PPA. The present discussion on optionality should lead to new insights into the mechanisms of language change and the relation between syntactic and morphological change.

In this chapter, I will discuss the data on PPA from two perspectives that try to capture optionality in different ways: competing grammars – optionality is a manifestation of ongoing language change, cf. Kroch (2000) – and the Interface Hypothesis – which ascribes optionality to the effects of computational complexity due to the combination of information at the interface between different linguistic (or cognitive) modules (cf. Platzack 2001; Sorace 2006 and related work; see also Fischer & Vega Vilanova 2018). In Chapter 2.1, I will compare these theories with respect to optionality. In Chapter 2.2, I will examine different possible interface effects with respect to PPA in Romance languages. Since specificity seems to play a central role for participle agreement, I will explore the interaction of PPA with other phenomena that also depend on specificity – object shift, DOM and CLD – in Chapter 2.3. Finally, I will summarize the results in Chapter 2.4, to conclude that any analysis of PPA should account for these interface effects, that is, it should not be constrained to a syntactic or semantic point of view exclusively.

2.1 Optionality: Competing grammars and interface effects

Following Chomsky's (1993 and subsequent work) idea that the C_{HL} is *optimally* designed to fulfill interface requirements (see Chapter 1.2.5 above), and the Strong Minimalist Thesis, which gives an advantage to minimal computations, optionality is not expected in natural languages. Moreover, derivations with fewer operations are preferred over more costly ones (see, e.g., Roberts & Roussou 2003 for an application of this principle to language change situations). If speakers feel there is a free choice between two 'equivalent' structures (equivalent in the sense that the distinctive reading has become opaque or ambiguous), the most economical variant will prevail whereas the other one will disappear. Consequently, optionality is only apparent: subtle differences in interpretation and use justify the existence of

parallel structures; whenever these differences bleach, one of the variants disappears (but see for instance Fukui 1993; Biberauer & Richards 2006 or Miyagawa 2011 for some different considerations on optionality in generativism).

Kroch (2000 and subsequent work) analyzes the growing ambiguity in the interpretation of two parallel variants as a transitory situation, which can trigger 'true' optionality. He understands this situation as a special case of 'bilingualism': each variant is part of a different grammar; speakers have to decide which construction they will use from one of these competing grammars.[1] In the case of PPA, French and Italian would have, at least, two competing grammars: in the first one, PPA is realized obligatorily in accordance with certain restrictions (e.g., 3rd person clitics, 1st and 2nd person clitics, partitive clitics, wh-constituents, etc.); in the other one, a more recently developed grammar, morphological agreement is not realized except for in a few obligatory contexts (e.g., 3rd person clitics in Italian).

Competing grammars make it possible to formulate explicit conditions for obligatory, optional or ungrammatical agreement. However, this hardly goes beyond the descriptive level, nor does it give us a hint about the source of the emergence and the further development of such conditions. Furthermore, the concept of 'competing grammars' is quite speculative and does not enable us to make any predictions. Without additional information, it is difficult to capture the motivation for the attested changes – i.e., the progressive loss of PPA. Why should languages always drift in the same direction? Why is it more probable for one option to prevail over the others diachronically?

Optionality may also arise in language contact situations (which can be considered another source of some kind of bilingualism). This means that an external motivation can bring about a change otherwise governed by language-internal factors through second language acquisition mechanisms in multilingual contexts. The introduction of an innovation from a contact language can compete with an already existing structure. Which elements (phonological, morphological, syntactic traits) can be borrowed, i.e., taken by the dominant language from the contact language, and which elements enter the language through substratum interference, i.e., through imperfect learning of the dominant language by L2 speakers, has been amply debated (cf. Thomason & Kaufman 1988; Heine & Kuteva 2003, etc.). It is a fact that at a certain point different groups of speakers (especially bilinguals) can have grammars with different properties than other monolinguals. This allows the gradual replacement of older constructions by newer ones. Language dominance

1. Another treatment of 'competing' structures can be found, for example, in Yang (2010). Combining frequency effects with general principles of efficient computation (the third factor of language design), he shows how language learners interpret variation in the input to construe new grammars.

(e.g., the size of the groups) and prestige are central criteria in analyzing language contact situations and change. Under this view, the direction of language change can be clearly determined. Unfortunately, in this approach, the source of variation and optionality has been shifted to language-external determinants. What about language change in situations in which language contact is negligible? How can language-internal processes lead to the rise of seemingly equivalent constructions? In this respect, the Interface Hypothesis (IH) is quite appealing.

With the IH, Sorace (2006), building on Platzack (2001), challenges the traditional view of the modularity of language and examines the interactions among all subsystems of grammar (lexicon, morphology, phonology, syntax, etc.) in terms of complexity of computation. The basic observation by Platzack (2001) was that syntactic constructions that codify information structure pose more problems to the language acquirers than strictly syntactic phenomena. This is not only due to the fact that pragmatics is acquired rather late by L1-learners (the critical period could be as late as the beginning of puberty; cf. Meisel 2007), but also to the fact that these constructions require integrating information processed in different linguistic modules (e.g., syntactic word order patterns must be matched with information structure and pragmatic meanings, such as focus or topic, old or new information). Summing up, the IH says that phenomena positioned at an interface are cognitively more complex than phenomena within one core module. As a consequence of their costly computation, interface phenomena are more vulnerable in language acquisition (L1 or L2). This, in turn, implies that these phenomena are more likely to undergo language change. Another visible consequence stemming from this is a higher degree of optionality. The IH thus helps predict when optionality is expected, rare, unexpected or (almost) impossible.

The IH is still very present in the current research agenda (cf. Fischer & Gabriel 2016). Departing from the original hypothesis, two kinds of interfaces have been distinguished (e.g., White 2011; Rothman & Slabakova 2011; but see also Kupisch & Rothman 2016 for a critical view): (1) internal interfaces, i.e., interfaces among grammar-internal domains (syntax, morphology, semantics), and (2) external interfaces, i.e., interfaces that require the coordination of other cognitive domains, beyond core grammar. Since the latter operate at the conceptual-intentional module of interpretation or at the articulatory-perceptual module of externalization, they are supposed to be more demanding for the language learner than the former.

In the same vein as this proposal, Fischer & Vega Vilanova (2018) suggest that the IH imposes a hierarchy of vulnerability to change in language contact settings, where bilingualism and second language acquisition are the norm. Phenomena

that belong to narrow syntax (at the right edge of the hierarchy in Figure 1.2)[2] are the least vulnerable ones to change over time; the more complex the affected interface is, the more vulnerable the phenomenon is to change.

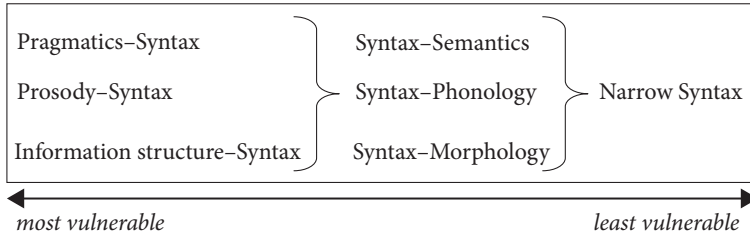


Figure 1.2 Hierarchy of vulnerability in language contact settings (Fischer & Vega Vilanova 2018)

There are good reasons to assume that this hierarchy should work for the explanation of diachronic data in general. The many works dealing with language change as a matter of language acquisition strongly support this idea. Either language change is ascribed to adults learning a second language (e.g., in different kinds of contact settings, as discussed above), or it is attributed to reanalysis in L1 acquisition (e.g., Lightfoot 1979 and subsequent work). According to the first approach, language change stems from innovations introduced by adult speakers, who then transmit new structures to the younger generations. According to the second approach, young speakers may sometimes produce an output that is not identical to the received input when they are confronted with ambiguous utterances. If the input does not provide enough evidence to unambiguously infer the underlying structure, the Transparency Principle (i.e., a limit on tolerated opacity in the input and on derivational complexity) is violated. According to Lightfoot, a "therapeutic" reanalysis takes place and catastrophic changes can be observed. The whole process is abrupt and lasts no longer than a few generations. Although Lightfoot's formulation of the Transparency Principle has been heavily criticized for its lack of precision and an ensuing difficulty in falsifying it, the necessity of linking change and acquisition is indisputable. Therefore, the same effects of the IH are expected to be found in language change situations that are not primarily dependent on a language contact setting. The same asymmetry is thus presupposed: external interfaces are more vulnerable than internal ones, and, in turn, these are more

2. Although prosody is usually understood as a part of phonology, Figure 1.2 suggests that segmental phonology and suprasegmental phonology show different properties regarding the IH. However, the discussion is trivial for our purposes: whether syntax-phonology is an internal or an external interface does not have any direct repercussions on PPA giving rise to interface effects.

vulnerable than core syntax phenomena with respect to non contact-induced language change.

Furthermore, it has been observed that language change is regularly accompanied by a more or less extended period of coexistence of two or more variants, i.e., optionality. Since interface phenomena are particularly complex, it is not surprising that some confusion and ambiguity arises here (an increasing "opacity" in Lightfoot's terms; this concept will be used in the analysis of agreement as grammaticalization of formal features in Part Two and Part Three). In sum, the IH seems to be a good starting point for analyzing variation and change in phenomena that show a high degree of optionality, and it allows us to make some predictions about the place where optionality will appear, the triggers for change or some possible results of the change (e.g., reducing the interface conditions and placing the phenomenon within a single domain). In the remainder of this chapter, I will adopt the perspective proposed by the IH, but later on I will question the compatibility of this hypothesis within new grammatical frameworks and propose a revised interpretation of it.

Following the assumptions of the IH, the optionality of PPA seems to point to a greater complexity of the construction than assumed by most approaches. A summary comparison of PPA with subject-verb agreement suffices to reveal fundamental differences. In contrast to PPA, subject-verb agreement seems to be quite stable over time. Even if the morphological marking of [Person] and [Number] disappears (probably due to a simple phonological reduction), subject-prominent languages such as English still maintain a rigorous subject-verb agreement, which is visible for example in word order effects. In a sentence such as 'The children played football,' the subject DP has raised to [Spec, TP], showing that the connection with the verb is still present. Although it has been claimed that the structure of object-verb agreement is parallel to subject-verb agreement, the outcome is much more variable, and agreement, as already shown, is even optional in some cases (with a kind of optionality that is rarely found in subject-verb agreement). The lack of agreement is not replaced by clear syntactic cues for a verb-object relation. Drijkoningen (1999) argues that PPA is not an instance of object agreement on a par with other well-known argument-verb agreement cases. The alternation of PPA cannot be reduced to a positional criterion without further qualifications. Whereas subject placement with respect to the finite verb is enough to delimit different agreement patterns (i.e., full agreement with pre-verbal arguments and partial agreement with post-verbal ones) in certain languages (1.37),[3] the distribution

3. The Modern French sentence in (i) shows a similar pattern to that in the Example (1.37): if the subject of an unaccusative verb is postposed and associated to an expletive in subject position, default agreement in 3rd person singular is required. If the subject DP is placed pre-verbally,

of PPA in Romance is more complex: to explain PPA, it is necessary to take into account, in addition to object position, which kind of element controls agreement and which kind of movement it undergoes.

(1.37) a. L-bannat-u darab-na / *-at l-ʔawlaad-a. Standard Arabic
the-girl.NOM.FPL hit.PST.3FPL /*3FSG the-boys.ACC
'The girls hit the boys.'
→ full agreement ([Number], [Person] and [Gender])

b. Darab-at / *-na al-bannat-u Zayd-an.
hit.PST.3FSG / *3FPL the-girl.NOM.FPL Zayd.ACC
'The girls hit Zayd.'
→ agreement only in [Person] and [Gender]
(Harbert & Bahloul 2002, cited by Bjorkman & Zeijlstra 2014)

Postulating that PPA is an interface phenomenon seems to be a promising working hypothesis. It is not only a suitable tool for reinterpreting the nature of the attested optionality,[4] but it is also an incentive to look for a deeper motivation for the phenomenon. In Chapter 2.2, I will look at the interactions between syntax and external linguistic domains (semantics, pragmatics and information structure) with respect to PPA. I will suggest that specificity should be considered one of the most important factors in explaining PPA if it is taken as an interface phenomenon. In Chapter 2.3, I will analyze how PPA is related to other object phenomena that are conditioned by specificity as well (DOM, CLD and object shift). The analysis that I will develop for Catalan PPA in Part Three builds on these data. I will then

full agreement succeeds (ii). The English counterparts, however, show full agreement with the expletive, as can be seen in the glosses. These agreement effects could be due to different properties of the expletive – whether the ϕ-features of the associate are transmitted to the expletive or not. Also, whereas Old French allows the subject to trigger subject-verb agreement while placed in situ, subject-verb agreement in Modern French is exclusively with the pre-verbal position (cf. Salvesen & Bech 2014).

(i) Il est arrivé trois filles.
EXPL be.3SG arrive.PSTPRT.DEF three girl.FPL
'There have arrived three girls.'

(ii) Trois filles sont arrivées.
three girl.FPL be.3PL arrive.PSTPRT.FPL
'Three girls have arrived.'

4. However, acknowledging interface effects does not exclude the influence of possible language contact scenarios. A cursory review of the data across Romance shows that the role of contact in the loss of PPA is not essential, though: all Romance languages develop in the same direction, even Romanian, which remained quite isolated from the other languages for a long period of time (cf. Dragomirescu 2014).

evaluate to what extent the higher instability of participle agreement morphology is attributable to the IH or to language-internal processes (involving ambiguity and opacity as a trigger for grammaticalization), or to an interaction of interface effects with language change, suggesting that the interface effects are better seen as epiphenomena after certain types of language change.

2.2 Interface effects on PPA

Like other argumental DPs, the DO is endowed with different sets of features. For example, its ϕ-features (i.e., [Person], [Gender] and [Number]) are associated with the referential value of the DP, thus identifying the event participant. The DO also carries case features (accusative or partitive; see, e.g., Belletti 1988), which are in some way related to thematic roles. Theta-role assignment depends on a number of additional properties, such as agentivity or affectedness. A categorical link of the DO to the prototypical role Theme or Patient does not hold in Romance languages. Grammatical relations and semantic roles are thus two separate layers. Moreover, the DO still has other semantic inherent features ([Animacy], [Humanness], etc.) and it acquires features that convey information structure during or after the syntactic derivation (e.g., topical or focal readings, new or old information, etc.). All these features are potentially relevant factors that can give rise to interface effects in the explanation of PPA.

2.2.1 Information structure–syntax interface

In Chapter 1.2.3, I have argued that syntactic approaches are insufficient to explain PPA entirely. Some other accounts (e.g., Le Bellec 2009, following Lazard 1994) emphasize that agreement morphology may mark information structure, more specifically, topical elements. Under this view, it is preferred to overtly mark 'atypical' objects: commonly, topics coincide with sentential subjects rather than with objects, which usually present new or focal information. Le Bellec (2009) bases her implicational hierarchies on topicality (see Figure 1.1). However, grammatical relations override topicality, and morphological properties of the verb have effects on the possibility of having agreement as well. The resulting set of hierarchies, in fact, reflects interface conditions for PPA.

Her account, however, encounters several problems. First, her concept of topicality is quite heterogeneous. For her, any element that can be considered a topic according to any definition of topicality is a topic. Topics can be common ground (i.e., information shared by speaker and hearer), known information, or old information already present in the discourse. Differences between French and Italian

are regarded as a response to different definitions of topic in these languages. But this claim has some empirical shortcomings. For example, although it might be true that all DOs that trigger PPA can be interpreted as topical (in a broader sense), not all topical DOs trigger agreement. Objects in situ, i.e., in post-verbal position, can be associated with the same topical reading, although PPA is out (1.38). If PPA only depended on grammatical relations, verb type or topicality, then the absence of agreement in these examples would be unexpected.

(1.38) A. Chi ha letto i libri?
who have.3SG read.PSTPRT.DEF the book.MPL
B. MARIA ha **letto** [$_{TOP}$ i libri].
MARIA have.3SG read.PSTPRT.DEF the book.MPL
'Who has read the books? MARIA has read the books.'

In contrast, word order alone is not a solid argument either. According to Rizzi (1997), the CP-domain is split into several functional projections dedicated to different pragmatic, discourse or information structure features. For this reason, constituents marked for special information structure are often attracted to the preverbal field. However, there is a heated debate about the nature of wh-movement: Is it long-distance movement (i.e., without any stops on its way up to the CP) or cyclical movement (i.e., stepwise)? Could topicality be an indicator of different types of wh-movement? The stopover in [Spec, AgrOP] cannot be conditioned by information structure directly, though: the relevant features are not placed there. Information structure is probably a previous condition, but the immediate motivation for the different types of movement (either long-distance or stepwise) must be elsewhere. This additional factor is expectedly also responsible for participle agreement. Additionally, it is not clear how topicality could affect verbal morphology from the CP through its agreement relation with the topical DO: the verb is not even involved in this agreement chain (CP–DO).

In sum, although PPA probably depends on the DO being topical, agreement can hardly be directly triggered by this feature. PPA is rather related to properties or requirements of object movement lower than the CP. In Part Three, I will claim that ϕ-features play a crucial role in object placement and that interpretive effects (and even morphological agreement) can be ascribed to operations after spell-out. Thus, the link between information structure and PPA cannot be maintained for both empirical (post-verbal objects, diachronic data, optionality…) and theoretical reasons (definition of topicality, delimitation of the structure that makes agreement possible…). Topicality makes agreement possible by stimulating object movement, but it does not constrain movement itself. The immediate trigger of agreement must then be found in other features directly shared by the verb and the DO.

2.2.2 Semantics/pragmatics–syntax interface

Instead of looking at features located outside the verbal domain, it seems reasonable to focus on the verbal domain itself. In this context, definiteness and specificity are two essential features. Due to their far-reaching effects on the semantic interpretation and syntactic make-up of the clause, a great deal of literature is devoted to them. The relation between definiteness/specificity and agreement, however, has so far not been addressed very often.

Consider the following examples from Spanish. In (1.39a) the temporal adjunct 'en una hora,' denoting a telic event, is not felicitous if the object is a bare noun (hence, indefinite and/or non-specific).[5] Adverbial modifications such as 'toda la tarde' denoting an atelic activity are fully acceptable. However, when the DO is introduced by the definite article ('la madera') (1.39b), the opposite pattern follows: only telic temporal adjuncts are felicitous.[6] The same effect is found in Catalan (1.40).

(1.39) a. Pedro cortó madera toda la tarde / # en una hora.
Pedro cut.PST.3SG wood all the afternoon / in one hour
'Pedro cut wood the whole afternoon / # in one hour.'

b. Pedro cortó la madera # toda la tarde / en una hora.
Pedro cut.PST.3SG the wood all the afternoon / in one hour
'Pedro cut the wood # the whole afternoon / in one hour.'

(1.40) a. En Pere va tallar fusta tota la tarda / # en una hora.
the Pere cut.PST.3SG wood all the afternoon / in one hour
'Pere cut wood the whole afternoonc/ # in one hour.'

b. En Pere va tallar la fusta # tota la tarda / en una hora.
Pedro cut.PST.3SG the wood all the afternoon / in one hour
'Pedro cut the wood # the whole afternoon / in one hour.'

Such contrasts are found in many genetically unrelated languages. In Slavic languages such as Russian, for instance, the case of the DO (partitive or accusative) interacts with the aspectual verbal root (perfective or imperfective), giving rise to different readings of the object DP (1.41) (cf. Krifka 1989; Leiss 2000; Ritter &

5. The distribution of bare nouns is closely related to grammatical relations. In general, bare nouns are only found in object position (see, e.g., Bartra-Kaufmann 2007 for a diachronic view of their distribution in Romance passive sentences). The emergence of the definite article in Romance is also determined by grammatical relations: it is assumed that it is first found in subject position (e.g., Stark 2002).

6. Provided that one has an appropriate context, a telic interpretation can be forced in (1.39a)/(1.40a) and an atelic one in (1.39b)/(1.40b). The context of the two examples above is neutral.

Rosen 2001; Fischer 2005). In these sentences, aspect morphology seems to convey the same information as the (in)definite articles in Romance languages, as can be seen in the glosses. Finnish shows similar effects (1.42) (Kiparsky 1998): case alternation may modify the aspectual interpretation of the clause, or the referential value of the object. All these examples show a direct link between nominal referentiality and verbal aspect, which stresses why definiteness and/or specificity should be taken into consideration when trying to explain the variation in PPA: these features could provide a motivation for the necessary stopover of the displaced (topical) object.

(1.41) a. On kolol drova.
he cut.IMPF.PST.3SG wood
'He cut/was cutting wood.'
b. On raskolol drova.
he cut.PRF.PST.3SG wood
'He cut/was cutting the wood.'

(1.42) a. Ammu-i-n karhu-a / karhu-j-a
shoot-PST-1SG bear-PART / bear-PL-PART
'I shot at the (a) bear / at (the) bears.'
b. Ammu-i-n karhu-n / karhu-t
shoot-PST-1SG bear-ACC / bear-PL.ACC
'I shot the (a) bear / the bears.'

The distinction between definiteness and specificity is not easy to define, since there are many unclear uses and much overlapping of these terms. Definiteness has been defined in two ways: as familiarity (or identifiability) with the referent or as uniqueness (or inclusiveness) of the referent (Heim 1982; Ward & Birner 1995; Abbott 1999; Lyons 1999, etc.). According to the first view, using the definite article in (1.43) implies that the reference of *the car* is more or less clear to the hearer and the speaker. Situation, general knowledge of the world, anaphoric reference, bridging cross-reference, associative use, etc. can justify interpreting a DP as familiar. This definition, however, does not account for all uses of the definite article in English. For example in (1.44), the condition for the use of the definite article rather seems to be uniqueness – i.e., reference to a unique individual. There is no consensus on which definition is more adequate to account for the distribution of the definite article in English, whether the first or the second one, or even a combination of both (see Lyons 1999).

(1.43) I bought **the car** this morning.

(1.44) [Nurse entering operating room]
I wonder who **the anesthetist** is today.

Specificity refers to the "referential anchoring" of a DP in the discourse, the "referential intention" of the speaker (von Heusinger 2011: 1025ff.). This notion is quite vague and gives rise to varied definitions (sometimes colliding to a certain degree with the uniqueness theory as well as the familiarity theory of definiteness). The concept of specificity was originally proposed to account for the ambiguity of indefinite DPs in opaque contexts. Essentially, it is assumed that indefinites have a referential (specific) or an existential (non-specific) interpretation (cf. Fodor & Sag 1982). Subsequently, the same distinction has been carried over to definite DPs (cf. Ihsane & Puskás 2001). Specificity has then been defined as discourse-linking, wide scope, partitivity, presuppositionality, topicality, referential persistence, noteworthiness, etc. (see the references in von Heusinger 2011: 1027). Some of these definitions, however, look like diagnostics for specificity that can be applied to some sentences and not to others. Scopal specificity, for example, allows the identification of specific DPs when more than one quantifier co-occurs in the same clause, but is useless in other cases. Epistemic specificity, which refers to the speaker's knowledge of the DP referent (1.45), relies on a semantic interpretation for which it is not easy to find clear evidence.

(1.45) **A student in Syntax I** cheated in the exam.
A: I know him: It is Jim Miller. → Specific reading
B: But I do not know who it is. → Non-specific reading

This is a very sketchy overview of the problematics of the notions of definiteness and specificity. Sorrenti (2015) offers a more detailed characterization of these issues, and I refer the reader to her for further discussion. She considers the possibility of distinguishing between a 'morphological' feature – i.e., definiteness, marked by certain definite determiners – and a 'semantic' feature – i.e., specificity. This seems to work quite well in Romance, although it might be conceptually flawed. As Karimi (1990) suggests, it is unusual for a language to have morphological markers for both definiteness and specificity which can be freely combined. English, French, German, etc. have definite articles, but no overt marking of specificity, whereas Persian, Turkish, Albanian, etc. mark specificity overtly but lack articles. Karimi thus concludes that "universal grammar has a single category of specific/definite (=presumed known)" (Karimi 1990: 142). This would explain the strong tendency to associate definite DPs to specific readings (and to a certain degree indefinite DPs to non-specific ones). In this sense and for the sake of simplicity, I will often use both terms indistinctly in the discussion. However, specificity and definiteness are coded separately in the corpus presented in Chapters 8 and 9. Morphological marking will be used as the criterion for coding definiteness because in Romance only definiteness is expressed overtly. Specificity is then considered from a semantic perspective.

Most definitions of definiteness or specificity make reference to discourse properties. At the same time, definiteness/specificity seems to correlate with morpho-syntactic properties of the clause. Therefore, several phenomena concerning the object syntax could be reconsidered in the light of the IH.

In many languages, one of the most direct manifestations of interface effects connected to specificity can be seen in the morpho-syntax of the object DP itself. Enç (1991), for instance, explores case marking and definiteness effects in existential clauses, departing from the alternation between accusative and non-case-marked objects in Turkish. In (1.46), the object of the second sentence optionally shows the accusative marking -ı. In this case, the referent of the DO is among the children previously introduced into the domain of discourse, whereas the bare object may refer to any child except for the children mentioned in the first sentence. In the first case, the interpretation is specific; in the second case, it is non-specific. Enç then defines specificity as a synonym for partitivity: specific DPs refer to entities from a previously given set – i.e., they are discourse-linked. Since specificity is expressed by case, a connection between the nominal domain of the object DP and the verbal domain, which assigns case, can be deduced (but see Friedemann & Siloni 1997).

(1.46) Odam-a birkaç çocuk girdi.
my-room.DAT several child enter.PST.3PL
'Several children entered my room.'
a. İki **kız-ı** tanıyordum.
two girl.ACC know.PST.1SG
'I knew two girls (of them).'
b. İki **kız** tanıyordum.
two girl know.PST.1SG
'I knew two girls.' (Enç 1991: 6)

The effects of specificity can look very different, though. Obenauer (1992), followed by Déprez (1998); Belletti (2006) and, from a slightly different perspective, Doroga (2014), observes that PPA in French can be correlated with different interpretations. He argues that the DO of sentences like (1.47) has a specific/discourse-linked interpretation if the past participle agrees with the DP – e.g., there is an already known set of possible mistakes, as in a multiple-choice test – whereas it has a non-specific/non-discourse-linked interpretation if the participle bears default agreement – e.g., the question may refer to any thinkable mistake without an explicit limitation of the denotation, for instance in an essay.

(1.47) Combien de fautes$_i$ a-t-elle **fait-ø/-es** ec$_i$?
how many of mistake.FPL have.3SG-*t*-she make.PSTPRT.DEF/FPL
'How many mistakes did she make?' (Belletti 2006: 508)

Following Kayne (1989b), Obenauer first defines the empty category (*ec*) or trace in object position as pronominal in nature. Accordingly, pronominal resumption forces a discourse-linked interpretation – "interprétation «reliée au discourse»" (Obenauer 1992: 175). Evidence for this interpretation is given in (1.48) and (1.49). He argues that the first example can only receive a [+specific] interpretation because of the resumptive clitic *les*.[7] The sentence in (1.49), with an empty category in the most embedded clause, is ambiguous: either the *ec* has the same function as the resumptive clitic and the DP *combien de disques* is discourse-linked, or it is non-pronominal and allows for a cardinality (i.e., non-specific) interpretation.

(1.48) Combien de disques$_i$ va-t-il acheter ec$_i$ uniquement parce qu' on
how many of disc.MPL go.3SG-*t*-he buy only because one
les$_i$ lui a recommandés?
CL.ACC.PL CL.DAT.SG have.3SG recommend.PSTPRT.MPL
'How many discs do you think he is going to buy because somebody recommended them to him?'

(1.49) Combien de disques$_i$ crois-tu qu' il va finir par acheter ec$_i$?
how many of disc.MPL believe.2SG-you that he go.3SG finish by buy
'How many discs do you think he is going to end up buying?'
(Obenauer 1992: 175)

Obenauer concludes that PPA is only possible when there is a pronominal *ec* in object position. The DO then conveys a specific or D-linked reading and the participle agrees with it. To prove his hypothesis, he applies several tests. For instance, PPA is felt inacceptable if the DO is unambiguously interpreted as a cardinality expression. In (1.50), the expressions *jusqu'à* 'until' and *en moins* 'less' impose a non-specific interpretation on the DO and PPA is out. Distributive readings are also associated with a [−specific] feature (1.51): without PPA, the sentence is a question about the number of mistakes each one of the participants has made, thus evoking a cardinality reading; with PPA, the sentence asks which mistakes every participant has made. In the same sense, the interrogative *quels* is polysemic: it means either 'which kind of' ([−specific]) or 'which ones' ([+specific]). The absence of agreement obligatorily gives rise to the first interpretation (1.52).

(1.50) a. Jusqu'à combien de fautes ont-ils **fait-ø/*-es?**
until how many of mistake.FPL have.3PL-they do.PSTPRT.DEF/*FPL
'How many mistakes did they make?'

7. Since PPA in French is generally optional and restricted to written and formal language, it is not viable to gather judgments on the grammaticality of the constructions, but rather on their acceptability. Although many of the details in Obenauer's data are not taught in formal instruction, speakers seem to have consistent intuitions with respect to these constructions.

b. Combien de fautes en moins ont-ils **fait-ø/*-es?**
how many of mistake.FPL less have.3PL-they do.PSTPRT.DEF/*FPL
'How many fewer mistakes did they make?' (Obenauer 1992: 176)

(1.51) Je voudrais savoir combien de fautes chacun a
I like.COND.1SG know how many of mistake.FPL each have.3SG
fait-ø/-es.
do.PSTPRT.DEF/*FPL
'I'd like to know how many mistakes each one made.' (Obenauer 1992: 176)

(1.52) a. Quelles maisons a-t-il **construit?**
which house.FPL have.3SG-*t*-he build.PSTPRT.DEF
'Which kind of houses has he built?'
b. Quelles maisons a-t-il **construites?**
which house.FPL have.3SG-*t*-he build.PSTPRT.FPL
'Which houses has he built?' (Obenauer 1992: 177)

In a nutshell, Obenauer's account takes the specific reading of certain constructions with PPA as evidence for the presence of a resumptive empty category. His analysis is mainly syntactic when he argues that the *ec* in object position has a pronominal value. However, the cues that are available for the speaker (or language learner) are semantic/pragmatic: identical surface strings are due to different underlying structures, which involve different readings. Morphology is a reaction to different syntactic conditions in which the feature of specificity seems to be involved. According to this, PPA is an interface phenomenon that requires the integration of information from different linguistic modules. Many of the examples given by Obenauer indeed show optionality and their interpretation is rather opaque. Participle agreement is generally disappearing in French, which is consistent with the scheme in Figure 1.2: interface phenomena are more unstable from both a synchronic and a diachronic point of view.

Beyond case assignment and PPA, other phenomena have been proposed to depend on definiteness/specificity. One of the most influential works on this issue is Diesing (1992). She departs from the assumption that the clause is semantically divided into two domains: the restrictive clause and the nuclear scope. She then formulates the so-called Mapping Hypothesis, which makes the correspondence between syntax and semantics explicit:

(1.53) *Mapping Hypothesis*
Material from VP is mapped into the nuclear scope.
Material from IP is mapped into a restrictive clause. (Diesing 1992: 10)

The most direct consequence of this idea is that different semantic interpretations of the DO are obtained in different syntactic positions. Indefinites that have

quantificational force (which also form operator-variable structures and undergo quantifier raising) need to raise out of the nuclear scope, where they would be subject to existential closure, into the restrictive clause. Non-specific indefinites (with a cardinality interpretation) may remain in situ. Diesing finds evidence for this in different word order effects and quantifier raising. In German, for instance, particles such as *ja doch* may signal the VP-boundary. Hence, the derived subject *zwei Cellisten* 'two cellists' in (1.54a) has left the VP and is interpreted as [+specific] (quantificational reading). The second sentence, however, has a VP-internal non-specific subject (cardinality reading). In sum, it is suggested that specificity is responsible for object placement (object movement or object shift).

(1.54) a. Weil zwei Cellisten ja doch in diesem Hotel abgestiegen sind.
since two cellists PRTC in this hotel lodge.PSTPRT be.3PL
b. Weil ja doch zwei Cellisten in diesem Hotel abgestiegen sind.
since PRTC two cellists in this hotel lodge.PSTPRT be.3PL
'Since two cellists lodged in this hotel.' (Diesing 1992: 78)

In the same vein, Déprez (1998) distinguishes between two possible object positions, linked to the [+/−specific] dichotomy: If the DO is adjoined (i.e., merged) to the VP, it receives a non-specific interpretation. For the DO to receive a [+specific] feature, it has to be adjoined to Agr/v, i.e., it has to be moved out of the VP. In the new position, the DO may trigger participle agreement.

In a more restricted syntactic framework, the motivation for object movement has been ascribed to case assignment. Accordingly, López (2012) suggests that indefinite objects that remain in situ are pseudo-incorporated into the verb. This implies that they do not require case assignment and cannot enter into an agreement relation with the past participle. Definite objects must move, albeit minimally ("short scrambling" in his terms). Ultimately, the interplay of movement and case requirements and the referential properties of the DO results in a variety of phenomena with definiteness/specificity in common (object shift/scrambling, PPA and, as will be shown in the next chapter, DOM and CLD).

Definiteness/specificity seems to be a core feature for a number of syntactic constructions concerning the object. An analysis of the object syntax from the perspective of the IH thus seems justified. Before looking at the (interface) effects of definiteness/specificity, case and aspect on PPA in Catalan, I will discuss other phenomena assumed to be related to specificity and how they are linked to PPA.

2.3 Object phenomena related to specificity

2.3.1 Object movement, CLD and DOM

In this chapter, I am going to describe some properties of object movement, CLD and DOM, and how they can be related to definiteness/specificity.

It is commonly accepted that object placement is constrained to a certain degree by information structure. Basically, there are two kinds of object movement: object shift and scrambling. In Scandinavian languages object shift is restricted to DOs in clauses in which the finite verb has moved out of the VP. Scrambling in Germanic, in contrast, seems to be unrestricted: non-finite verb forms allow scrambling, and any element, not only the DO, can undergo this process (cf. Thráinsson 2001 and Vikner 2005 for further references). For the present purposes, I will ignore these distributional differences.

The conditions for object movement have been discussed extensively in the literature. Scandinavian object shift, for instance, is obligatory with personal pronouns, optional with definite DOs and ungrammatical with indefinite DPs (Vikner 2005: 421ff.). Diesing (1992) shows that specificity plays an important role in Germanic scrambling. Thus, definiteness and specificity (two discourse-related features) are crucial notions to account for object placement and different kinds of object movement in different languages (see also, e.g., Alexiadou & Anagnostopoulou 1997).

In Modern Romance, there is no clear evidence for object movement. The finite verb is placed quite high in the structure, both in the main clause and in embedded clauses. This makes it hard to detect evidence for object movement based on word order. However, Sportiche (1996) puts clitic doubling (CLD) on a par with object shift. CLD is a construction in which a full DP object co-occurs in the same clause with a clitic pronoun which shares the same case and the same theta-role as the full DP (1.55) (see Anagnostopoulou 2005 for an extensive overview of the phenomenon). Sportiche suggests that the presence of the clitic in TP has a similar function and distribution to overt movement of the object out of the VP.

(1.55) Le dieron el libro a Juan. Spanish
CL.DAT.3SG give.PST.3PL the book to Juan
'They gave Juan the book.'

CLD is a very variable phenomenon both within a language and across languages. The conditions for CLD are heterogeneous, since many semantic, morphological or syntactic features seem to be involved in the realization of CLD: case (dative vs. accusative), thematic role (Possessor and Experiencer vs. Theme and Recipient), animacy (+/–animate, +/–human), specificity, topicality and DP structure

(full pronoun or other full DPs) are some of the features that have been proposed to explain CLD. Fischer & Rinke (2013) combine some restrictions attested in Romance languages within a parameter hierarchy that can be interpreted as an implicational hierarchy (see Figure 1.3).

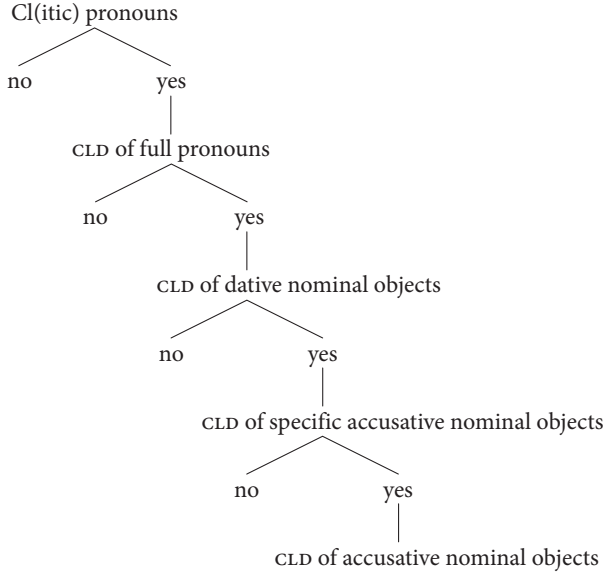


Figure 1.3 Implicational parameter hierarchy for CLD in Romance (Fischer & Rinke 2013: 468)

Fischer et al. (2019), departing from this approach and providing additional Old Spanish and Old and Modern Catalan data from their own corpus as well as data from different Spanish varieties taken from Zdrojewski & Sánchez (2014), argue that CLD is conditioned both by the grammaticalization of the clitic pronoun itself (see Fontana 1993; Bleam 1999; Fischer & Rinke 2013; Maddox 2019) and the choices within the verb movement parameter hierarchy. These two factors are necessary but independent of each other. In their account, verb movement limits the positions available to which the object moves in order to express information structure. Object placement is freer in Old Romance than in Modern Romance (cf. Martins 1994; Fischer 2010). At the same time, the position of the verb becomes lower and lower over time. CLD is a means to restore the former flexibility of word order. Instead of object shift or scrambling, Romance languages make extensive use of CLD constructions, especially American Spanish varieties. In contrast, Peninsular Spanish and Catalan allow CLD mainly with personal pronouns only. As for Italian and French, only some dialects show instances of CLD.

Previously to Sportiche's account, CLD had been discussed in terms of case assignment. It has been observed that in some languages (especially in Romanian) CLD requires the object to be marked by a preposition-like element, i.e., it must be differentially case-marked (which is known as "Kayne's generalization," Jaeggli 1982: 20). Due to the presence of the clitic, which 'absorbs' the accusative case of the verb, a new case assigner must be inserted so that the full DP object receives case and the case filter is satisfied. This correlation – CLD + DOM – has turned out to be far less consistent than initially assumed. Several non-doubled DPs require DOM, and CLD without DOM is also possible in some cases. Suñer (1988) proposes discarding the movement analysis for the clitic in CLD constructions: the clitic does not receive case from the verb, but is rather an agreement marker that matches the specificity feature of the DO (see also Strozer 1976; Rivas 1977; Jaeggli 1982, etc.). In this context, Sportiche (1996) tries to reconcile both views. He assumes the existence of dedicated clitic projections, ClVoice 'clitic voices,' responsible for case assignment, hence A-positions.[8] The clitic may indeed move as a head out of the VP and thus show mixed properties (as a head and as a phrase; see also Chapter 2.3.4). Furthermore, he assumes that the clitic and the associate XP are endowed with a certain feature [F], which has to be satisfied in a Spec-Head relation – what he calls the Clitic Criterion (Sportiche 1996: 236). The Clitic Criterion can be fulfilled in the following ways:

(1.56) *Clitic construction parameters*
- i. Movement of XP* to XP^ [i.e., from the base-generated position to the specifier of ClVoice] occurs overtly or covertly
- ii. H [the head of ClVoice, i.e., the clitic] is overt or covert
- iii. XP* [the associate of the clitic generated in object position] is overt or covert

(Sportiche 1996: 237)

By combining these three parameters, different construction types are predicted (1.57), the only restriction being the "Doubly Filled Voice Filter" (1.58), a condition inspired by the Doubly Filled COMP Filter (Bayer 1984).

(1.57)
- i. Undoubled clitic constructions: covert XP*/XP^ with overt H.
- ii. CLD: overt XP* moves covertly to XP^ with overt H.
- iii. Scrambling: overt XP* moves overtly with covert H.

(Anagnostopoulou 2005: 550)

8. Also Di Tullio, Saab & Zdrojewski (2019) claim that CLD is an A-dependency, but is triggered by the feature [Person] instead.

(1.58) *Doubly Filled Voice Filter*
* [$_{HP}$ XP [H …]]
where H is a functional head licensing some property P,
and both XP and H overtly encode P. (Anagnostopoulou 2005: 551)

For our purposes, the most interesting issue of Sportiche's account is the connection established between CLD and scrambling. The conditions for both phenomena are practically the same. Pragmatics, information structure and definiteness/specificity, crucial features in the analysis of scrambling, seem to have an influence on CLD (cf. Sánchez 2010; Gabriel & Rinke 2010; Vázquez Rozas & García Salido 2012; Sánchez & Zdrojewski 2013). Definiteness/specificity is assumed to be involved in DOM as well (1.59) (Aissen 2003; Leonetti 2004; von Heusinger & Kaiser 2005), although this phenomenon is a bit more complex: animacy and affectedness (García García 2014) and telicity, i.e., aspectual features of the verb (1.60) (Torrego 1999), have to be taken into consideration. Thus, the relationship between CLD and DOM is controversial.

(1.59) a. Necesita a una enfermera que pasa la mañana con ella.
need.3.SG DOM a nurse REL spend.IND.3SG the morning with her
'He needs a nurse that spends the morning with her.'
→ [+specific] with indicative mood in the relative clause

b. Necesita una enfermera que pase la mañana con ella.
need.3.SG a nurse REL spend.SUBJ.3SG the morning with her
'He needs a nurse to spend the morning with her.'
→ [–Specific] with subjunctive mood in the relative clause
(Leonetti 2004: 80)

(1.60) Marta insultó *(a) un compañero.
Marta insulted DOM a colleague
'Marta insulted a colleague.' (Torrego 1999: 1786f)

Independently of the peculiarities of each phenomenon, two facts must be noted: first, the conditions for the appearance of these phenomena partly overlap (the same recurrent features are found: specificity/definiteness, aspect, topicality…); second, there is a strong similarity to some accounts for PPA, which I will make more explicit in following chapters. Therefore, all these phenomena seem to be interrelated in the sense that they are affected by the same features (e.g., definiteness/specificity). The relation between object movement and CLD, and between DOM and CLD, has just been discussed. In the next sections, I will examine the relationship of these constructions (object movement, DOM and CLD) with PPA.

2.3.2 PPA and object movement

The principal condition for PPA in (Modern) Romance has been claimed to be movement of the object to a pre-verbal position. Cliticization and non-argumental movement (i.e., wh-movement and relativization) are the most relevant contexts for PPA. Derived subjects, too, trigger agreement, although only if the auxiliary is BE, i.e., in passives in all Romance languages and with unaccusatives only in the languages that have auxiliary alternation. According to Poletto (2014), PPA was already restricted to preposed DOs in Old Italian.

This is consistent with López's (2012) idea according to which DOs in Spanish (and probably in other Romance languages) undergo only short scrambling. In this 'intermediate' position, the object stays outside the case-assigning chain, hence DOM must be inserted, but it is still not the appropriate configuration for PPA, which is probably higher. Other operations that force the object to raise further in the tree are needed to reach the position in which PPA occurs.[9] Wh-movement to the CP and cliticization are two such operations. In unaccusative clauses, the object moves to the subject position for case assignment (cf. Perlmutter 1978; Burzio 1981, 1986). In line with Burzio's generalization, verbs that cannot assign a theta-role to the external argument do not assign accusative case to the internal argument either. Hence, the internal argument is moved to a position in which it receives case: nominative in [Spec, TP]. Alternatively, an expletive can be inserted, building a chain with the associate DP, thus sharing the case value. If the expletive fails to also share the ϕ-features of the associate, as in French (see fn. 3 in this chapter), PPA is excluded as well:

(1.61) Il est **arrivé** trois filles.
EXPL be.3SG arrive.PSTPRT.DEF three girl.FPL
'There have arrived three girls.'

At first sight, PPA and object movement do not seem to be a single phenomenon, rather object movement is a precondition for PPA to occur. Not all instances of movement trigger agreement, and the behavior of PPA differs from one language to the other. Recall Example (1.47) shown by Obenauer (1992), in which agreement gives rise to an interpretation contrast. Perhaps this fact provides a clue about the nature of the position in which PPA takes place. If this is the case, it can be claimed that PPA is not triggered by position, but rather by an intervening feature (contra Poletto 2014): cliticization and A′-movement alone cannot account for the systematic differences in the interpretation. Some questions arise

9. Recall the discussion about the movement analysis of clitics and the possible correlation between PPA and the grammaticalization status of the clitic pronoun in fn. 10 in Chapter 1.

out of these facts: Are PPA and DOM two different ways of overtly marking the same 'movement+agreement' operation? Do they satisfy the same requirements? The changes in the conditions for PPA and DOM in diachronic stages of the Romance languages add complexity to this picture: in Old Catalan, for instance, object movement does not seem to play any role in PPA, so that all DOs, definite and indefinite, pre- and post-verbal, agree with the past participle (cf. Part Three). In any case, movement or, more specifically, the motivation for movement seems to be a prerequisite for several complex constructions such as DOM and PPA.

(1.47) Combien de fautes$_i$ a-t-elle **fait-ø/-es** ec$_i$?
how many of mistake.FPL have.3SG-t-she make.PSTPRT.DEF/FPL
'How many mistakes did she make?' (Belletti 2006: 508)

2.3.3 PPA and DOM

It is commonly assumed that DOM is linked to case assignment. The preposition-like element (*a* in Spanish/Catalan and *pe* in Romanian) assigns case whenever the DO fails to receive it (e.g., because of short scrambling, López 2012). Melis & Flores (2009); Zdrojewski (2013) and Company Company (2014) claim that DOM assigns dative. If accusative case is responsible for PPA, we would expect DOM and PPA to exclude each other: either because the DP already has a case assigner (the preposition-like element) and is thus inaccessible for the participle assigning case, or because the object bears dative, in which case agreement cannot take place. Assuming that DOM blocks PPA, a complementary distribution of languages with the one construction or the other is predicted. As a matter of fact, normative Italian and Standard French have PPA but show DOM only sporadically, whereas Spanish and Romanian make systematic use of DOM but lack PPA. However, other cases do not fit so clearly in these categories. For instance, although Portuguese is not typically considered a DOM language (but see Schwenter 2014), it lacks PPA. Catalan requires DOM with personal pronouns, some quantifiers and certain other ambiguous expressions (and in some varieties, also with definite animate DPs), but still retains PPA. As far as I know, the relation between DOM and PPA, as well as their dependence on object movement, has practically not been investigated, with some exceptions such as the nanosyntactic approach to DOM of Rocquet (2013).

There is still another interesting correlation. Stark (2008) suggests that languages that still encode partitivity in their morphology do not have DOM. Both French and Italian have a partitive clitic pronoun (*en*/*ne*) and partitive articles (*de*/*del*) and disallow DOM. The same correlation seems to be valid for PPA: only languages with morphological partitivity allow PPA (French and Italian). Spanish

and Romanian lack partitive expressions and PPA, but have a more or less extended use of DOM. Portuguese has neither PPA, DOM nor partitive morphology. Therefore, the implication is unidirectional: even if a language has already lost (or has never had) morphological partitives, it does not inevitably develop DOM. The morphological expression of partitivity in Catalan is weaker: the partitive article is practically lost, but Catalan still preserves the partitive clitic *en*. Catalan is thus expected to have PPA but no DOM. As I will show in Chapter 3, this claim is mainly correct. Whether this is coincidental or not, the link between partitivity and PPA in Romance seems to be confirmed.

2.3.4 PPA and CLD

The connection between PPA and CLD has been explored occasionally. Franco (1994), for instance, formalizes the correlation between CLD and PPA in Romance as an AgrO-Parameter. One crucial component of his analysis is the grammatical status of the clitic pronoun. Recall that clitics undergo a grammaticalization change from Old Romance to the Modern Romance languages: they originally have a DP structure and end up being heads or even agreement morphemes (Fontana 1993; Bleam 1999, etc.). Clitics that are analyzed as DPs move to or are merged in specifier positions. Clitics already reduced to heads undergo head-to-head movement (i.e., they are incorporated into their host). Assuming that agreement is subject to strict locality conditions, i.e., it succeeds only under a Spec-Head relation, an X°-clitic cannot agree with the verb it adjoins to, since it is not in the adequate configuration for agreement. It is rather the case that the clitic and the past participle compete to check the same feature in a particular functional projection above the VP (e.g., AgrO).

In the same vein, Sportiche (1996) establishes PPA as a diagnostic for the movement analysis of clitics in Romance languages. Whereas NP-movement to [Spec, IP] in unaccusative clauses shows obligatory participle agreement, movement of the clitic is not as 'strong' and allows an optional stopover in an intermediate projection. An adequate explanation of this phenomenon has to take the head properties of the clitic into consideration. In an earlier paper (Sportiche 1990) he proposed that the first part of the clitic movement is phrasal, until the clitic is incorporated into its hosting head. The last process is only possible if the landing site of XP-movement is an A′-position governed by the auxiliary verb to which the clitic is attached. But then clitics should be able to license parasitic gaps (since they fulfill the licensing conditions by virtue of their A′-movement), which, however, is not confirmed by the data. In order to circumvent the problem of parasitic gaps, Sportiche postulates separate projections, called Clitic Voices, linked to case assignment. Accordingly, these projections qualify as A-positions and parasitic gaps

are not licensed any more. With the help of the three clitic construction parameters in (1.56), he derives possible construction types – simple clitics, CLD and scrambling. Nothing else is said about how PPA applies. It is merely assumed that PPA is prevented if the clitic or wh-object either moves covertly or skips [Spec, AgrOP], the locus of participle agreement. In this way, the optionality of PPA remains unexplained or simply subject to optional movement, an explanation that can hardly escape circularity: agreement is optional because movement is optional, but we know that movement is optional because agreement is not obligatory. Although one of the pros of Sportiche's account is that it unifies the explanation of several constructions that at first sight seem unrelated, it still fails to capture the interplay between PPA and CLD.

This is precisely the aim of Tsakali's (2006) work. Departing from the observation that there are either languages with CLD or languages with PPA, but both constructions are not usually found in the same language (Table 1.2), she develops a 'clitic doubling parameter' to account for the alternation of PPA and CLD in Romance.

Table 1.2 Complementarity between CLD and PPA (Tsakali 2006: 109)

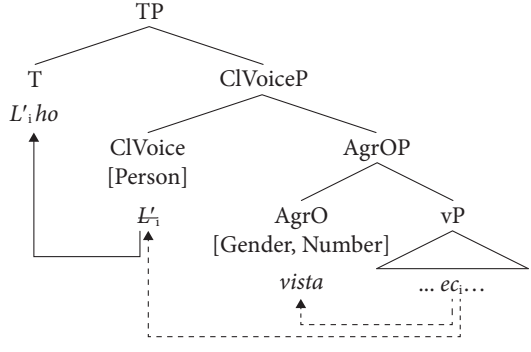
	CLD	*PPA*
Greek	√	X
Argentinean Spanish	√	X
Catalan	X	√
Romanian	√	X
Albanian	√	X
Bulgarian	√	X
French	X	√
Italian	X	√
Serbo-Croatian	X	X
Taqbaylit	√	X
Tarifit	X	√

Tsakali explains clitic doubling (and doubling in general) as a chain forming operation in an analysis that is highly indebted to Sportiche (1996). Following Brody (1995), she claims that only the root position of the chain is theta-related (i.e., assigns or receives a thematic role) and the head of the chain is in a case position. The clitic is thus treated as an expletive forming a chain with a theta-marked associate in object position (a full DP in CLD constructions, an empty element otherwise). According to her, structural mechanisms such as skipping or procrastinating (i.e.,

covert movement) do not really explain optionality, let alone provide a motivation for the split shown in Table 1.2. With the 'clitic doubling parameter,' further developed in Tsakali & Anagnostopoulou (2008), she proposes two distinct ways of checking object features. The main assumption is the existence of two separate functional projections, taken from Sportiche (1996): AgrO and ClVoice. Two scenarios can be distinguished:

1. Split-checking / Languages with PPA
   The DO in the root position of the clitic chain checks the features in AgrO and ClVoice cyclically. The DO enters into two subsequent checking operations, the first one for the features [Gender] and [Number] in AgrO and the other one for the feature [Person] in the ClVoice (1.62).[10] The clitic is the head of ClVoiceP, the participle is in AgrO. CLD is banned by a restriction on overt XPs preventing them from entering into cyclical agreement relations – only empty categories are able to do so (cf. Tsakali & Anagnostopoulou 2008: 343–44; Merchant 2001). A separation of different ϕ-features (person vs. number and gender) is also found in D'Alessandro (2016), who explains different phenomena of southern Italian dialects (e.g., auxiliary selection, DOM and 'omnivorous participial agreement') on the basis of how these features are distributed between vP and TP.

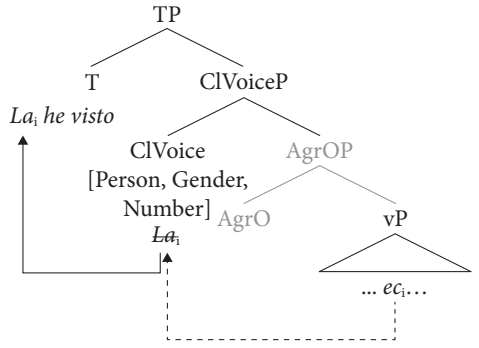
(1.62)



2. Bundle-checking / Languages (potentially) with CLD
   All object features are checked at once in a single projection (AgrO/ClVoice) (1.63). Since the associate DP is not engaged in cyclical checking, it may be realized as a full DP under the appropriate conditions, giving rise to CLD configurations. Tsakali does not make explicit what the exact configuration of bundle-checking is. I assume that, AgrO being inactive, the past participle is incorporated into the auxiliary of the compound tense form.

10. In this and the following examples, arrows with solid lines mark movement and arrows with dashed lines mark agreement relations.

(1.63)



This account is very appealing since it makes clear and powerful predictions to be tested. For example, as discussed in Tsakali (2014), it has obvious consequences for first language acquisition. Since bundle-checking is a more simple operation and demands a less costly derivation, it is expected that L1-learners will first try to adapt their input to bundle-checking, unless they have enough evidence that two separate functional projections are needed – CLD should be easier to acquire than PPA. In the same sense, it is expected that the diachronic path is the other way around: languages with PPA (with a costly split-checking strategy) will turn into languages with CLD (bundle-checking). However, the claims made by Tsakali (2006) and Tsakali & Anagnostopoulou (2008) with respect to the typological distribution of PPA and CLD are too strong. Although most Romance languages fit into their scheme, there are still some problematic languages: Catalan, for example, has both CLD and PPA. Their classification only works if one considers the most conservative varieties of Catalan, in which it is possible to find personal pronouns which are not doubled by a clitic and PPA is assumed to be the most extended variant. But even in these conservative dialects, accusative CLD is optional (mainly in the same context in which CLD occurs in Standard Peninsular Spanish). Therefore, mixed languages do exist, even if they do not seem to be very frequent. As I will show in Chapter 3.3.2, CLD and PPA are in complementary distribution at the clausal level in Catalan, but both structures are available to the language. This can be interpreted as an alternation caused by an ongoing change. PPA is gradually being substituted by CLD. Since PPA and CLD can be considered interface phenomena, this does not come as a surprise.

Other problematic issues in Tsakali's proposal are theoretical. For instance, the split of functional projections does not seem to be properly motivated. This account promotes a proliferation of syntactic structure, while current minimalist assumptions require its reduction, especially concerning Agr projections (which do not have any counterpart at the conceptual-intentional interface). The analysis of different agreement contexts (especially PPA with wh-constituents) and the

motivation for chain formation as a necessary condition for agreement are not articulated enough. Finally, their current approach is not directly applicable to language change without additional assumptions. For these reasons, I will try to improve the theoretical and empirical adequacy of this proposal in Part Two and Part Three by introducing some necessary modifications. I will then show that the amended theory successfully describes and explains the diachronic Catalan data on PPA and CLD presented in Chapter 8 and Chapter 9.

2.4 Interim summary

In this chapter, I have addressed the problem of the optionality and variation of PPA across Romance. As became evident in Chapter 1, purely semantic or syntactic accounts do not seem to be adequate to explain the entire phenomenon. Rather, PPA is a multi-factorial phenomenon that involves the integration of morpho-syntactic and semantic-pragmatic properties. Beyond object movement to certain pre-verbal positions – i.e., the standard account of PPA – topicality and especially definiteness/specificity have turned out to play an important role in the description of participle agreement. The Interface Hypothesis (Sorace 2006, among others) roughly predicts the kind of data we find: interface phenomena show a higher degree of variability/optionality and are more apt to be affected by language contact situations (cf. Fischer & Vega Vilanova 2018) due to their greater computational complexity. Although the IH will be revised later on, it will be necessary to account for the attested interface effects – which will lead to a reformulation of how the different modules interplay and even of the IH.

The features of topicality, definiteness/specificity, etc. have also been supposed to be involved in other object constructions, namely object movement (object shift or scrambling), DOM and CLD. For this reason, I have reviewed the basic properties of these phenomena and their relation to each other and to PPA (Chapter 2.3). I have concluded that object placement is a prerequisite for agreement, but the actual motivation for it must be found in other independently motivated feature(s). Wh-movement, for instance, can hardly affect PPA directly since the features [wh] and [q] do not fulfill requirements of the verb (i.e., the participle), but of the CP. Consequently, the role of definiteness/specificity in the morphological realization of agreement should be considered in more detail.

In Chapter 2.3.4, I have discussed Tsakali's (2006) approach, which explicitly aims at unifying the derivation of PPA and CLD. This account has the advantage of offering clear predictions for language acquisition and language change, compatible with the Interface Hypothesis, or more generally with the interface effects we have seen. However, it shows some empirical and theoretical inconsistencies. The

modification of this approach, and how it can be applied to the synchronic and diachronic explanation of PPA in Catalan, will be the central topics of Chapter 5 and subsequent chapters.

CHAPTER 3

Past participle agreement in Catalan

Although Catalan is repeatedly mentioned in the literature on PPA in Romance, the empirical basis is, with a few exceptions, deficient. Since agreement is generally optional in Catalan, it is not quite clear how it should fit into the different classifications that have been proposed (see Chapter 1.1, and 2.3.4). Furthermore, the diachronic perspective (not only for Catalan) has often been neglected. Many questions are still unanswered, for example, how optionality emerges or what the trigger for the loss of PPA is. Some papers put emphasis on the grammaticalization process of the auxiliary in the compound tenses from Latin through to the Modern Romance languages (e.g., Macpherson 1967). One can find valuable data there to understand changes with respect to the verbal paradigm, properties of the auxiliaries, subcategorization frames, etc., but a compelling reason for the loss of PPA is lacking. This tendency is confirmed in many Romance varieties: Spanish, Romanian and Portuguese completely lack PPA, and in French and Italian the distribution of PPA is gradually decreasing. What are then the mechanisms which inevitably lead to the loss of morphological participle agreement?

The situation of Catalan is particularly interesting (cf. Muxí 1996) because: (i) the process of loss begins relatively late so that, in contrast to Spanish, Portuguese and Romanian, there are enough written documents to carry out a corpus search which allows a detailed description of the change; and (ii) the current use of PPA in Catalan is never obligatory, as opposed to Italian, but it is still alive in many varieties, which can be understood as a symptom of an ongoing language change. Since the normative grammar of Catalan is more permissive than, for example, the French one, the effects of change (mainly the optional realization of agreement) are not obscured by external pressures (or, at least, to a lesser degree), which often work against the natural development of language (see Chapter 3.2).

In this chapter, I will discuss Catalan data found in the literature, showing that they are insufficient to understand the entire behavior of PPA over time. In 3.1, I will summarize the main contexts in which PPA is accepted in Standard Catalan, going through the same contexts as discussed in Belletti (2006) for Italian and French. In 3.2, I will provide some insights on how different normative grammarians have tried to systematize the phenomenon and will take their discrepancies as an argument for handling PPA as a 'case of doubt,' according to Klein (2003). In

the last section, I will illustrate how the same correlations presented in 2.3, which have the feature [Specificity] in common, apply to Catalan as well.

3.1 Peculiarities of PPA in Catalan

At first sight, Catalan patterns mostly with French. The auxiliary BE always triggers PPA, both in passive sentences – though limited to the lexical verb (1.64a) (cf. Cortés 1993) – and in unaccusative sentences (1.64b). It must be noted that auxiliary alternation has almost disappeared in Catalan and the auxiliary BE for unaccusative verbs is restricted to certain archaic constructions and some contact varieties – for example, the Catalan spoken in the South of France (see Veny 1982). The verb *néixer* 'to be born', for instance, is still used with the auxiliary BE in some traditional songs (1.65a), whereby HAVE may be used in the same song for the same verb a couple of lines later (1.65b).

(1.64) a. Aquestes sabates han **est-at/*-ades**
this shoe.FPL have.3SG be.PSTPRT.DEF/*FPL
fabric-ades/*-at aquí.
manufacture.PSTPRT.FPL/*DEF here
'These shoes have been made here.'

b. Elles són **veng-udes/*-ut** de França.
they.FPL be.3PL come.PSTPRT.FPL/DEF from France
'They came from France.'

(1.65) a. [El nen Jesús] és **nat** en una establia
[the child Jesus] be.3SG born.MSG in a stable
'Jesus child was born in a stable'

b. ha **nascut** un minyonet, ros i blanquet
have.3SG born.DEF a baby.DIM blond and white.DIM
'a baby is born, blond and pale'

With 3rd person clitic pronouns, PPA is optional in Catalan, either in CLLD or simple object cliticization. However, as Fabra (1919) already noticed, agreement is much preferred with feminine singular than with the other pronouns ((1.66), the non-preferred form is between brackets). With 1st and 2nd person pronouns, PPA is not usual, although in some dialects (e.g., Balearic Catalan) it is still quite common (1.67) (cf. Rosselló 2002).

(1.66) a. No l' he **vista** (**vist**).
not CL.ACC.3FSG have.1SG see.PSTPRT.FSG (see.PSTPRT.DEF)
'I haven't seen her.'

b. No els he **vist** (**vists**).
not CL.ACC.3MPL have.1SG see.PSTPRT.DEF (see.PSTPRT.MPL)
'I haven't seen them.'

(1.67) ?No m' ha **vista**.
not CL.1SG have.3SG see.PSTPRT.FSG
'(S)he hasn't seen me.'

Agreement with preposed wh-elements in relative or interrogative clauses is only marginally accepted in Catalan, in contrast to French. In some varieties (Balearic and varieties in contact with French), however, it is optionally accepted and used.

(1.68) a. Aquesta és la pel·lícula que he **vist-ø/ *-a**.
this.FSG be.3SG the film.FSG REL have.1SG see.PSTPRT.DEF/*FSG
'This is the film I've seen.'
b. Quina pel·lícula has **vist-ø/*-a?**
which film.FSG have.2SG see.PSTPRT.DEF/*FSG
'Which film have you seen?'

Since Catalan has practically no auxiliary alternation and lacks expletive pronouns, many of the other contexts for PPA discussed, for example, in Kayne (1985) and Le Bellec (2009) are not relevant for Catalan (impersonal sentences, reflexive or reciprocal pronouns, etc.). However, with respect to partitive clitics, as well as control and causative verbs, the distribution of Catalan PPA patterns with Italian rather than French. With partitive clitics, although still optional, PPA is fully acceptable. Recall that spoken French shows the same behavior but with several restrictions – for example, mass nouns and atelic verbs (see Chapter 1.1.1). For Catalan no such conditions have been defined, which could mean either that there are no restrictions on PPA with partitives in Catalan or that these contexts have not yet been studied thoroughly.

(1.69) N' he **vist-ø/-es** algunes.
CL.PART have.1SG see.PSTPRT.DEF/FPL some.FPL
'I have seen some of them.'

Agreement in control structures is a bit more complex. Standard Catalan has mainly the same rule as French. Agreement on the past participle of *verba dicendi*, such as *dir* 'to say' or *demanar* 'to ask, to order', depends on the grammatical relation of the controller (usually a clitic that climbs to the main clause) in the embedded clause (i.e., the infinitival clause): if it is the subject, PPA is preferred (1.70a); if it is the object, PPA is banned (1.70b). Causative verbs may show object agreement in either case (1.71) (cf. Bastardas i Parera 2003). These restrictions, however, seem to have been imposed rather artificially by a normative grammar

that is clearly oriented to the French models (see below). Spontaneous speech is, in fact, more tolerant toward these cases, in the same way spoken French differs from the formal variety (cf. MacKenzie 2013; Berta 2015; Stark 2017, etc.).

(1.70) a. (Les noies) Les han **sent-it/-ides** cantar una
the girl.FPL CL.ACC.3FPL have.3PL hear.PSTPRT.DEF/FPL sing a
cançó.
song
'They have heard them sing a song.'

b. (La cançó) L' han **sent-it/*-ida** cantar a les
the song.FSG CL.ACC.3FSG have.3PL hear.PSTPRT.DEF/*FSG sing to the
noies.
girls
'They have heard the girls sing it.'

(1.71) a. Les ha **fet-ø/-es** treballar durament.
CL.ACC.3FPL have.3SG make.PSTPRT.DEF/FPL work hard
'(S)he made them work hard.'

b. Les ha **fet-ø/-es** escurçar.
CL.ACC.3FPL have.3SG make.PSTPRT.DEF/FPL shorten
'(S)he let (somebody) shorten them.'

3.2 PPA as a case of doubt: A digression on normative grammar and the realization of PPA[1]

At first glance, the Catalan data do not diverge significantly from the patterns described for Italian or French. Just like in these languages, Catalan has a set of clearly defined rules that control agreement. But as I have argued above, PPA is a highly variable phenomenon and, especially in Catalan, allows optionality. If this is seen from the perspective of the Interface Hypothesis, PPA should be particularly vulnerable to language change, which would also explain optionality. In such a situation, the discrepancy between grammatical descriptions and actual language use may become more acute. The aspiration to systematize and rationalize heterogeneous data may lead to a strict, 'unnatural' normalization. This may contaminate language use to the point that spontaneous data or judgments become inaccessible. Any attempt to intervene in a construction subject to ongoing language change – even more if it is an interface phenomenon – is likely to suffer from arbitrariness, artificiality and inconsistency. In this context, Sobin (1997)

1. The discussion in this chapter is based on Vega Vilanova (2019).

speaks of "grammatical viruses" and Norde (2009) about "degrammaticalization," two mechanisms that can invert the direction of change. Could PPA in Catalan be considered such a case? There is good reason to think it is.

Due to the peculiar history of the Catalan language, the first prescriptive works on Catalan were written relatively late, at the beginning of the 20th century, a period known as the *Renaixença* ('Revival'). This is a consequence of the Spanish predominance over Catalan since the end of the Middle Ages. Almost all written documents had been written in the prestige language, namely Spanish. The *Renaixença* was, thus, a cultural movement trying to revitalize Catalan culture and language. Lacking a continued literary tradition, the only language model available for Catalan grammarians was an archaic language (i.e., Old Catalan), which was very divergent from the current use of the language. Furthermore, the predominance of Castilian Spanish was felt to be a corrupting factor, so there was a tendency to avoid any structures that sounded or looked Spanish whenever there was a genuine Catalan alternative. This implied that Spanish grammars could not serve as a reference for the new Catalan norm. Instead, the new paradigm for the *llengua de cultura* would imitate the French and, to a lesser degree, the Italian norms. It is thus legitimate to ask to what extent the data presented in Chapter 3.1 reflect (or reflected) actual use. In addition to the Interface Hypothesis, there is another way of looking at variability and optionality: to consider it as a 'case of doubt' (*Zweifelsfall*) in the sense of Klein (2003).

Three criteria define what constitutes a case of doubt: (i) there are at least two parallel forms with the same (basic) meaning; (ii) these forms are phonologically similar; and (iii) the variation is accompanied by a metalinguistic debate about their correct use (according to a normative definition of 'correctness') – i.e., even highly proficient native speakers are unsure when to use one form or the other.

Klein gives several examples of cases of doubt in different language domains in German, from purely phonetic variation to syntactic, semantic and pragmatic variation: morphological doublets such as *siebte*/*siebente* 'seventh', hesitation in gender marking such as *das* (neuter) / *der* (masculine) *Balg* 'the brat', variation in verbal agreement such as in *Er oder ich hat*/*haben das getan* 'He or me has/have done it', etc. Among the causes for their emergence, he mentions language contact and language change, conflicting rules in language systems or socially relevant metalinguistic intervention. The last factor really seems to play a role in Catalan PPA.

PPA in Catalan apparently fulfills the two first criteria as a case of doubt. The agreeing and the default forms of the participle do not convey any obvious contrast in meaning. Both forms are equally accepted in contexts where PPA is possible in Standard Catalan; the preference for one form or the other depends on stylistic choice, often encouraged by the wish to keep Catalan distinct from Spanish, as will be shown below. The second criterion is also satisfied, since the two variants

are merely inflected forms of the same stem, hence they are phonologically similar. But is there a concomitant metalinguistic debate on the use of PPA in Catalan?

In 1906, inspired by the ideas of the *Renaixença*, the 1st international congress of the Catalan language (*Primer Congrés Internacional de la Llengua Catalana*) took place in Barcelona. This was a milestone in the development of the grammatical works throughout the 20th century. The congress, centered around three main fields (language, literature and society), brought about 3000 participants together. The sixth working session in the linguistic block was devoted to PPA under the title "*Concordansa del participi ab el terme d'acció*" ('Agreement of the participle with the term of action'). Two eminent philologists were involved in a heated debate: Antoni Maria Alcover, organizer and president of the congress, and Pompeu Fabra. In Alcover's opinion, obligatory PPA should be reintroduced in every context:

> l'infracció de la lley de concordansa no es una evolució espontania sobrevinguda naturalmente dins la nostra llengua, sinó que's dèu esclusivament a l'influencia castellana, que desde'l sigle XVI deturpa y violenta l'estructura interna del català[2]
> (Primer Congrés 1908: 235)

It must be noted that Alcover shows a constant rejection of what he calls a "Castilian influence" throughout his contributions in the proceedings published after the congress, as well as in his other linguistic works. In contrast, Fabra replies that PPA obeys natural restrictions as in other Romance languages, for instance French and Italian, which were not considered to be under Castilian influence. He thus proposes following the same solutions as these neighboring languages and adapting their normative rules to the newly shaped Standard Catalan. He adds, however, some modifications based on personal observations on language use (not always well founded but still very valuable and the fruit of a sharp linguistic intuition), as for instance the preference for agreement only with feminine plural objects (and the rejection of it with masculine plural forms). His final proposal roughly corresponds to the data presented in Chapter 3.1.

Fabra's eclectic view, devoid of ideological biases as much as possible, prevailed over Alcover's proposal. Most grammarians during the 20th century have leaned toward Fabra's recommendations, although usually with slight modifications. Marvà (1968: 139–41), for instance, considers PPA to be obligatory with 3rd person clitics, irrespective of gender and number. 3rd person clitics also trigger

2. "the violation of the agreement law is not a spontaneous evolution that suddenly happened in our language in a natural fashion, but it is due exclusively to the Castilian influence, which has been tarnishing and forcing the internal structure of Catalan from the 16th century on" (my translation).

obligatory agreement in the participle of six verbs selecting VP-complements, without paying attention to their grammatical relation to the embedded verb: *voler* 'to want', *poder* 'can', *saber* 'to be able to', *fer* 'to let', *gosar* 'to dare', *haver de* 'must' (1.72). With all other control verbs, PPA is obligatory if the clitic corresponds to the embedded subject and is ruled out if the clitic is the embedded object. Unfortunately, Marvà does not offer any justification for the division of the control verbs into two groups and, more importantly, it does not reflect the speakers' habits: whereas agreement of the causative verb in (1.72a) and of the perception verb in (1.72b) are readily accepted (albeit only with feminine forms, hence the b-example is still dispreferred), (1.72c) sounds odd in Modern Catalan and is perhaps not even attested in Old Catalan.

(1.72) a. La reparació, l' hem **feta** fer pel manyà.
the repair CL.ACC.3FSG have.1PL let.PSTPRT.FSG do by-the locksmith
'We let the locksmith repair it.'

b. No els hem **sabuts** veure.
not CL.ACC.3MPL have.1PL be able.PSTPRT.MPL see
'We couldn't see them.'

c. Els nens, no els hem **gosats**
the kid.MPL not CL.ACC.3MPL have.1PL dare.PSTPRT.MPL
deixar sols.
leave alone.MPL
'We haven't dared to leave the kids alone.'

Other grammatical works have a more descriptive aim and are thus more permissive. Badia i Margarit (1962), for example, describes agreement in terms of frequency, i.e., agreement as a preference rather than an obligation, and is open to the idea that there is dialectal variation. He does not base his considerations on quantitative or dialectal studies but rather on impressionistic observations. Solà (1987) does not even consider PPA among the "controversial issues of the Catalan grammar" he is devoted to, either because of the difficulty of finding solid empirical data, or because PPA is thought of as a merely stylistic matter.

The *Atlas Lingüístic del Domini Català* (ALDC, Veny & Pons i Griera 2006), an extensive dialectal study of all Catalan-speaking territories, provides only two examples of the acceptability of PPA: one with a feminine singular 3rd person clitic (1.73a) – which is the most acceptable context for agreement anyway – and the other one with a relative pronoun (1.73b).[3] There are no further data with differ-

3. According to unpublished data of the *Atlas* accessed by Gavarró & Massanell (2013), the sentence with the relative pronoun as controller of agreement showed PPA only in Rossellonese (a contact variety with French) and Majorcan Catalan.

ent constructions or comments about applicable restrictions. These data are thus completely insufficient for a proper analysis of PPA.

(1.73) a. Aquesta noia, ja l' hem **vista**.
this girl.FSG already CL.ACC.3FSG have.1PL see.PSTPRT.FSG
'This girl, we have already seen her.' (ALDC, Question 2405)

b. La noia que hem **vist** és bonica.
the girl.FSG REL have.1PL see.PSTPRT.DEF be.3SG beautiful.FSG
'The girl we have seen is beautiful.' (ALDC, Question 2404)

Even in the *Gramàtica del Català Contemporani* (Solà et al. 2002), a grammar that intends to be as descriptive and comprehensive as possible, the author of the chapter devoted to participle agreement (Rosselló 2002) agrees in the main points with Marvà's grammar, although she allows for variation, especially in Balearic Catalan. More specifically, she considers PPA to be possible in Balearic Catalan with 1st and 2nd person pronouns (especially feminine), with reflexive clitics irrespective of person, with unaccusative verbs and in pronominal passives. All these contexts require the use of the auxiliary HAVE. PPA is also possible with some relative pronouns (*que* 'that') and certain interrogative words (*quin* 'which', *quant* 'how much/many'). In short, only post-verbal DP objects are systematically excluded as triggers of object agreement (but see Chapter 3.3.1). For Rosselló, dislocation (i.e., A′-movement) is a condition for PPA. Finally, she claims that both the embedded subject and the embedded object of any causative or perception verbs trigger optional agreement in all varieties of Catalan.

To summarize: In the second half of the 20th century, the interest in PPA in the context of normative and descriptive grammars decreased. However, it is still part of formal instruction in school, and even style guides at some universities (e.g., the Universitat de Barcelona)[4] prescribe agreement as obligatory in some contexts. This situation leads to confusion among speakers (even highly proficient ones) about the grammatical status of PPA. There is a gap between usage and norm, and the growing tolerance of optionality is a rather perturbing factor. The expression of this insecurity is quite genuine in online discussion forums. In *El Punt Avui* in January 2013, a user posted an article entitled "*La nefasta influència del castellà en el català culte*".[5] The author maintains that PPA is extremely frequent among Valencian speakers, though admitting that PPA is only common with feminine objects:

4. <http://www.ub.edu/cub/criteri.php?id=1159> (26 March 2020).

5. My translation: "The devastating influence of Castilian on the cultivated Catalan."

> Tots els valencians hem fet sempre eixa concordança i, actualment, la inmensa majoria de nosaltres continuem fent-la. Encara que en el cas del masculí plural l'hem perduda per complet des de fa molt de temps[6] (elpuntavui.cat, 28.01.2013)

He also considers the fact that the default form is also accepted in normative grammars to be a "big and serious mistake," because this is "mutilating the language in a deplorable way" and "bringing it a little bit closer to Castilian." This is only an example of the resentment against the Castilian influence that can be found in online forums. Whereas some users reject agreement categorically (it is felt to be dialectal or non-standard), other speakers think that PPA should be "reintroduced, especially in the written language, but also in the spoken language whenever possible" (in the forum *El Racó Català* in August 2005) and overgeneralize it with utterances such as (1.74). In this sentence, the past participle agrees with the nominative object of the psych verb *agradar* 'to like'. The auxiliary verb is not BE and the main verb is not unaccusative either (*pace* Belletti & Rizzi 1988), so that it is difficult to justify how this construction can be integrated into the contexts in which PPA usually appears in Romance.

(1.74) *A mi, la literatura castellana, mai no m' ha **agradada**.
to me the literature Castilian never not CL.1SG have.3SG like.PSTPRT.FSG
'I've never liked the Castilian literature.'

In sum, PPA in Modern Catalan seems to fulfill the third criterion of being a 'case of doubt': even competent speakers have trouble identifying (or justifying) the 'correct' use of agreement morphology. There is a clash between language policies (standardization, norm and formal instruction) and spontaneous language use constrained by subconscious mechanisms of language change. Optionality is an indicator of an ongoing language change (see Chapter 2), and this should be taken into consideration before giving normative recommendations, in order to avoid forcing an unnatural behavior. MacKenzie (2013) claims that, to a certain extent, PPA in French is the product of a "grammatical virus," a construction that L1 speakers do not acquire until they receive formal instruction and which is restricted to specific registers or social classes. It is conceivable that the new (or reintroduced) feature may expand to other contexts or registers, but it is rather unlikely that such a 'viral' rule will have a long-lasting effect, since it ignores the intricate conditions and interactions of PPA with other phenomena. Thus, I will now return to the Catalan data and examine some facts that prove that PPA behaves like an interface phenomenon in Catalan as well (Chapter 3.3.1). I will then

6. "All Valencians have always made agreement and, nowadays, the immense majority of us keep doing it. Although in the case of masculine plural we lost it completely a long time ago" (my translation).

xsdiscuss how agreement interacts with object movement, CLD and DOM (Chapter 3.3.2). In the last section, I will discuss how aspect and definiteness/specificity influence the syntax and syntactic change of a specific construction in which the past participle is essential – the absolute small clause.

3.3 PPA in Catalan: A phenomenon at the interfaces?

Catalan data have already been addressed by some of the approaches discussed in Chapter 1.2. For example, Carmack (1996) and Berta (2015) correlate the loss of PPA with the grammaticalization of the auxiliary and the reinterpretation of the small clause. For Lois (1990) and Muxí (1996), the loss of PPA correlates with the availability of auxiliary alternation. Since Catalan does not have CLD, Tsakali & Anagnostopoulou (2008) propose split-checking as a syntactic analysis for the PPA construction. From another perspective, Cortés (1993) justifies the variability of agreement patterns using different morphological rules guided by auxiliary verbs. Data on Standard Catalan (often guided by normative considerations), as generally used in these accounts, fit quite well in the approaches discussed above, but their conclusions are often less tenable if one looks at more fine-grained spontaneous data.

In this section, I will show that PPA in Catalan is as complex as in other Romance languages (French and Italian) and that the same interactions with specificity, DOM and CLD can be found. In other words, morphological rules or positional criteria cannot capture all the peculiarities of the PPA construction. Instead, considering Catalan PPA an interface phenomenon – or, more generally, considering the interplay of morphological, syntactic, semantic and pragmatic information – seems to be a promising approach to the multi-factorial nature of participle agreement, its variability and its optionality.

3.3.1 The role of specificity in Catalan PPA

As in Italian and French, only pre-verbal objects – cliticized, left-dislocated or promoted to subject position in passive or unaccusative clauses – trigger agreement, and as in these languages, a positional rule does not seem to be sufficient to account for the semantic/pragmatic distinctions of certain constructions (see the discussion in Chapter 2.2.2). Obenauer (1992) shows that participle agreement in French is associated with a D-linked reading of the wh-words *quel* 'which' and *combien* 'how much/how many'. But agreement with the equivalent elements in Catalan (*quin* and *quants*) is only marginal, as it is disallowed with wh-constituents in general. More interesting questions are whether there is parallel evidence

of definiteness/specificity effects in other structures in Catalan, and whether Obenauer's observations are applicable in Catalan. There are at least two pieces of evidence supporting the hypothesis of such specificity effects.

The first piece of evidence comes from Majorcan Catalan. Salvà i Puig (2017) shows that in this variety some post-verbal objects are still able to trigger PPA:[7]

(1.75) Jo no t' he **toc-ada/-at** sa mel.
I not CL.2SG have.1SG touch.PSTPRT.FSG/DEF the honey.FSG
'I didn't touch the honey.' (Salvà i Puig 2017: 55)

Although this case of PPA is optional, there are some contexts in which agreement is impossible:

(1.76) a. Na Maria sempre ha **tem-ut/*-udes** ses bubotes.
the Maria always have.3SG fear.PSTPRT.DEF/*FPL the ghosts.FPL
'Maria has always been afraid of ghosts.'

b. Es poal de fems ha **fet-ø/*-a** pudor durant tot
the wastebin have.3SG make.PSTPRT.DEF/*FSG stink.FSG during all
es sopar.
the dinner
'The wastebin was stinking during the whole dinner.'
(Salvà i Puig 2017: 56–7)

The contexts in which agreement is out comprise clauses with stative verbs, i.e., activities or atelic dynamic events. Salvà i Puig thus concludes that PPA with post-verbal objects in Majorcan Catalan is conditioned by the inner aspect of the verb. This is a division which strongly resembles the distribution of accusative and partitive case in Finnish described in Kiparsky (1998). Aspect, specificity, differential object marking and PPA are thus closely related. The different readings of (1.77), according to Salvà i Puig (2017: 67), are almost the same as Obenauer (1992) shows for French.

(1.77) a. Aquest curs he **tengudes** unes estudiants
this school year have.1SG have.PSTPRT.FPL some student
brillants.
brilliant.FPL
'This year I have had some brilliant students.'
(→ all my female students have been brilliant)

7. Since the beginning of the 20th century, however, this property has been rapidly decreasing. Nowadays, only older speakers optionally use PPA with post-verbal objects. This structure is not isolated, though: Occitan and some Italian dialects (Manzini & Savoia 2005) also show cases of agreement with post-verbal objects.

b. Aquest curs he **tengut** unes estudiants
this school year have.1SG have.PSTPRT.DEF some student
brillants.
brilliant.FPL
'This year I have had some brilliant students.'
(→ only some of my female students have been brillant)

Salvà i Puig, following Travis (2000) and MacDonald (2008), identifies the position of the aspectual projection between vP and VP. This projection "instantiates the so-called *object-to-event mapping* through an *Agree* relation" (Salvà i Puig 2017: 68). For telic events, this projection is endowed with an unvalued feature of quantization [q] and ϕ-features of the direct object [uϕ]. The direct object provides the value for [q]: specific objects assign it a positive value; bare nouns assign a negative one. In contrast, for the expression of atelic events, this projection is not needed at all, so PPA is excluded from the outset. However, it is not quite clear why only positive values for [q] can trigger PPA, since [−q] on the aspectual head would also carry the same object ϕ-features – unless ϕ-features are ancillary to [+q], which seems to be an ad hoc postulation; a different solution for the covariation of the object features is developed in Chapter 10.2.2 and 10.3.2 on the basis of Hawkins's (1982) concept of 'cross-category harmony'. Interestingly, the apparent association of positive aspectual features and ϕ-feature agreement is also found in some stages of Old Catalan, as I will show in Chapter 9 and especially in Chapter 9.3.

Additionally, Salvà i Puig assumes with Belletti (2004) that topical objects must agree with a higher head – the Low Topic Phrase – responsible for givenness (1.78). On its way to [Spec, LowTopicP], the object may have a stopover in [Spec, AspP] and trigger PPA – though optionally. Therefore, objects that do not agree with LowTopic° cannot trigger PPA. Post-verbal objects in Majorcan Catalan are analyzed as right-dislocated and form a chain with a resumptive *pro* probably in this position (Spec, LowTopP) (Salvà i Puig 2017: 61). Unfortunately, this explanation is rather speculative. It is true that DOs that cannot be dislocated, i.e., that cannot be interpreted as low topics, such as negative polarity items (cf. Cinque 1990), do not trigger agreement (1.79), but not all objects that trigger PPA (in former diachronic stages of Catalan) seem to be interpretable this way.

(1.78) $[_{\text{LowTopicP}}\ [_{v^*\text{P}}\ [\ _{\text{AspP}}\ [\ _{\text{VP}}\ \ldots\ \text{DO}\ \ldots\ ]]]]$

(1.79) No havia **pres-ø/*-a** cap rabiada mai.
not have.PST.3SG take.PSTPRT.DEF/*FSG no irritation never
'(S)he had never had a fit.' (Salvà i Puig 2017: 71)

For the second piece of evidence for (residual) specificity effects in Catalan PPA, I will take into consideration constraints on different verb classes. Recall that sentences such as (1.74), with a psych verb, do not allow agreement on the past participle. There is another verb which is intrinsically incompatible with PPA: the existential verb *haver*(*-hi*). A cursory search in the Corpus de Català Contemporani de la Universitat de Barcelona (CCCUB, <http://www.ub.edu/cccub/>) and the Corpus Textual Informatitzat de la Llengua Catalana (CTILC, <http://ctilc.iec.cat>) shows that not even when the internal argument is preposed (e.g., through cliticization) is PPA common with the existential verb (1.80). However, it is possible to find some instances of PPA with *haver*(*-hi*) in texts until the end of the 19th century, as well as sporadic occurrences during the 20th century (1.81). Neither psych verbs nor existential verbs designate telic events. Hence, the same interaction between aspect – i.e., inner aspect – and PPA is observable.

(1.80) sempre ny'[8] ha rivalidats de lloc com ha ny'
always CL.PART have.3SG rivalry.FPL of place as have.FSG CL.PART
hagut sempre, no?
have.PSTPRT.DEF always not
'There are always territorial rivalries, as there have always been, aren't there?'
(<http://hdl.handle.net/2445/15807>, row 78; 30.03.2020)

(1.81) [visites] n' hi havia **hagudes** tantes
[visit.FPL] CL.PART CL.LOC have.PST.3SG have.PSTPRT.FPL so-many.FPL
'there had been so many (visits)'
(Miquel Àngel Riera, "Panorama amb dona", 1983; <http://ctilc.iec.cat>; 30.03.2020)

Another domain in which the connection between participial aspect and the properties of the object DP is visible is found in the definiteness restrictions of absolute small clauses, which are discussed at the end of this chapter.

3.3.2 Correlations among object phenomena

In accordance with the previous discussion, we would expect there to be interactions of PPA with object placement, CLD and DOM in Catalan, similar to those found in French and Italian. There is no clear evidence for object movement in Modern Catalan, but the data on CLD and DOM seem to confirm this prediction.

Compared to Spanish, CLD is quite restricted in Catalan. Even with full pronouns, some speakers consider CLD to be optional (1.82a). CLD with dative

8. Strictly speaking, the form *ny'* /ɲ/ must be seen as the fusion of the partitive and the locative clitic.

arguments is, for speakers with a lower degree of Castilian influence (or a higher degree of Catalan language dominance), not acceptable (1.82b). Only doubling of Experiencer, Possessor or Benefactive datives is obligatory (1.82c). The extension of CLD (and the change from it being optional to it being obligatory) is a relatively recent innovation (cf. Vega Vilanova et al. 2018 for some more data).

(1.82) a. A la festa només (el) vaig veure a ell.
at the party only CL.ACC.3MSG see.PST.1SG to him
'I only saw him at the party.'

b. A la inauguració (#li) van donar flors a l' Ada Colau.
at the inauguration CL.DAT.3SG give.PST.3PL flowers to the A. C.
'At the inauguration, they gave flowers to Ada Colau.'

c. A la noia *(li) agrada la xocolata.
to the girl CL.DAT.3SG like.3SG the chocolate
'The girl likes chocolate.'

Remember that Tsakali & Anagnostopoulou (2008) claim that there is a split between languages with CLD and languages with PPA. In Catalan, both phenomena are present. However, whereas PPA is restricted to a small set of constructions in which it is always optional, CLD seems to be extending to new contexts and becoming obligatory – i.e., going down the hierarchy shown in Figure 1.3. In other words, CLD and PPA are in an inverse relation: the progressive loss of PPA is going hand in hand with the rise of CLD. This can be seen as a typical language change situation, in which the old structure (PPA) is gradually replaced by a newer one (CLD), allowing more or less extended periods of coexistence and optionality. In this sense, a diachronic approach can be more useful than a synchronic perspective in identifying which features are the most relevant ones for analyzing the optionality of PPA and CLD – taking for granted that these constructions are subsequent expressions of a single feature – and how they emerge and further develop.

DOM, too, is quite restricted in Catalan. Basically, only personal pronouns are usually differentially marked (cf. Escandell Vidal 2009, and references therein). DOM with full DPs is rare, although there are some generally accepted exceptions (which are irrelevant for the discussion at issue). Rocquet (2013) suggests that PPA is a type of differential marking. According to this, PPA and DOM should exclude each other. Related to this idea, I would like to draw attention to some data that have remained unnoticed so far. Sentence (1.83a), with CLD and DOM, is perfectly acceptable[9] (in consonance with Kayne's generalization). (1.83b), however, is

9. The judgments were provided by Catalan speakers from Southern Catalonia. Other varieties might rate the sentences in (1.83) differently. However, this would not substantially change the fact that, at least for some speakers, the relation between PPA and DOM is evident.

ungrammatical or at least only marginally acceptable: a sentence with CLD/ DOM and PPA at the same time is rejected (syntactic doubling is possible, but not 'tripling'). In order to repair this sentence, the past participle must bear default agreement, as in (1.83a), or the DO must be dislocated, as in (1.83c), which is fine again.

(1.83) a. Avui les he **vist** a elles.
today CL.ACC.3FPL have.1SG see.PSTPRT.DEF to them.FPL
'I have seen them today.' → √ CLD/ DOM

b. * Avui les he **vistes** a elles.
today CL.ACC.3FPL have.1SG see.PSTPRT.FPL to them.FPL
→ * CLD/ DOM + PPA

c. Avui les he **vistes**, a elles. → √ CLRD + PPA

In sum, some effects of definiteness, specificity and/or aspect on PPA, although quite tenuous and scattered around a set of heterogeneous constructions in different varieties, are attested in Modern Catalan. This provides support for the idea that an explanation of PPA based exclusively on a position rule of the DO with respect to the verb is insufficient: in fact, PPA in Catalan behaves like an interface phenomenon.

3.3.3 Further evidence: Definiteness effects in absolute small clauses

The discussion and analysis of the data shown in this section are taken from Vega Vilanova (2016). I refer to this paper for further details.

So far, I have discussed data with the past participle depending on an auxiliary verb. However, the past participle is involved in another construction that does not require any auxiliarization, namely, the absolute small clause (ASC). The term ASC encompasses a "variety of adjunct constructions that convey modal, temporal, causal, conditional, or similar information to the main clause" (Vega Vilanova 2016: 333). Here again, some definiteness effects (i.e., interface effects) are found.

ASCs can be construed on a transitive verb (1.84a) or on an unaccusative verb (1.84b), but not on unergative verbs (1.84c). For this reason, ASCs represent a good diagnostic tool for unaccusativity (cf. Perlmutter 1978; Levin & Rappaport-Hovav 1995).

(1.84) a. [**Acabats** els deures], podeu sortir a jugar.
finish.PSTPRT.MPL the homework.MPL be-allowed.2PL go-out to play
'As soon as you finish your homework, you are allowed to go out and play.'

b. **Arribats** a la meta, van caure a terra.
arrive.PSTPRT.MPL to the goal fall.PST.3PL to ground
'When they arrived at the goal, they fell to the ground.'

c. *Dormits bé tota la nit, estareu més concentrats.
sleep.PSTPRT.MPL well all the night be.FUT.2PL more focused
'If you have slept all night, you will be more focused.'

Among the properties discussed in Vega Vilanova (2016), there is one peculiar restriction that has often been disregarded in the analyses: non-specific DP arguments are generally excluded from this construction. A bare noun (1.85b) and a non-specific indefinite DP (1.85c) yield ungrammatical outputs.

(1.85) a. Acabats els deures, …
b. *Acabats deures, …
c. *Acabats molts deures, …

Although the CP is probably absent altogether (cf. López 1994; Alcázar & Saltarelli 2007), ASCs must have enough TP-structure to host negation, voice and aspect. Participle agreement in ASCs is obligatory (in any Romance language) due to their passive structure: pronominal substitution proves that the DP argument bears nominative case (1.86a);[10] agentive adjuncts are accepted (1.86b), although only marginally. On its way to the subject position, the DP argument moves over the participle and triggers compulsory morphological agreement. The verb, however, must raise further up in order to obtain the unmarked word order V-argument.

(1.86) a. **Triada** ella /*-la entre totes les
choose.PSTPRT.FSG she.NOM / CL.ACC.3FSG among all the
candidates,…
candidate.FPL
'As she was chosen among all the candidates,…'
b. **Trobades** les joies per la policia, …
find.PSTPRT.FPL the jewel.FPL by the police
'Once the police found the jewels, …'

The ban on bare nouns can be put into relation with a general restriction on passive clauses (Bartra-Kaufmann 2007). The ban on indefinite DPs, however, is unexpected. It is also unlikely that some pragmatic requirements disallow indefinite DPs (i.e., new referents) in adjuncts such as ASCs. Other semantically equivalent structures (e.g., full clauses) do not show any definiteness restrictions. The source of this constraint must then be syntactic in nature, relying on the feature configuration of the clause. Vega Vilanova (2016) suggests that this restriction arises as

10. According to Belletti (2008: 82), this is not valid for Italian, since accusative clitics are possible:

(i) Conosciutami / Salutatala / Incontratici…
know.PSTPRT.FSG-CL.1SG / greet.PSTPRT.FSG-CL.ACC.3FSG / meet.PSTPRT.MPL-CL.1PL

the past participle imposes increasing limitations on the aspectual interpretation of the small clause. This is translated into restrictions on the DPs the ASC can combine with. In Old Catalan there is a greater combinatorial freedom: word order within the small clause was free and there was no definiteness restriction on the nominal argument – all phrase types in (1.85) are attested. Once the present participle and the gerund conflate and the 'gerundival small clause' develops, the ASC is relegated to certain specific contexts: only telic events can form ASCs, and only definite arguments are compatible there. Furthermore, ASCs are restricted to stage-level predicates; individual-level predicates lead to ungrammaticality in this construction (see Kratzer 1995; Travis 1991; Bruno 2011; Arche 2012). Consequently, stative events are not accepted (1.87), and telicity improves ASCs with negation (1.88). The resemblance to PPA cannot be overlooked.

(1.87) * **Parlat** català, et tracten millor a les botigues.
speak.PSTPRT.MSG Catalan.MSG CL.2SG treat.3PL better at the shops
'If you can speak Catalan, they treat you better at shops.'

(1.88) a. ? No **trobades** les joies…
not find.PSTPRT.FPL the jewel.FPL
'As they couldn't find the jewels,…'
b. * No **desaparegudes** les joies…
not disappear.PSTPRT.FPL the jewel.FPL
'Since the jewels had not disappeared,…'

To summarize: In ASCs too, obligatory participle agreement is associated with certain aspectual verb classes. Whereas aspect in ASCs prevails as the crucial factor in explaining the properties of this construction in the transition from Old to Modern Catalan, the prominence of the same feature for PPA in Modern Catalan is fading and nothing but relics are found in isolated constructions or specific varieties. These opposing changes can hardly be coincidental; instead, there must be something else happening in this period. In the same way the feature composition of the participle in ASCs was modified (resulting, I assume, from competing equivalent structures, which led to specialization: ASC, gerundival small clause and full adjunct clause). I will show that different language change processes (grammaticalization, economy pressure, semantic bleaching, etc.) caused a restructuration of the features encoded in the functional projections responsible for object agreement (especially of the feature for definiteness/specificity), which led to the loss of agreement. The prominence of definiteness/specificity/aspect with respect to PPA – i.e., their correlation with morphological ϕ-agreement – is strong enough to challenge accounts that are exclusively structural. In the following, I will develop a syntactic approach based on the properties of formal features

rather than on structural positions and I will try to account for the optionality and the interface effects that have been observed as syntactic change, rather than morphological change.

CHAPTER 4

Standpoint and research outlines

Before turning to the empirical study, I would like to sum up some of the most important observations of the preceding chapters in order to refine the hypotheses in the introduction. The results of the overview of past participle agreement across Romance (with special attention to Catalan for the reasons explained above) should help to better motivate the hypotheses, thus leading the corpus search and subsequent analysis.

Mainly for (Standard) French and (normative) Italian, it is remarkable that PPA is readily explained by the presence of certain structural positions with corresponding movement over the specifier, that is, PPA is treated on a par with subject-verb agreement (recall the discussion of Kayne 1985, 1989a above). As Drijkoningen (1999: 41) puts it, "French participle agreement presents one of the clearest examples of the link between visible morphology and overt movement". But there are several arguments for rejecting this kind of approach: first, purely structural accounts lead to circularity, which usually remains unnoticed (but cf. Müller 1999). In addition, different kinds of evidence can be seen as interface effects in the sense of the Interface Hypothesis (Platzack 2001; Sorace 2006, and related work). A more detailed look reveals that PPA is a multi-factorial phenomenon (see Chapters 2 and 3.3). Consider the implicational hierarchies by Smith (1995); Le Bellec (2009) or Loporcaro (2010), which combine various features in a structured way. Implicational scales, however, are essentially descriptive rather than explicative: they do not provide any reason for the attested dependence of some factors on the others. However, interface effects, such as definiteness/specificity restrictions, interaction with clitic doubling, differential object marking and object shift/scrambling, should be explained within the analysis of PPA as well. The perspective of the Interface Hypothesis has further advantages, for example, it accounts for optionality and variability in a more natural way. Yet the IH cannot be accepted without further qualifications, since it is not directly compatible with current assumptions about the architecture of grammar (which will be made explicit in the next section).

Not only is the exploration of interface effects of interest with relation to PPA, but also the diachronic perspective is crucial for our understanding of this construction. Of course, diachronic data are useful in defining more precisely the

properties of PPA nowadays – for instance, which features are involved in which way. Furthermore, this approach has far-reaching consequences for linguistic theorizing. A main concern about PPA is the high amount of variability and even optionality. The integration of optionality in any linguistic theory has often been discussed and has received varied interpretations. Optionality can be seen as evidence for an ongoing language change – the variants are understood as pertaining to competing grammars (e.g., one older grammar with agreement and a more recent one without it). From the IH perspective, phenomena that require the integration of information from different modules are expected to allow for more variability due to their greater computational complexity. Within the Minimalist Program, however, optionality is undesired: language is an optimal device to comply with interface (LF, PF) conditions (Chomsky 1993). Computational efficiency bans the existence of optionality – each variant must be tied to a different interpretation, even if with very subtle differences. Unfortunately, it is sometimes very difficult to capture different readings for each variant. But the former approaches (Interface Hypothesis, competing grammars) need some additional assumptions in order to overcome explicative limitations. As Fischer & Vega Vilanova (2018) argue, the Interface Hypothesis predicts more vulnerability of interface phenomena in language contact settings. I have then suggested that interface phenomena are also more vulnerable in language change situations. But with this, not too much has been said – the points of variability and the possibilities for language change are not unconstrained in this way, rather the range of variability obeys further restrictions that need to be specified more accurately. The IH, for instance, cannot predict how and why the structure changes in the way it does. In fact, the IH does not affect the laws of language change, but it makes it possible for them to apply.

Reference to the diachronic development of PPA seems unavoidable. In spite of this, diachronic research is rare (there are still a few noteworthy studies, e.g., Macpherson 1967; Gavarró & Massanell 2013; Poletto 2014). Nonetheless, due to its complexity, the analysis of PPA in Romance gives rise to questions as to what triggers mechanisms of language change (such as grammaticalization) and how these mechanisms imbricate each other. The Interface Hypothesis must certainly be redefined in this context, as well as in the light of recent improvements in grammar theory. Parametric change, syntactic change and grammaticalization will also be reformulated on the basis of the same premises. The conjoint consideration of grammaticalization and interface effects is very promising since it leads to a reconsideration of the modular architecture of grammar, hitting upon one of the most discussed issues: the issue of the precedence of syntactic over morphological change (or vice versa). In sum, the consequences for linguistic theorizing of my approach concern several central topics such as optionality, modularity and a deeper understanding of language change.

The interplay between general mechanisms of language change and properties of the features (semantic, syntactic, etc.) involved in object-verb agreement should be at the heart of any explanation of PPA in Romance. The question is not trivial: our assumptions about how language change works (e.g., the possibility and the place of syntactic change, parameter resetting, grammaticalization, etc.) are influenced by our conceptualization of formal features and the morpho-syntactic components of grammar, and vice versa. Not only is optionality problematic from the viewpoint of the Minimalist Program, but also language change lacks any motivation (if language is optimally designed, there is no need to change it). Givón (1976) already suggested that change begins with pragmatics. It is thus necessary to establish how exactly this comes to be – for example, which core modules are first affected (morphology or syntax) and how and where the process of change begins and expands. A widespread view is that morphological erosion leads to new syntactic constructions (cf. Roberts 1997; Lightfoot 2002). The loss of morphological case in full DPs, for example, often means the development of fixed word order patterns. In a sense, the Rich Agreement Hypothesis also leans on this idea: only rich agreement paradigms on the verb trigger V-to-T movement, whereas the loss of morphological distinctions goes hand in hand with restrictions on verb movement (cf. Koeneman & Zeijlstra 2014 and references therein). Consequently, different agreement patterns (PPA vs. default) must generate different syntactic representations. But the opposite scenario is also conceivable: that syntactic changes cause the reorganization of morphological exponents. Indeed, this is the opinion defended in Fischer (2002), building on a much older view by von Humboldt ([1822] 1972), Givón (1971: 413) ("today's morphology is yesterday's syntax") and Cole et al. (1980), among others. Overt morphology can be a residue of a former syntactic operation that no longer applies. If the language system fails to find a new meaning or function for a bleached morphological exponent, optionality not linked to differences in interpretation may appear, whereby the most probable case is that those morphological exponents will be removed over time (cf. Fuß 2012 for some cases in which information structure related changes are followed by reanalysis and/or loss of some morpho-syntactic patterns). Accordingly, overt morphology is sometimes an 'embellishment' at PF, a stylistic matter.

Taking all this into consideration (as well as some background assumptions that will be presented below), I am now able to reformulate the research questions of this book (analysis of participle agreement and optionality, a reconsideration of the mechanisms of language change under minimalist assumptions and the relation between syntactic and morphological change), in the shape of an updated, well-grounded version of the hypotheses presented in the Introduction:

(1.89) *Hypothesis 1: PPA as an interface phenomenon*

a. PPA is not governed by object position, but rather by a semantic/pragmatic feature (definiteness/specificity/aspect). This allows us to analyze PPA as an interface phenomenon, with all the consequences this has (instability, vulnerability to language change, optionality, etc.).

b. The effects of definiteness/specificity can be observed in all diachronic stages of Catalan, but their properties are in constant change. The distinctions expressed by these features may become so opaque that 'true optionality' arises.

(1.90) *Hypothesis 2: different processes of language change that interact in PPA*

a. The pressure of economy principles promotes the change from complex structures (PPA) to simpler ones (default agreement, possibly CLD). This process is unavoidable and irreversible and results in cyclic change.

b. Syntactic change interacts with the grammaticalization of the formal features involved in PPA (aspect, case, definiteness/specificity, ϕ…), and vice versa. Formal features can thus be relocated in the structure, grammaticalized (i.e., detached from their semantic meaning) or even deleted.

c. Change is cyclical – i.e., if specificity is no longer expressed by PPA, other constructions may adopt this function (e.g., CLD and DOM emerge).

(1.91) *Hypothesis 3: precedence of syntactic over morphological change*

a. The feature configurations encoded in the lexical items are the first ones to be affected by change. This means that change begins with grammaticalization, (re-)parametrization or syntactic change due to economy principles and the first effects of language change are syntactic (e.g., word order).

b. Morphology can be considered a reflex of syntactic change. In some cases, morphology may remain 'fossilized,' thereby giving rise to true morphological optionality as a transitory state after syntactic change has taken place. True optionality (without semantic correlates) is possible, but is subject to further change (e.g., deletion of the morphological exponents).

Keeping these hypotheses in mind, in the next chapters I will put forward the required theoretical background and technical tools. I will show that a theory of change that builds on current minimalist assumptions about clause structure and syntactic operations can successfully capture how new parameter settings emerge in a language. This will be illustrated by the diachronic analysis of subject-verb agreement, with crucial consequences for the null-subject parameter. In Part Three, I will apply this analysis to object-verb agreement, more specifically, to the development of PPA in Catalan.

PART TWO

Theoretical background

Universal grammar and language change

As I have shown in Part One, variability and optionality characterize past participle agreement (PPA) in Romance. Most approaches to explaining the distribution of PPA mainly in French and Italian, however, avoid discussing these data. It is commonly assumed that movement to certain pre-verbal positions, secondary to wh-movement or cliticization, is the trigger for PPA, but this can hardly be the whole story. First of all, these accounts lead to circularity: optional morphology is explained as optional movement to a specifier position over the past participle. Moreover, subtle interactions of agreement with semantic readings of the clause (i.e., definiteness and specificity), aspectual properties of the verb and other phenomena concerning object syntax such as DOM/CLD and object movement have been attested. For these reasons, I have suggested that a diachronic analysis can shed more light not only on how PPA works and how optionality should be understood, but also on the other related phenomena, especially CLD and DOM. The Interface Hypothesis (Platzack 2001; Sorace 2006; Fischer & Gabriel 2016, and others) offers a framework that could provide a better explanation for apparent optionality: since phenomena that involve properties located in more than one linguistic module (syntax, morphology, semantics, pragmatics, phonology) are more difficult to process than phenomena belonging to a single domain, these are more unstable in first and second language acquisition. Consequently, interface phenomena are more vulnerable in language contact situations (cf. Fischer & Vega Vilanova 2018) and probably in language change too. The diversification of the contexts that trigger PPA in the different Romance languages and the relatively high amount of optionality found within each language are thus predicted by the IH.

Certainly, PPA shows some interface effects that require further analysis. However, the classic formulation of the IH is no longer compatible with current assumptions about grammar architecture. Alternative representations of these interface effects will be extensively discussed in Chapter 10.3.1. In Chapter 2 and Chapter 3, I have shown some effects of aspect and specificity on PPA. In the following chapters, I will try to account for these facts and argue that the grammaticalization of formal features (case and ϕ) has a direct effect on syntactic agreement and movement,

but that specificity itself is not coded in the syntax. Rather, (non-)specific readings emerge as the conceptual-intentional interface interprets the syntactic output. The mapping of specificity to particular syntactic structures and morphological exponents requires the integration of information at several linguistic modules and at several interfaces. However, this process takes always place, in any utterance and any kind of construction. The greater instability of certain phenomena should not be simply explained by the cognitive costs of integrating information that stems from different linguistic modules, but rather by the complexity of the structures that are mapped to these interface representations. In this context, one could wonder where language change resides: does the trigger of language change – in this case, the loss of PPA – reside in narrow syntax, or rather in a readjustment of the mapping between semantic and morpho-syntactic features? In my proposal, language change is initiated in syntactic constructions constrained by pragmatic requirements that lead to doubling structures. And this is a central idea for connecting the pragmatic origin of change: syntactic agreement and the grammaticalization of formal features, the first stage of a certain type of language change, are repair mechanisms for too complex structures (i.e., constructions with pragmatic doubling). How LF maps features such as specificity to this syntactic output plays a subordinate role in language change. Under these assumptions, I will reconsider the status of optionality: it is driven, or at least constrained, by internal forces of language change. Occasional cases of 'true optionality' can be considered secondary effects of this grammaticalization process. The loss of PPA will illustrate this approach.

Some theoretical tools are needed before testing the hypotheses with respect to the optionality of PPA, the mechanisms of language change and the relation between syntactic and morphological change reformulated in Chapter 4. In Chapter 5, I will discuss current debates on the nature of syntax and the place of variation in syntactic theory directly derived from new conceptions of universal grammar (UG) and parametrization. I will also pay special attention to the properties of formal features and the syntactic operations they trigger, especially *Agree*. Chapter 6 is devoted to grammaticalization as one of the most prominent processes of language change. The goal of this chapter is not to offer an exhaustive overview of the research in this field, but rather to pinpoint some of the elements needed for the analysis of PPA and, more generally, to scrutinize the interaction between the different processes of language change (grammaticalization, parametrization and economy-driven syntactic change), which is still not fully understood. Advances in this field may help to improve our understanding of syntactic mechanisms and the lexicon. I will suggest redefining the notion of grammaticalization at the level of formal features (cf. van Gelderen 2011). In Chapter 7, I will apply the proposals developed so far to the anaylsis of subject-verb agreement, from both a synchronic and a diachronic perspective.

CHAPTER 5

On clausal structure and universal grammar

The advent of generative linguistics brought about a paradigm shift. One of the central claims in generativism was the rejection of the behaviorist view of language acquisition, dominant at that time. Observations on first language acquisition led to the formulation of the so-called 'Plato's problem' or poverty of the stimulus, namely, "the problem of explaining how we can know so much" about language with limited experience (Chomsky 1986: xxv). The most natural answer to this was the postulation of a 'universal grammar' (UG), common to all human beings, which contains certain invariable information, called principles, and their respective variables, called parameters, i.e., a space for language-specific choices among a probably predetermined set of properties.

The basic idea of a UG organized as a universal set of principles and parameters was extremely well accepted and inspired a bulk of papers trying to identify which (universal) principles and, especially, which parameters should be considered part of UG. This led to a proliferation of the number of postulated parameters. Very soon, the need for a simplification or reduction of the computational burden ascribed to UG arose. The original model was then subject to successive modifications, which have ultimately crystallized in the 'Minimalist Program' (Chomsky 1993 and subsequent work). The changes range from the syntactic elements and operations that are assumed in grammar, to the very nature of the syntactic computation and syntactic representations. In this chapter, I will take a brief look at the motivation for these changes and how syntactic structure, parametrization and variation, formal features, syntactic dependencies and syntactic operations are conceptualized.

5.1 Universal grammar and the clausal spine

The standard Principles and Parameters approach has often been compared to a switch box (Chomsky 1986). The principles stored in UG (i.e., every single switch in the box) are open to different parametric values (i.e., the position of the swich pointing to a 'default' or 'marked' value) that are fixed during first language

acquisition.[1] Among the best-known examples are the Extended Projection Principle (EPP) and the null-subject parameter. According to the EPP, [Spec, IP], i.e., the subject position, must be obligatorily filled in all languages, i.e., the EPP is a universally valid principle of UG. Now, the EPP is associated with the null-subject parameter: the language learner has the choice between filling [Spec, IP] overtly at all times, either by using a full subject DP or an expletive constituent as is the case in French and English, or allowing empty categories (*pro* or *PRO*) to occupy this position as is the case in null-subject languages such as Spanish and Japanese (for further discussion, see Chomsky 1981; Rizzi 1982 and D'Alessandro 2015, among many others).

This view had evident advantages. With the help of this model, it was possible to make clear and falsifiable predictions for language acquisition and define the uppermost limits for the variation of human language (i.e., the limits of UG). However, it is also the case that the postulation of new parameters proliferated to the point that they ended up contradicting the main purpose of the parametric theory, namely, shaping a representation of UG tenable from a cognitive and evolutionary perspective (e.g., Boeckx 2011; Fodor & Sakas 2016, and references therein).

Under this view, it is necessary to constrain the content of UG to only a few indispensable elements. Operations that had been considered part of UG are now ascribed to general cognitive processes not specific to language. Parametric variation is conceived as an "emergent property of the three factors of language design" (Holmberg & Roberts 2014: 61), which, according to Chomsky (2005: 6), are:

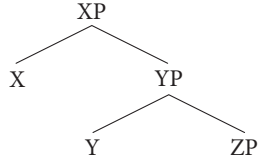
(2.1) *Three factors of language design*
F1: The genetic endowment, UG.
F2: The environment: Primary Linguistic Data (PLD) for language acquisition.
F3: General principles of computation and cognition (e.g., Feature Economy and Input Generalization)
(taken from Holmberg & Roberts 2014 and Biberauer & Roberts 2015)

In addition to a reformulation of the notion of parametrization (which I will address in Chapter 5.2), minimalist ideas brought about a drastic reduction of syntactic mechanisms and levels of representation (see, e.g., Hornstein & Nunes 2008; Hornstein 2009, among many others). More specifically, it is assumed that the only language-specific operation is *Merge*, i.e., the creation of new syntactic objects (SO) by assembling smaller constituents, and that UG can be reduced to this operation (cf. Chomsky 1995 and subsequent work). Merge is assumed to apply in an

1. Whether parameter setting is still active during second language acquisition or not is a matter of debate (see, e.g., Bley-Vroman 1990 and Schwartz & Sprouse 1996, for two opposing opinions).

unrestricted way, with the sole limitation of the binary branching condition. Any lexical item (LI) chosen from the lexicon and inserted into the *numeration* (X, Y…) can be combined with other LIs or already built SOs (YP, ZP…) to build a new SO (2.2) through Merge. This operation is recursive until all the LIs in the numeration have been used. To avoid overgeneration, it is assumed (Boeckx 2014b; Zeijlstra 2016; Müller 2017) that LIs are endowed with an ordered set of structure-building (or selectional) features, reminiscent of the older notion of subcategorization. Thus, the motivation for Merge is found in the requirements of the formal features carried by the LIs. A transitive verb V, for instance, is equipped with a [D] feature that must be satisfied by a nominal LI (or syntactic object) merged with this verb.

(2.2)



Syntactic movement is understood as a special case of Merge, namely *internal Merge*, which replaces the operation *Move*, as it was formulated earlier. The mechanisms are roughly the same. The requirements of a feature (i.e., a selectional or formal feature, loosely linked to a semantic content) are complied with by merging an element in the appropriate syntactic configuration. This element can be directly introduced from the lexicon through the numeration (i.e., externally merged, *eMerge*) or it can be 're-merged' within the derivation (i.e., moved or internally merged, *iMerge*). In sum, the notion of feature is crucial in current syntactic theories (cf. Adger & Svenonius 2011).[2]

A logical consequence of these assumptions is that the clausal spine does not form part of UG any more (contra, e.g., Cinque 1999). The system described here is derivational rather than representational. Merged elements do not fill a gap in a pre-existing syntactic structure, but syntactic structure grows as the derivation continues. The view that the whole collection of functional projections is contained in our innate language knowledge (with the cartographic approach as an extreme implementation of this idea) and that these projections are activated or deactivated during language acquistion has been dismissed. Functional material is stored in the lexicon in the form of formal (and selectional) features, probably not

2. More recently, Chomsky (2013, 2015) has introduced a further development of another well-formedness condition on merged SOs, *Labeling*. The Labeling algorithm could be responsible for certain types of language change (cf. van Gelderen 2015). By virtue of Labeling, the EPP as a trigger for (overt) movement can be dispensed with. However, it does not seem to be relevant for the diachronic analysis of PPA. A detailed discussion of Labeling is thus outside the scope of this paper.

even innate, which give rise to different arrays of functional projections as a consequence of their Merge requirements, occasionally with different orderings from one language to the other. In sum, the syntactic hierarchy emerges in the course of the syntactic derivation, but is not pre-stored.

Phasehood (see also Chapter 1.2.5 and references therein) can be considered to emerge in a similar fashion. A derivation by phases reduces the cognitive load needed to build a clause, since only sub-arrays of the numeration are computed at once. A phase is what defines spell-out domains (i.e., the sister node of a phase head) and is thus directly related to a language-external module (externalization). Therefore, phasehood does not belong, strictly speaking, to the genetic endowment, but is rather a consequence of cognitive limitations.[3]

Neither formal features, functional projections nor the ordering of Merge are pre-established in UG. Instead, all these properties are encoded in the LIs, which have to be learned on the basis of positive evidence. The effects of these properties can be manifested in narrow syntax or at the conceptual-intentional and articulatory-perceptual interfaces. Language learners need visible cues in the input to infer the existence of formal features or functional material in their language. Word order effects, overt morphology or semantic-pragmatic readings can serve as appropriate cues. Bošković (2009), for instance, claims that a language in which none of the common properties of a D° category appears does not instantiate this category – from this follows a split between NP- and DP-languages. In Chapter 10, I will argue that some functional projections or formal features concerning the DO can also be absent in some languages. In the absence of unambiguous cues, certain features may disappear (i.e., they are no longer encoded in the LIs), which has direct consequences in language change – for example, the loss of participle agreement.

3. The concept of 'phase' is far less than clearly defined: while there is consensus as to the phasal status of CPs, the role of vP is still controversial (e.g., Bošković 2016; Keine 2017). It seems that v° can oscillate between being a phasal or a non-phasal head, which is contextually determined. This discussion is, however, beyond our scope. For the sake of simplicity, I will use a standard definition of 'phase,' namely phase as a theta-complete unit (or propositional syntactic unit) (Chomsky 2000). This seems to work quite well for the differences between canonical transitive and unaccusative clauses, although it is not without some inconsistencies. Under the analysis presented in Chapter 7, it is difficult to reconcile this notion of phasehood for the vP with the assumed properties of null subjects (there is no element within vP to comply with theta-completeness; the problem derives from demanding a semantic property from an element that belongs to formal agreement, namely the verbal ending). For the moment, I will ignore this inconsistency and leave the issue for future research. I would like to thank Wolfgang Meyer for calling my attention to this problem.

5.2 Parameters and variation

A further consequence of a conception of syntactic derivation as guided by feature-driven Merge is the possibility of a higher degree of inter- and intralinguistic variation in syntactic structures. If LIs contain ordered sequences of selectional and formal features, the syntactic output must already be determined in the lexicon. Hence, syntactic features and their properties are not pre-established in UG, but rather acquired during the acquisition of lexical entries (which does not necessarily mean that a language without formal features can exist). Variation is thus encoded in the lexicon. A new definition of language change in terms of 'lexical change' seems very promising.

In contrast to the attested superficial variation, the invariance of syntax has been a desideratum of generative syntax. Kayne (1994) was among the first to propose an algorithm (the Linear Correspondence Axiom) which obligatorily generates right-adjoined complements and left-adjoined specifiers in all languages. The unmarked constituent order is thus SVO and all languages of the world base-generate the internal and external arguments in these positions. Different canonical orders (VSO, SOV, etc.) are derived afterward by additional movement operations. More recent approaches put it more explicitly: variation is confined to a problem of linearization, that is, to PF (e.g., Chomsky 2007). Under this view, Merge has no directionality. A merged SO has no information about whether the head is placed before or after the complement. An additional rule must generate the final string (e.g., head-initial or head-final phrases).

Variation in core syntax is also banned by the Chomsky-Borer Conjecture, which Baker (2008) formulates as follows:

(2.3) All parameters of variation are attributable to differences in features of particular items (e.g., the functional heads) in the lexicon. (Baker 2008: 353)

Inflectional elements, in particular, are responsible for cross-linguistic variation. A functional head H may be endowed with the feature F in one language but not in the other. In turn, F may have different values in different languages, which come with different requirements. These requirements are ultimately mirrored in morphology, word order and, more generally, in properties at the externalization component.

Under these premises, a reformulation of the notion of parameter and parameter setting has been proposed (e.g., Roberts 2012; Holmberg & Roberts 2014; Biberauer & Roberts 2015; see also Newmeyer 2004; Gallego 2011, and references therein for a critical examination). Parameters are set in the lexicon, more concretely in the functional elements of the lexicon, since they are encoded in the features contained in the lexical entries. This is certainly an appropriate move toward a simplification of the grammar, since it leads to a drastic reduction in the number of possible

parameters: not every conceivable language-specific rule qualifies as a parameter, but only the properties of a restricted set of features of functional categories. Under this view, parameters are themselves not part of UG, but they rather 'emerge' from the interaction of the three factors of language design (2.1). Parameters are then organized in hierarchies that depend on third-factor strategies that serve as a guide for the learning process. Biberauer & Roberts (2015), for example, identify two such third-factor strategies: Input Generalization and Feature Economy (2.4).

(2.4) i. Feature Economy: postulate as few formal features as possible to account for the input.
ii. Input Generalization: if a functional head F sets parameter P_j to value v_i then there is a preference for all functional heads to set P_j to value v_i.
(Biberauer & Roberts 2015: 7)

The idea that cross-linguistic parametric variation is stored and located in the lexicon has been considered very appealing. According to this, syntactic operations are not subject to parametrization, i.e., narrow syntax does not permit variation (cf. the "Strong Uniformity Thesis" in Boeckx 2014a). Apparent differences in output representations can thus be traced back to the different formal features that enter the numeration (or different properties of them). In this sense, when I use the term 'syntactic change,' I refer to changes in the output representations, which are generated by syntactic mechanisms – Merge, Move, Agree – which are themselves invariable, and which are, finally, dependent on the distribution of features among LIs. Basically, there are two ways in which formal features can modify output representations and generate variation:

1. Formal features can enter the numeration either one by one, or as feature bundles linked to a single morphological chunk (but see Boeckx 2014b for criticism of the possibility of complex LIs; for him, feature bundles presuppose a 'pre-syntactic' assemblage, which is built according to the same principles and restrictions as SOs). Feature bundles engage in syntactic operations as a unit. Hence, some languages may show a consistently cartographic disposition correlating with a rather analytic morphology, while other languages may tend to combine features and make extensive use of fusional/synthetic morphological exponents.
2. Formal features have relative freedom to be attached to different LIs, thus giving rise to different syntactic derivations. Assuming that LIs are endowed with sequences of selectional and formal features which determine the order in which their requirements must be satisfied, there can be variation concerning the features encoded in a certain LI and regarding the moment when these features become relevant for the derivation.

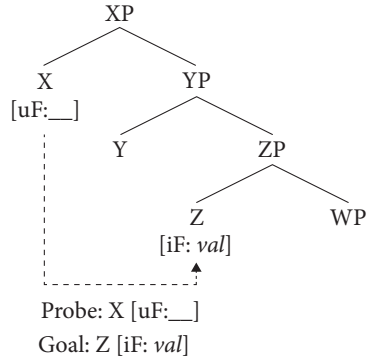
All these factors – which features are present in a language, with which LIs they are associated, and how they are arranged within a feature bundle – will be reflected in the surface variation of the clausal structure. In sum, formal features in current syntactic theory are more prominent than in previous frameworks: many syntactic operations depend on the requirements of formal features. Formal features also provide an explanation for variation (e.g., parametrization) and change.

5.3 Formal features and Agree

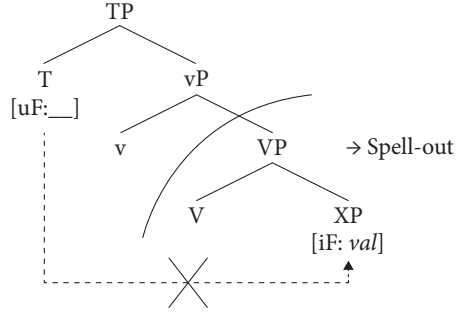
Agree is possibly the most basic syntactic operation after Merge. It can be defined as a matching operation between two or more syntactic elements.[4] In a feature-driven account of Merge, Agree is needed from the very first step in the derivation: in a successfully merged SO, the complement must satisfy (i.e., match) the selectional features of the head. Syntactic (or formal) features are features manipulated by narrow syntax – unlike semantic and phonological features, which are directly interpreted by the interfaces (Zeijlstra 2012). However, there is no consent about the configurations in which feature matching is possible for Agree. In one of the most popular approaches (Chomsky 1995, 2000, 2001), it is assumed that formal features are divided into interpretable and uninterpretable features. This distinction roughly correlates with their semantic equivalents. Interpretable features are endowed with a value ([iF:*val*]) which is transmitted to the valueless uninterpretable features ([uF:__]) in a valuation/interpretability biconditional correspondence (cf. Chomsky 2001: 5). It is further assumed that at spell-out all features contained in the derivation must be legible at the interfaces (LF and PF), as formulated in the Full Interpretation Principle in Chomsky (1995). Uninterpretable features are not legible at the interfaces and are, therefore, deleted after valuation. In this sense, uninterpretable features are the driving force behind syntactic derivation – more technically, they have been characterized as probes searching for an appropriate goal in their c-command domain (2.5). In contrast, interpretable features are syntactically inert: they do not contain any requirement that has to be fulfilled. This leads to difficulties if the goal is in a lower phase than the probe, for example, in (2.6): the goal is accessible to the probe only if it 'escapes' spell-out by moving to the phase edge (i.e., Spec, vP), but what could be the motivation to move there?

4. Of course, this concerns only syntactic agreement ("Agree-Link") and not necessarily morphological agreement ("Agree-Copy"), which can rather be understood as a post-syntactic operation (cf. Bobaljik 2008; Himmelreich 2017). The relation between syntax and morphology, however, is a very controversial issue. Certain aspects of this will be discussed in Chapter 6.

(2.5)



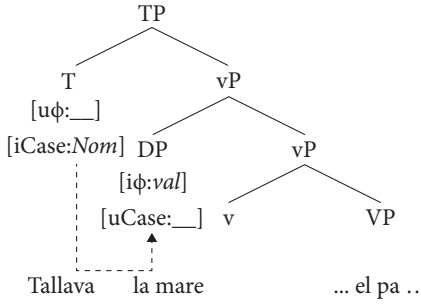
(2.6)



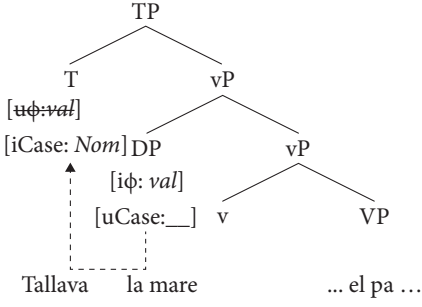
In order to keep the goal active – thus accessible – for the probe, it must have some other uninterpretable feature that has to be checked and deleted. This has been formulated as the Activity Condition (Chomsky 2001; but see Nevins 2005 and Zeijlstra 2012 for critical reviews), which is reminiscent of the principle *Greed* in Chomsky (1993): syntactic operations affect only elements that still have unsatisfied requirements (i.e., an [uF]).

Subject-verb agreement is a good illustration of such a case (2.7). In a sentence in Catalan such as *Tallava la mare el pa* ('The mother cut the bread'), T° (the verb *tallava* 'cut') has an interpretable (and valued) case feature [iCase:Nom] and uninterpretable ϕ-features [uϕ:__]. Because of these uninterpretable features, T° acts as a probe. The external argument (*la mare* 'the mother') carries interpretable ϕ-features [iϕ:*val*] but needs a value for the uninterpretable case [uCase:__] (2.7a). Due to its uninterpretable case, the external argument is syntactically active and qualifies as a proper goal for the probe in T°. Once the ϕ-features of T° are valued and, consequently, deleted, the uninterpretable case of the DP is valuated in return, and deleted as well (2.7b–c) (i.e., 'reverse agreement'). Since no uninterpretable features are left, the derivation may proceed. Overt movement to [Spec, TP] is explained by the strength of the feature in T° (e.g., Chomsky 1993), the presence of an additional EPP feature (but note that the existence of such a feature is nowadays questioned, other kinds of features have been proposed to take its place) or similar devices.

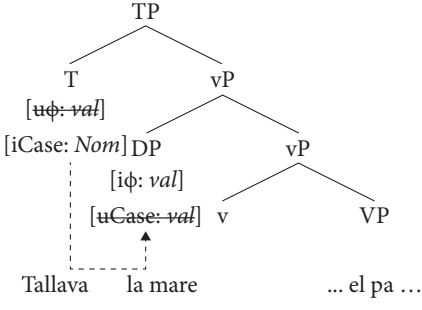
(2.7) a. 1st step: the probe in T° [uϕ:__] searches for a goal



b. 2nd step: (upward) valuation, deletion of [uϕ] in T°, and 'reverse agree' for case



c. 3rd step: (downward) valuation and deletion of [uCase] in the external argument



In sum, movement (i.e., iMerge) is mainly motivated by agreement restrictions: unchecked [uFs] must be displaced at least as far as to the edge of the phase in order to avoid being sent to spell-out before their requirements are satisfied – which would make the derivation crash. Further movement must then be motivated by different features (EPP, edge features or others).

This model, however, has several shortcomings, as Zeijlstra (2012) points out. Reverse agree, multiple agree and concord do not fit in very well with this account.

Also, intermediate steps by successive cyclic movement and the EPP-feature itself remain unmotivated.

To begin with, the strict correspondence of interpretability and valuation has been challenged (cf. Pesetsky & Torrego 2004, 2007; Bošković 2011). Interpretability and valuation are two independent properties that give rise to four conceivable combinations of formal features (2.8).

(2.8) iF:*val* (interpretable valued feature)
iF:___ (interpretable unvalued feature)
uF:*val* (uninterpretable valued feature)
uF:___ (uninterpretable unvalued feature)

According to this, there is a shift in the definition of Agree: its decisive property is not checking and deleting, but rather valuation, a process that forms agreement chains through feature sharing. In this way, Agree can connect more than two constituents simultaneously. There are of course some restrictions: all members of the chain must have occurrences of the same feature and only one occurrence can be interpretable – the semantic meaning linked to the feature will be interpreted at this position after spell-out (cf. Brody 1997). Once the chain is formed, all members will share the same value. A positive outcome of this approach is that the deletion of uninterpretable features through valuation (a process that lacked theoretical motivation in former approaches) is no longer problematic: All uninterpretable occurrences of the feature are members of a single chain sent to the interfaces as a unit. It is the whole chain that is interpretable or not, and there is no need to 'delete' unwanted members.

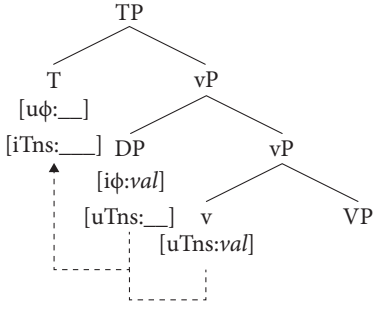
According to these assumptions, Pesetsky and Torrego propose a revision of the analysis of subject-verb agreement in which they make use of three of these four categories. Their first observation is that only tensed clauses can assign nominative case to the external argument. The subject of infinitival clauses in English, for instance, is assigned accusative case from the main verb (2.9).

(2.9) John believes [**him** to have won].

From this they conclude that nominative case is not just an additional feature adjoined to T: Tense and nominative are manifestations of a single feature Tense [Tns]. In verbal elements, it is interpreted as a temporal specification; in nominal elements, it is externalized as case. This feature is interpreted under T°, but the feature itself is unvalued – [iTns:__]. The verb in v, however, has a value for [Tns] (since it carries differential temporal morphology), although this feature is not interpretable in that position – [uTns:*val*]. Finally, the subject DP must check nominative case, which by definition is an unvalued uninterpretable feature – [uTns:__]. The resulting chain is shown in (2.10) (ϕ-feature checking remains as

in Chomsky's 1995 account and subsequent work). In Chapter 7, I will adapt this proposal to the diachronic data on subject-verb agreement. In turn, this analysis will set up the basis for the explanation of the development of PPA in Catalan in subsequent chapters.

(2.10) *Upward valuation (feature sharing)*



Another controversial question is the identification of the structural conditions for Agree, i.e., which configurations make Agree possible. It is commonly assumed that [uF] probes downward along the tree into its c-command domain (Chomsky 2001; Epstein & Seely 2006; Preminger 2013; Preminger & Polinsky 2015, etc.). The value of the goal – [iF] – is copied into the higher position – [uF]. More recent accounts have questioned this structural requirement, which has led to alternative proposals to this upward valuation/downward probing.

Baker (2008) and Carstens (2016), for instance, claim that Agree is parametrizable, and bidirectional Agree is possible – i.e., whereas some uninterpretable/unvalued features c-command the goal, other [uFs] must be c-commanded by the goal (see also Schütze 2016). Contrary to this unrestricted approach, Zeijlstra (2012) and Bjorkman & Zeijlstra (2014) defend the idea that feature valuation is always downward, i.e., interpretable features must c-command uninterpretable ones. This is the view that I will adopt in my analysis of verb-argument agreement in Chapter 7 and Chapter 10.

Zeijlstra's (2014: 113) starting point is the assumption that formal (syntactic) features are different in nature from semantic (and phonological) ones. During language acquisition, semantic features are naturally associated with interpretable formal features [iF], but this connection derives from learning algorithms, and not from properties inherent to the features themselves. Formal features are syntactic artifacts and are, therefore, ignored by the interfaces. In the syntax, they contribute to syntactic cohesion and can thus only show up in pairs (or chains) combining [iF] (which Zeijlstra 2016 calls "independent features") and [uF] ("dependent

features"). Agree is primarily a checking operation: valuation can even be delayed to spell-out, so that default morphology is obtained.

According to Zeijlstra, any problem the traditional minimalist view has with Agree as downward Agree/upward valuation (e.g., reverse agree, multiple agree, concord, successive cyclic movement and the EPP feature) disappears once one adopts upward Agree/downward valuation. Zeijlstra (2012) and Bjorkman & Zeijlstra (2014) also argue that the deletion of [uF] leads to a major *look-ahead problem*: this would imply that narrow syntax is aware of restrictions that will apply at the interface levels. Assuming that [uFs] do not have to be deleted before spell-out and that checking, not valuation, is the core property of Agree, satisfying the requirements of an [uF] can be confined to the syntactic computation. Agree does not aim at rescuing the violation of a constraint at the conceptual-intentional interface, but has its own goals, namely building syntactic structures.

Feature-checking ensures the syntactic well-formedness of the derivation, whereas valuation may occur independently of checking, even post-syntactically: unvalued features can be valued by their checkers or other features in the right configuration. Whenever it is not possible to find an adequate valuer, a default value is added to the feature. Verb agreement in ergative-absolutive case systems such as Nepali and Hindi-Urdu illustrate this point. Zeijlstra argues that verbal agreement can be oriented to the ergative subject if it bears structural case. The verb then takes the ϕ-feature values from this argument (2.11b). Otherwise, the ergative argument fails at valuating the [uϕ] of the verb, and the absolutive object serves as the alternative valuer (2.11c).

(2.11) a. [[DP_{Erg}] T $_{[u\phi:\_]}$ … [DP_{Abs}]]

b. maile yas pasal-mā patrikā **kin-ē** Nepali
1SG.ERG DEM.OBL store-LOC newspaper.NOM buy-NPST-1SG
'I bought the newspaper in this store'

c. raam-ne rotii **khaayii** **thii** Hindi-Urdu
Ram-ERG.MASC bread-FEM eat.PRF.FEM be.PST.FEM
'Ram had eaten bread' (Bobaljik 2008: 309–10)

In sum, Zeijlstra's (2012 and subsequent work) alternative approach to the directionality of Agree seems to cover a wider range of phenomena without additional assumptions. Furthermore, this approach is conceptually sound in the sense that it gets rid of several vacuous concepts, such as the EPP, and unsubstantiated assumptions, such as the need for deletion after valuation. Furthermore, I suggest that the separation of checking and valuation processes can capture phenomena related to morphological agreement more accurately. Finally, as I will show in Part Three, downward checking provides a more elegant explanation of the Catalan data on PPA, since it results in more economical derivations.

CHAPTER 6

On grammaticalization and language change

One frequently discussed process of language change is grammaticalization. Ever since Meillet ([1912] 1965) coined the term, grammaticalization has often been defined as the process of lexical material becoming functional, or functional material becoming even more functional (Kuryłowicz 1965; Roberts & Roussou 2003; Roberts 2007, etc.). In other words, grammaticalization leads to the creation of functional morphemes out of already existing morphological material. Generative approaches to grammaticalization have interpreted this as a change in the structural position where certain features or lexical items are inserted. This has led to principles such as 'Merge-over-Move' (e.g., Roberts & Roussou 2003; van Gelderen 2004): lexical pieces are inserted as high as possible in the structure in order to avoid 'costly' syntactic operations (e.g., Move). Under this view, grammaticalization is motivated by the preference for more economical derivations (see also Fischer 2002, 2007; Fuß 2017, etc.). Recall that economy is also the basic tenet for excluding optionality in syntactic derivations (see Chapter 2).

Interestingly, grammaticalization has also been connected with the properties of functional categories. The strength of functional features, for instance, can be modified as a consequence of a grammaticalization process. This means that overt vs. covert movement is a visible effect of grammaticalization. However, assuming that formal features are the locus of parametric variation, these effects are far from being harmless (recall Chapter 5.2). The relation between grammaticalization and parametrization thus has to be more profound. Understanding this relation could shed light not only on how grammaticalization works under the recent developments within the Minimalist Program, but also on how the lexicon is composed.

As Roberts (2007) claims, grammaticalization can be subsumed under the concept of reanalysis and parametric change. If grammaticalization (an operation that creates or modifies functional material) operates at the feature level as well – an idea that will be extensively discussed in the next section, and will be central in the analysis of the diachronic development of PPA – then the relation with parametrization follows automatically: parameters emerge from the value specification and properties of the formal features stored in the LIs, especially in functional heads, which are precisely the targets of grammaticalization. Thus, a manipulation of the formal features in the lexicon through grammaticalization may lead to new parameter settings.

6.1 Grammaticalization as a descriptive tool

As a consequence of the transformation of the lexical material in a lexical item into functional material, a redistribution of the formal, semantic and phonological features contained in the LI is usually involved. The semantic content of a verb or a noun, for example, can take on a more abstract meaning to the point that the item is 'reanalyzed' as the expression of a formal feature engaged in agreement relations between clausal constituents. This becomes especially obvious in the case of verbs of movement ('go,' 'come'), which are frequently bleached of their original meaning and reinterpreted as tense markers (for the future and past, respectively). As full verbs, they are merged within VP and keep their full meaning and argumental properties. After grammaticalization occurs, they are placed higher in the structure (e.g., TP) and select a main verb as complement. The grammaticalization might not stop there. If it continues, the newly formed function word (i.e., the auxiliary verb expressing tense relations) may cliticize and attach to a host (generally, the main verb). If, in addition, it loses its phonological autonomy, it may end up as a verbal affix. This is exactly the kind of change found in the formation of Romance synthetic future tenses. The full verb of possession HABEO in Latin undergoes a grammaticalization process and is reanalyzed as an auxiliary (see Macpherson 1967 and the discussion in Chapter 1.2.1; see also Roberts 1993). In addition to the aspectual value of the auxiliary *haver* in Old Romance, it has a modal deontic use, which further grammaticalizes into a temporal future value (*I have to sing* > *I will sing*). The new form then cliticizes to the main verb (allowing temporarily for mesocliticization) and eventually becomes a verbal affix, fully integrated in the verbal morphological paradigm, in the end (2.12).

(2.12) CANTARE HABEO > cantar he > cantar-he > cantaré
'I will sing'

On a more abstract level, this kind of change has been captured in a 'grammaticalization cline' (e.g., Hopper & Traugott 2003; Eckardt 2012), applicable to a variety of grammaticalization phenomena:

(2.13) content word > function word > clitic > affix > Ø

In a sense, grammaticalization is handled as a primarily descriptive tool. It describes patterns of semantic, syntactic, morphological and phonological changes of LIs. Accordingly, structuralist approaches to grammaticalization abound (Lehmann 1995; Traugott & Heine 1991; Campbell & Janda 2001; Hopper & Traugott 2003, among many others). These works successfully organize the main properties of grammaticalization – i.e., semantic bleaching, morphological reduction, phonetic erosion and obligatorification – in a very systematic way (see also Heine &

Kuteva 2005 for a consideration of the influence of language contact in grammaticalization, and Traugott 2010 for a current overview), but they rarely go beyond descriptive adequacy. I would like to advance toward a higher explicative adequacy – to explain why these well-known properties are found in the way they are.

6.2 Grammaticalization clines: From semantic to formal features

Unidirectionality has been identified as another important property of grammaticalization (e.g., Givón 1975: 96; Langacker 1977: 103f; Vincent 1980: 56–60, cited in Lehmann 1995: 14). Certainly, the observed tendencies are very strong. Although the possibility of finding true cases of 'degrammaticalization' has been the center of much debate (cf. Norde 2009), the mainstream view considers grammaticalization an irreversible unidirectional process. This assumption has given rise to a cyclical conception of grammaticalization (once an element has been fully grammaticalized, the vacant place can now be filled by a new element), reproduced in grammaticalization clines such as the one mentioned above (2.13). Fuß (2017: 479), for example, adapts and expands this cline to the diachronic analysis of agreement markers (affixes) which develop from certain content words (personal pronouns) (2.14). First, he integrates the classification of pronouns introduced by Cardinaletti & Starke (1999); in addition, this cline reflects Sapir's ([1921] 1970) cycle of morphological language types from isolating to agglutinating and inflectional languages. Hence, grammaticalization provides a fruitful and flexible framework for addressing diachronic data. Unfortunately, the interplay between syntax and morphology – or more generally the development of interface phenomena – is still not explicit in this kind of formalization. Some steps could be taken in order to reach better explanations of the grammaticalization processes.

(2.14) independent pronoun > weak pronoun > clitic pronoun > affixal (agglutinative) agreement marker > fused agreement marker > Ø

Syntactic constituents as well (not only 'words') can be placed along a grammaticalization cline (2.15) which incorporates syntactic, morphological and pragmatic features. Givón (1976) observes that clausal topics can be reinterpreted as occupying the subject position (i.e., Spec, TP) at the same time as resumptive pronouns are phonologically reduced and cliticized to the verb as agreement markers – i.e., as inflectional affixes in the verbal paradigm. Emphatic full pronouns can thus undergo the entire process in (2.15). This approach highlights the structural (syntactic) aspects of the process, while still being consistent with the general pattern of (2.13).

(2.15) emphatic full pronoun (topic/focus) > grammatical subject > agreement marker

The development of object clitics in Romance (see Fontana 1993; Bleam 1999; Marchis & Alexiadou 2013; Fischer & Rinke 2013; Anagnostopoulou 2016, etc.) can also be captured by a grammaticalization cline (2.16). Roughly, these accounts link syntactic structures (DP/D/ϕ) to feature composition (i.e., the number of features the clitic is able to encode) throughout the grammaticalization path. As a consequence of grammaticalization, the complexity of the clitic steadily decreases. This can be seen, for example, in the 3rd person dative clitics, both in Spanish and in Catalan. Sentence (2.17a), with a number mismatch between the clitic and the coreferring DP, is acceptable for many Spanish speakers. The equivalent Catalan sentence in (2.17b), one of the distractors in the questionnaire that will be presented in Chapter 8, was accepted by all but one of the participants. These data suggest that dative clitics do not encode (or they only optionally encode) [Number] in Modern Spanish and Catalan, which has been taken as evidence for the claim that dative clitics are more advanced along the grammaticalization scale than accusative clitics.

(2.16) DP clitic > D° clitic > ϕ-feature bundle > Ø

(2.17) a. Le$_i$ di los libros a los niños$_i$.
CL.DAT.3SG give.PST.1SG the books to the child.MPL
'I gave the books to the children.'

b. Jo li$_i$ regalaré llibres a totes dues$_i$.
I CL.DAT.3SG gift.FUT.1SG books to all two.FPL
'I will give books to both of them.'

The previous examples show that grammaticalization can be applied to different levels, from lexical words to constituents, as well as from a morphological or a syntactic viewpoint, or even a combination of perspectives from different modules. If LIs are understood as feature bundles associated with morphological exponents, a similar cline should be conceivable at the feature level – a type of grammaticalization which possibly underlies the other types described above. This option is already suggested in the characterization of the development of object clitics in (2.16) and was first made explicit by van Gelderen (2011). The process of "lexical material becoming functional" is thus redefined as in (2.18):

(2.18) semantic features > interpretable formal features > uninterpretable formal features

However, this proposal faces two problems. Firstly, it is a matter of fact that LIs lose features (or their values) over the course of time. According to this, the last

step in the grammaticalization cline should be the complete loss of the feature at issue. Modern Romance languages, for instance, practically lack dual number, and gender distinctions have disappeared in English to a great extent. The loss of formal features is also expected under the assumption of unidirectionality: formal features are not accumulated but rather replaced by new ones, which come from grammaticalized semantic features stemming from lexical material. Secondly, the distinction between semantic, interpretable and uninterpretable features is not properly defined and their distribution is at odds with a strict separation of semantic, formal and phonological features located in different domains (LF, narrow syntax, PF), as proposed in Zeijlstra (2014) and assumed in Chapter 5.3, which is a more logical assumption and has important consequences for the analysis of interface effects. Due to their radically different nature, semantic features cannot simply be 'degraded' to interpretable, or even to uninterpretable features, and be deleted from the derivation in this way. This would change the semantic interpretation of the LIs themselves. Late insertion (i.e., post-syntactic insertion) of missing semantic features under certain pragmatic configurations (e.g., Harbour 2003; Brandt & Fuß 2013) should be taken with caution: if late insertion were a common mechanism, interpretation would be fully independent of the output of narrow syntax and its morpho-phonological exponents; in other words, it would be completely arbitrary. Even late insertion must somehow rely on the syntactic output. Leonetti (2004, 2007) makes DOM dependent on definiteness, whereas the specificity effect associated with DOM is obtained inferentially. Hence, late-inserted features seem to depend on the existence of other features already present in the derivation, and are probably limited to a few properly motivated cases. In constrast, formal features, only needed in narrow syntax, can be deleted diachronically without further consequences.

To illustrate this, let us have a look at the number feature. It is uncontroversial that number is a formal feature usually involved in subject-verb agreement. In certain configurations, however, the verb does not agree with 'syntactic' number, but rather with the semantic feature for number. A noun such as *el jurado* 'the jury' in Spanish is formally singular, but designates a collective, so that it is semantically plural (like the English nouns 'police,' 'committee,' etc.). If *el jurado* is placed in subject position as in (2.19a), agreement depends exclusively on the formal number feature of the DP (i.e., singular). If the DP is dislocated (2.19b), the coreferential resumptive *pro* in subject position can agree with it in singular (i.e., according to its formal features) or in plural (i.e., according to its semantic features) (see Sheehan 2006: 88). A similar competition between formal gender and semantic gender features has been shown for relative pronouns in German (Wurmbrand 2017).

(2.19) a. El jurado *estaban / estaba presionado.
the jury be.PST.3PL / be.PST.3SG pressured
'The jury was pressured.'
b. El jurado, María nos aseguró que estaban presionados.
the jury María us assure.PST.3SG that be.PST.3PL pressured
'As for the jury, Mary assured us that the jury was pressured.'
(Sheehan 2006: 88)

These examples show that semantic features and formal features may, in fact, coexist. The loss of formal features, thus, does not affect the presence of semantic features at the appropriate place. Since there is no necessity to identify interpretable and semantic features, it is difficult to justify how a semantic feature 'converts' into a formal one, or vice versa.

Also, since the task of formal features is syntactic cohesion, for example, by triggering syntactic operations such as Merge and Agree, they can only exist in pairs (or sets) with an interpretable and an uninterpretable counterpart. For this reason, isolated interpretable features cannot exist. For (2.18) to meet this requirement, it would be necessary for the corresponding uninterpretable feature to be available elsewhere in the lexicon. In this case, grammaticalization of a LI would be dependent on properties found in the entire language system (i.e., the existence of a formal feature as a precondition), but not on the properties of the LI itself. This does not seem to always be the case; otherwise new formal features would never emerge. From this it follows that doubling configurations are especially suitable to push grammaticalization.

Finally, the grammaticalization cline of formal features has to make it possible to explain the natural link between semantic and formal features. Some formal features still maintain a direct relation to the meaning of the semantic features (e.g., case and theta assignment, gender and nominal classes, etc.). Structures with doubled semantic features, which are replicated by the creation of grammaticalized formal features, are a possible explanation for this. Semantic features are not transformed into, but are replicated by formal features.

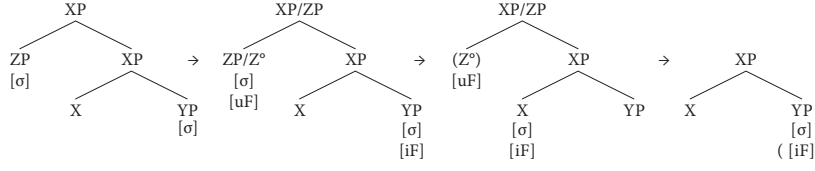
In addition to the syntactic function of formal features (i.e., clausal cohesion through agreement, thus making explicit the hierarchical relations among constituents), formal features emerge as a repair strategy for constructions violating the economy principle. More specifically, I claim that the trigger for the grammaticalization of (new) formal features is the existence of doubling constructions, which contain redundant (i.e., non-economical) elements which must be removed by virtue of the economy principle. Therefore, the goal of grammaticalization is the disintegration of the semantic features in one of the doubled constituents. According to Eckardt (2009), such doubling constructions could represent a violation

of the principle "Avoid Pragmatic Overload": although it is probably needed for emphasis or, more generally, information structure, the interpretation of the same semantic feature at two different points of the construction is undesired. The agreement chain between the formal features links the two sets of semantic features in the syntax. The chain can now be sent as a unit to the interfaces, which means that only one member of the chain is needed for interpretation, while the other can be deleted.

According to this proposal, the grammaticalization cline is modified as shown in (2.20). The different stages of grammaticalization are represented in (2.21). The emergence of formal features boosts semantic bleaching, phonological reduction and/or structural simplification of one of the members in the doubling structure ([σ] stands in this example for semantic feature). Once the 'anti-economical' construction is removed, formal features themselves dissolve. The element with the [uF], phonologically eroded and morphologically reduced, is accordingly eliminated.

(2.20) doubled semantic features [σ] > (simple) [σ] + [iF]/[uF] > simple [σ]+ Ø

(2.21)

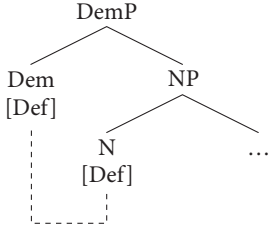


This account reflects the intuition in (2.18) that semantic features are replaced by formal features, but tries to provide a motivation for this according to current assumptions about the role and nature of formal features, Agree and clausal structure, as discussed above. It is also consistent with the principle of "Feature Economy" stated in van Gelderen (2011: 17): "Minimize the semantic and interpretable features in the derivation." However, this principle is understood here as two complementary changes – the reduction of semantic features in doubling constructions and the avoidance of formal features once they have accomplished their task. This notion of grammaticalization turns out to be a powerful explicative tool for language change and can be applied to a wide range of phenomena.

Doubling constructions are the starting point for a potential language change. By grammaticalization, two coindexed lexical morphemes are redefined as a lexical and a grammatical (functional) morpheme (LEX + LEX → GR + LEX). This idea is not new. Givón (1976) already proposed that agreement markers come from resumptive pronouns linked to dislocated constituents. The emergence of object clitic doubling has also been related to resumption with a dislocated constituent (cf. Gabriel & Rinke 2010). Jespersen's Negation Cycle (Jespersen [1917] 1966) is probably another case of grammaticalization triggered by doubling structures. The

emergence of definite articles from demonstrative pronouns (in Romance and in Germanic languages) can also be understood as a doubling construction followed by grammaticalization. The demonstrative has the same referential features as the DP/NP. In order to avoid redundancy, a formal feature (e.g., definiteness [iDef/uDef]) is paired with the semantic definiteness [Def] conveyed by the demonstrative and the noun (2.22). As a consequence, definite articles are grammaticalized. The grammaticalization path of clitics can be interpreted in a similar way: a clitic inserted in a 'big DP' replicates features present in its complement DP, whereas a base-generated clitic in the TP-domain as agreement marker (i.e., with formal features rather than semantic) represents a solution for the semantic doubling. The grammaticalization of auxiliary verbs could also be due to such configurations.

(2.22)



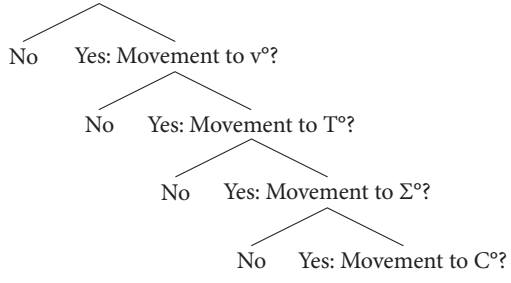
Emphasis or expressivity, or more generally information structure/pragmatics, can be seen as probable sources for the doubling of semantic features. If this is on the right track, grammaticalization cannot be fully understood without taking language use into consideration. If the expressive import of a construction such as CLLD or the deictic meaning of a demonstrative pronoun bleaches – i.e., if the original use of the construction becomes ambiguous or opaque – a grammaticalization process may start. In this way, pragmatics 'enters' the syntax.

The result of grammaticalization may add new features to the feature repertoire of a language, as is the case with definiteness by the grammaticalization of articles just mentioned. Clitic doubling, likewise, introduces doubled object ϕ-features into the derivation. When the clitic grammaticalizes from a DP/D° to an agreement marker, the formerly semantic ϕ-features may give rise to the introduction of formal ϕ-features for the object, which trigger object-verb agreement in the syntax. In such cases, already existing features may be associated with different LIs. This would also be the case if aspect distinctions, usually encoded in verbal morphology, shift to the nominal domain (i.e., in case alternation). In any case, grammaticalization seems to affect the organization of the features in the mental lexicon.

Assuming that the formal features encoded in LIs are the locus of parameter variation, new parameter choices are expected to emerge from grammaticalization, i.e., the emergence, dissolution or relocation of a formal feature may have

effects on (re-)parametrization. This prediction seems to be confirmed (cf. Fischer 2002, 2010; Roberts & Roussou 2003; Biberauer & Roberts 2012). Navarro et al. (2017) show that changes in verb movement can be represented in a parameter hierarchy as in (2.23) (inspired by the proposal by Biberauer & Roberts 2015), which means that the position of the verb is constrained by the presence of formal features in certain structural positions, i.e., the feature specification for the different functional heads. As I will show in the next chapter, when the features responsible for subject-verb agreement grammaticalize, a new parameter value for the null-subject parameter may arise.

(2.23) Is there verb movement?



(adapted from Navarro et al. 2017: 123)

Additionally, syntactic changes in the sense of a restructuration of the formal features among LIs motivated by economy (which modifies the resulting syntactic structures that can be generated) may have an effect on grammaticalization and parameter setting. As will be discussed in Part Three, object-verb agreement in Romance provides a good example of the relation between language change and parametrization. According to the Unique Checking Constraint proposed by Tsakali (2014), language learners prefer 'easier' computations: if they can choose between split-checking and bundle-checking several related features, they prefer to realize all agreement operations in one step. This leads to a reduction of syntactic structure and a new parameter setting for the CLD parameter (cf. Tsakali & Anagnostopoulou 2008).

6.3 Some thoughts on the question of morphology

It is uncontroversial that grammaticalization goes along with a reduction at all levels (phonological and morphological erosion, feature loss, syntactic simplification, etc.). Examples of free words becoming clitics and affixes are possibly found in any language of the world. If the phonological reduction continues, affixes may end up as zero morphemes. Since the phonological realization (i.e., externalization) is

a matter of the articulatory-perceptual interface, the possibility of zero exponents for certain features or LIs (e.g., functional heads and formal features) is always available. Thus, the absence of morphology does not provide evidence for the loss of a feature, but only for the loss of the overt expression of that feature (cf. Koch 1995).[1] The grammaticalization paths shown in Chapter 6.2, however, leave open the question of whether the loss of formal features is dependent on morpho-phonological erosion or not, i.e., whether morphological change precedes syntactic change or is a consequence of it. Several scenarios are imaginable: (1) syntactic change may occur without morphological change prior to it; (2) morphological change is possible without syntactic change prior to it; (3) syntactic and morphological change are simultaneous and interdependent; or (4) they are simultaneous but independent processes.

Most commonly, it is assumed that the presence of a certain morpheme (categorically) indicates that a syntactic operation has applied, whereas its absence does not say anything about this effect (see the discussion in Poletto 2014, and references therein). Syntactic change thus follows morphological change (i.e., phonological reduction) but never precedes it.

There is, however, evidence that suggests that syntactic change is possible independently of morphology (cf. Fischer 2010). Cole et al. (1980), for example, discuss the properties of Experiencer arguments of psych verbs in different languages and conclude that in most cases syntactic subject properties arise earlier than subject morphology (basically, nominative case and verb agreement).

Not all kinds of features, however, are equally likely to undergo syntactic change. Whereas selectional features, responsible for Merge, are compulsory in the derivation, syntactic/formal features are dispensable. Their main role is syntactic cohesion, and making structural dependencies and hierarchical relations explicit, besides being a 'last-resort mechanism' to reduce pragmatic overload (see Eckardt 2009 and the discussion above). Since they are to a certain degree supplementary (i.e., they are not part of our genetic endowment or UG), they need clear cues so that they can be postulated in language acquisition and maintained diachronically. In this respect, the input must be unambiguous and abundant enough for the learner to parse the relevant features, which are not automatically postulated to be present in a language (in contrast, possibly, to selectional features). The syntactic effects of agreement (e.g., word order and movement) are consistent cues for a successful transmission of formal features. Morphology, however, does not always

1. I do not refer to the cases of null morphology within paradigms. It is extremely common that the unmarked value of a feature does not have overt morphology (e.g., masculine, nominative, present tense…). This null exponent, however, stands in opposition to overt morphology in other forms of the paradigm (e.g., feminine, dependent case, past tense…).

provide reliable cues due to the possibility of matching the expression of formal features with zero morphemes. But the question is still whether overt morphology can be considered robust evidence for the presence of a formal feature. I think that this is a non-trivial matter. Since the link between semantic and formal features is so close, it is difficult to determine whether the morphological exponent responds to the semantic or to the syntactic feature, in which case morphology would not represent a good cue for deducing syntactic structure. It would be necessary to find instances of formal features obviously dissociated from semantic ones, i.e., features that are only active in the syntax but have no effect on the interpretation at LF, but this seems to be a hard task. An extreme case would be overt morphology variation that does not correlate either with syntactic features or with semantic meanings. The use of the two or more alternative morphological exponents could then be defined as a stylistic choice. In this scenario, an optional variant would logically disappear if the syntactic configuration with which it was previously associated has changed, and if it cannot be reinterpreted as a reflex of a semantic feature. If this is correct, 'true optionality' would be a transition period before the complete loss of a morpheme after syntactic change. The selection of appropriate morphological exponents (at PF) is usually related to the output of narrow syntax, but it is not necessarily constrained by it all the time (in the same way semantic and formal features usually overlap, although they are conceptually autonomous), resulting in some freedom for the morphological module. In sum, morphology seems to react to syntax rather than guiding it. It thus seems plausible to believe that morphological change may occur after syntax has changed.

To illustrate this point, I will consider the number feature. Dual number is an especially salient notion in our conceptualization of the world and is also a formal feature in several languages (i.e., a possible value for the number feature). In Spanish, as in most modern European languages, there are several expressions for semantic duality (*ambos* 'both', *pareja* 'couple'…). However, there is no morpho-syntactic repercussion of duality (e.g., in the form of agreeing morphology associated with syntactic ϕ-agreement, as in Old Greek and Old English, for instance, or special binding effects). The use of dual markers (*ambas manos* 'both hands' vs. *las manos* 'the hands') does not give rise to any special readings or semantic effects either. It is clear that nowadays [Dual] is a semantic feature in these languages but not a formal one, since there is no overt syntactic, or even morphological cue to acquire (or activate) this feature. Nevertheless, some marginal expressions of duality have been maintained. In sum, the morphological component can keep material of a feature (probably still associated with the semantic value of this feature) after losing the category that supported it. As I will show later on, this approach – i.e., the primacy of syntactic over morphological change – successfully captures the change with respect to PPA in Romance languages.

6.4 Economy and cyclicity

A concept that has been more or less implicitly present in the preceding exposition is the economy principle. Economy is a recurring topic in language change studies. The reduction of computational complexity lies at the heart of many linguistic changes. Generative definitions of grammaticalization as a strategy to reduce syntactic operations (e.g., Merge-over-Move) in order to avoid 'costly' derivations are directly derived from the economy principle (cf. Roberts & Roussou 2003; van Gelderen 2004). As van Gelderen (2011) extensively shows, economy is also the trigger for cyclic change.[2]

As for the grammaticalization cline proposed in (2.20), economy is responsible for the movement toward simpler structures. Grammaticalization starts with a complex construction due to the doubling of semantic features which depend on pragmatic requirements (e.g., focalization or expressivity), which are necessarily fulfilled in the speech situation. Bleaching the doubled constituent, reducing the number of elements in the numeration, avoiding redundancy (mere repetitions), and limiting the amount of syntactic structure (i.e., the need for fewer projections, the formation of a lower number of chains, etc.) are some of the manifestations of the economy principle in the context of grammaticalization. The emergence of formal features, however, does not contribute to a greater simplicity of the structure (cf. van Gelderen 2011 and Biberauer & Roberts 2015 for different formulations of the Feature Economy principle). On the contrary, they introduce an additional operation Agree in narrow syntax that did not previously exist. However, this complexity is still preferable to pragmatically marked structures with doubled semantic features. In fact, doubling structures often show interface effects (Chapter 2) and thus have a certain amount of ambiguity and instability. If the language learner is not able to identify the original semantic or pragmatic motivation for doubling (e.g., because the distinctive interpretation of the structure has become opaque), other parsing strategies will be applied (cf. Fuß 2008, 2012): syntactic Agree between formal features. Hence, formal features are necessary as 'last resort' mechanisms to minimize the complexity or costs of such a construction, or to 'mimic' in an economical way an input that has become opaque. After this, formal features are eliminated as well.

As soon as the doubled semantic features are simplified and incorporated into narrow syntax as an agreement chain, other elements may reintroduce coindexed semantic features, arguably for similar reasons to before (information structure,

2. The idea of cyclic changes is, however, older than this. Von der Gabelentz ([1891] 1972), Jespersen ([1917] 1966) and Sapir ([1921] 1970) have also claimed that language change is a cyclical process.

expressivity, etc.). In this way, grammaticalization as a formalization of syntactic features can end up as a cyclical process. The economy principle thus prompts both cyclicity and grammaticalization clines, although other factors (i.e., opacity and parsing failure) must be involved as well. Assuming that the economy principle should rather be understood as a general cognitive strategy that is not language-specific, which is why it is included in what Chomsky (2005) calls the "3rd factor of language design," it is clear that cyclicity and grammaticalization must be conceived as epiphenomena emerging from the interaction of the three factors of language design, instead of being part of UG itself, or primitives of language.

6.5 Summarizing

In this chapter, I have argued that the classic concept of grammaticalization can be perfectly adapted to the current developments in syntactic theorizing elaborated in Chapter 5. I have assumed that formal features, strictly distinct from semantic and phonological features (cf. Zeijlstra 2014), are responsible for the syntactic operations Merge and Agree, and that variation and parametrization are encoded in their properties. In this context, language change processes should be redefined so as to crucially apply to the feature level. This makes it possible to identify interrelations between grammaticalization, parametrization and other types of syntactic change in a broader sense.

First, I have focused on the grammaticalization of formal features. After suggesting several conceptual modifications to the proposal in van Gelderen (2011), represented in (2.20) and (2.21), I have argued that the source of grammaticalization is the existence of doubling structures, with duplicated semantic features. Since emphasis, expressivity and, more generally, information structure and pragmatics are the triggers for the introduction of a doubled semantic feature, it can be assumed that syntactic change begins with pragmatics (cf. Givón 1976). This view is also compatible with the predictions of the Interface Hypothesis: phenomena at the (external) interfaces are more vulnerable to language change (cf. Sorace 2006; White 2011, etc.). This effect comes automatically under the view of grammaticalization presented here. The creation of a pair (or set) of formal features should be understood as a 'repair strategy' when the meaning of the doubling construction becomes opaque or ambiguous. Once the construction has been 'improved' by eliminating the semantic features in one element, the formal features also undergo further grammaticalization and are deleted. I have then discussed the role of (overt) morphology in language change. Formal features undergo the last step in the grammaticalization cline – i.e., deletion – only if there is no robust evidence in the input for their conservation. Word order and movement are solid cues for

the existence of formal features in the syntax; morphology, in contrast, is less reliable: it allows zero exponents (cf. Koch 1995) and it seems that morphology can survive syntactic change (cf. Cole et al. 1980; Fischer 2010, etc.). Finally, I have commented on some properties of grammaticalization derived from 3rd factor cognitive strategies (e.g., unidirectionality, cyclicity, etc.). I am convinced that the view of grammaticalization presented here achieves descriptive and explanatory adequacy in compliance with current assumptions in linguistic theory.

In the next chapter, I will illustrate how the grammaticalization cline for formal features can be used to explain the development of subject-verb agreement. In order to do this, I will first adapt the analysis on subject agreement by Pesetsky & Torrego (2004, 2007). I will then discuss how variation in the feature composition of LIs (i.e., which features are instantiated in a specific language and how they are bundled and linked to LIs) may interact with the economy pressure, mediated by grammaticalization and parametrization processes. This cursory analysis, however, will serve as a reference point for the more exhaustive study of object agreement (more specifically of PPA) in Part Three.

CHAPTER 7

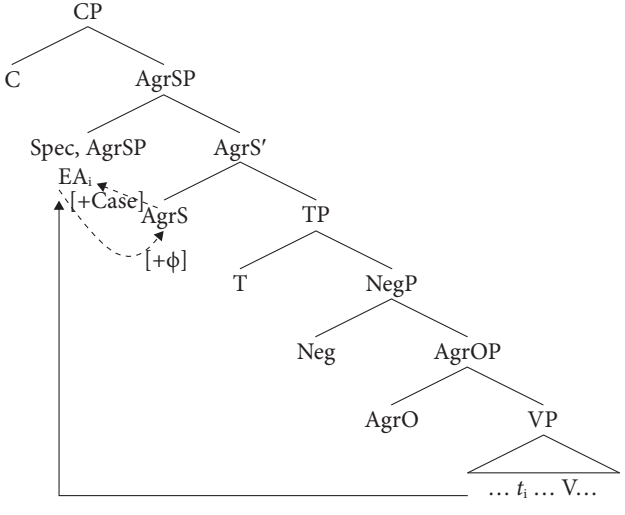
Subject-verb agreement revisited

7.1 Preliminaries: Some problematic issues

Kayne (1985) suggests that any instance of argument-verb agreement should be accounted for by relying on similar mechanisms, namely Spec-Head relations. If PPA, an instance of object agreement, is similar to subject-verb agreement in some relevant way, it will be useful to look into subject agreement in some more detail before turning to object agreement.

It is uncontroversial that the position in which the subject ends up after being overtly moved is a specifier position placed relatively high within TP. This is why a dedicated position – Spec, AgrSP – located above Tense has been proposed. Pollock's (1989) split-IP hypothesis justifies the distinction between structural and inherent cases: structural cases are assigned by Agr-heads; inherent case is assigned by a semantically non-empty head to its complement. The subject DP (EA=external argument) then needs to rise to [Spec, AgrSP] in order to receive nominative case from Agr°. In turn, the nominal ϕ-features of the subject are transmitted to the verb. This is illustrated in (2.24–2.25) for a simple Catalan sentence.

(2.24)



(2.25) a. [$_{AgrSP}$ La catifa$_i$ [$_{AgrS}$ aterra$_j$ [… [$_{VP}$ t_i t_j a l'aeroport del Prat]]]].
the carpet.FSG land.3SG at the airport of El Prat

b. [$_{AgrSP}$ Les catifes$_i$ [$_{AgrS}$ aterren$_j$ [… [$_{VP}$ t_i t_j a l'aeroport del Prat]]]].
the carpet.FPL land.3PL at the airport of El Prat
'The carpet/s lands/land at the airport El Prat.

Many languages, among them most Romance languages, do not show overt movement to the subject position, either because there is no overt subject at all or because it remains in its base-generated position within VP, where it gets a thematic role from the verb. Since Chomsky (1981), however, it has been assumed that the subject position must be obligatorily projected in the structure, which is known as the Extended Projection Principle (EPP). According to this, the (higher) specifier of IP cannot remain empty. For null-subject languages, different empty categories (*pro*/*PRO*) have been postulated to satisfy the EPP. The availability of these categories is language-specific, i.e., parametrizable. The null-subject property is thus the result of a parameter that allows or bans the possibility of having an empty category check the EPP (see Rizzi 1982; D'Alessandro 2015, and many others). However, the very existence of *pro* has been amply debated. On the one hand, *pro* has been argued to have the same distributional properties as "weak pronouns" (Cardinaletti & Starke 1999). This means that empty categories must be inserted to delete uninterpretable features (e.g., verbal ϕ-features) before spell-out (cf. Sheehan 2006; Roberts 2010). On the other hand, many scholars have tried to eliminate these null elements from syntactic analyses (Barbosa 1995; Manzini & Savoia 2005, etc.). Alexiadou & Anagnostopoulou (1998) observe that there is a cluster of properties that distinguishes languages of the Germanic type from languages of the Greek and Romance type (2.26).

(2.26)

Germanic languages	**Romance languages / Greek**
SV(O)/Expletive–VS(O) alternation	Free word order (VSO/VOS)
A-status of subjects	A′-status of subjects
Non pro-drop	Pro-drop
Definiteness restrictions with unaccusatives	No definiteness restrictions with unaccusatives

They propose that all these properties are due to how the EPP feature is satisfied/checked within TP: through Move/Merge of either XP or X°. In the latter case, the verbal agreement morphology has "the categorial status of a pronominal element"[1] (Alexiadou & Anagnostopoulou 1998: 494) and, as such, it is able to

1. Note that 'pronominal in nature' should not be understood as if the verbal endings were syntactic pronouns, but it rather means that their feature configuration is similar to that of pronouns (e.g., with interpretable features instead of uninterpretable ones).

check (and delete) the uninterpretable EPP feature, which is commonly seen as an uninterpretable nominal feature D (cf. Chomsky 1995; Holmberg 2005).[2] According to Alexiadou & Anagnostopoulou (1998: 516), the ϕ-features of the verbal morphology are interpretable, possibly deriving from their (remote) origin as free pronouns. In some cases (e.g., Trentino/Florentino, French), subject clitics may fulfill the same function (i.e., checking EPP/D as X°), which is not unexpected under the assumption that clitics undergo a grammaticalization process from XP to X° to ϕ-feature bundles (see Chapter 2).

Summing up, the value for EPP checking permits two parameter settings, which can be diachronically related through the grammaticalization of subject pronouns/subject clitics: 'Move/Merge of XP' and 'Move/Merge of X°' (but always taking into account that there are other ways of modeling movement to TP without taking recourse to EPP features). In what follows I turn to the question of the possible effects of grammaticalization on the formal features contained in the different elements involved in subject-verb agreement (free pronouns, clitics, verbal inflection…), and how these new different feature configurations can be linked to language change and the null-subject parameter.

7.2 Two diachronic stages in subject-verb agreement

At first sight, Romance languages (except French and Brazilian Portuguese) show little variation with respect to their subject properties. The constituent order is still relatively free, and null subjects are the norm. However, an increase in the restrictions has been attested in Catalan, Spanish and (European) Portuguese (cf. Martins 1994; Fischer 2002, 2010; Vega Vilanova et al. 2018). In some Spanish varieties, for instance, the canonical SVO order has been extended to contexts where Peninsular Spanish would require VOS due to information structure requirements (cf. Gabriel 2010). Judeo-Spanish (Fischer, Gabriel & Kireva 2014: 84) shows a similar evolution. Catalan (cf. Vallduví 1994) tends to resort to dislocation strategies in order to organize information structure outside the clause. Presumably, these changes with respect to word order are connected to the verb movement parameter (Fischer et al. 2019): increasing restrictions on the verb position in the syntactic tree come with a reduction in possible A′-positions for the DO within the clause. It is plausible to think that the verb movement parameter also has an effect on subject properties.

2. Recall Chapter 1.2.4: ϕ-agreement on passive morphology also absorbs theta-role and case, hence it is considered to be argumental.

Unlike European Portuguese, Spanish and Catalan, Brazilian Portuguese (BP) and French are no longer considered pro-drop languages. Along with obligatory subjects, a reduction in the morphological richness of the verbal paradigms has been attested, as shown in (2.27): BP has only three different forms (*canto, canta, cantam*), whereas French has only one distinctive form for 2nd person plural (*chantez*) with the rest of the paradigm being (phonologically) identical ([ʃãt]).

(2.27)

French verbal morphology	**BP verbal morphology**
je chant-e [ʃãt]	(eu) cant-o
tu chant-es [ʃãt]	(você) cant-a
il/elle chant-e [ʃãt]	(el/a) cant-a
on chant-e (nous chant-ons)[3] [ʃãt]	(a gente) cant-a
vous chant-ez [ʃã.'te]	(vocês) cant-am
ils/elles chant-ent [ʃãt]	(eles/as) cant-am

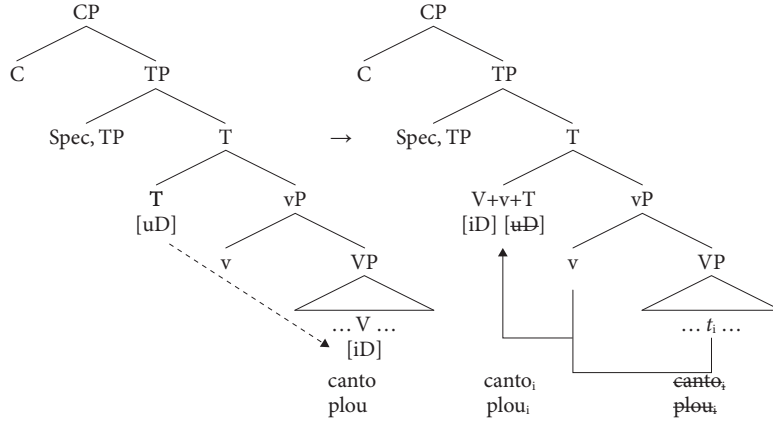
The different types of verb movement have often been ascribed to the morphological properties of the verb, i.e., whether the verb has rich or poor morphology. This is known as the Rich Agreement Hypothesis (cf. Koeneman & Zeijlstra 2014 and references therein). This idea could be integrated into Alexiadou & Anagnostopoulou's (1998) proposal as follows: since the verb in T° is not accompanied by an overt XP in [Spec, TP], verb movement to this position can be interpreted as a solid cue to postulate an interpretable nominal feature [iD] in the verbal inflection; rich agreement thus fulfills a pronominal function and checks/deletes by itself the EPP feature in T° (i.e., an uninterpretable nominal feature [uD], which must be c-commanded by [iD]). This is shown in (2.28a)[4] for a verb with an EA (*cantem* 'we sing') and a verb without one (*plou* 'it rains') in Catalan. Once the verbal endings lose their pronominal (i.e., referential) property for reasons that will be explained below, [uD] can no longer be the motivation for verb movement. Another phrasal constituent has to take over the checking of the EPP, be it a subject DP, a personal pronoun, or an expletive. In the latter case, the subject DP needs an additional uninterpretable feature to remain active, thus accessible to T°, namely [uCase]. The subject then raises to [Spec, TP] to c-command [uD]. In the absence of an appropriate DP, an expletive can be directly inserted there, as in (2.28b) for

3. The specific form for 1st person plural in *chantons* is becoming obsolete since it is usually replaced by the form *on chante*.

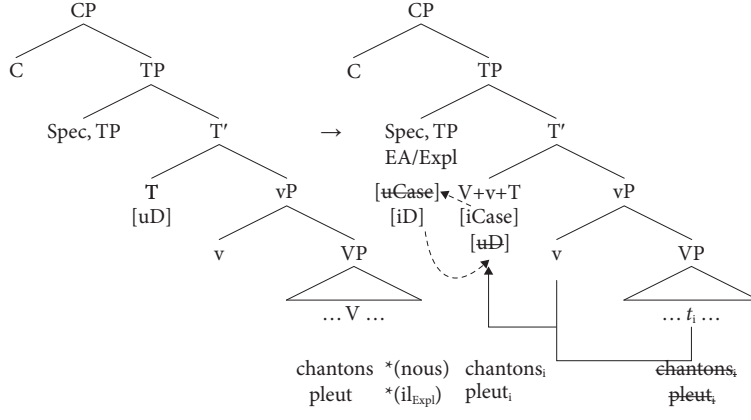
4. In this and the following examples, I will distinguish between semantic and formal/syntactic features through different coding conventions: semantic features are directly marked by square brackets (e.g., [ϕ]), while formal features are specified for their interpretability (e.g., [iϕ] and [uϕ]). Solid arrows show movement operations, and dashed arrows show the direction of checking/valuation by Agree.

French. The case feature on the nominal can now be checked by 'reverse Agree.' One of the main differences between the Catalan and the French structures is the landing site of the movement triggered by [uD]: it is the head whenever V can check the EPP adjoined to this position, or the specifier whenever it is a DP that is merged or moved there.

(2.28) a.



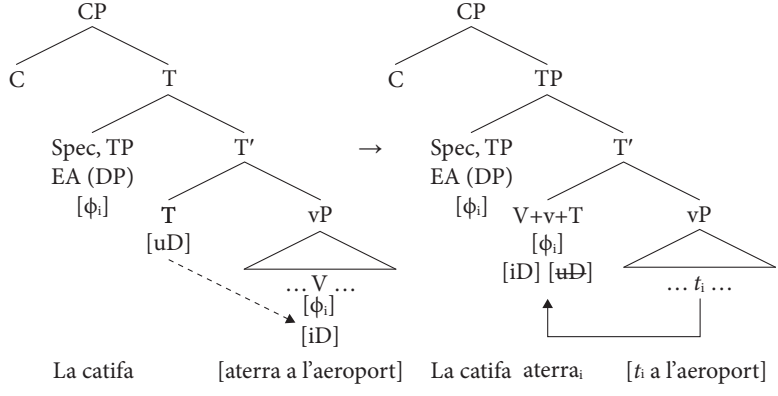
b.



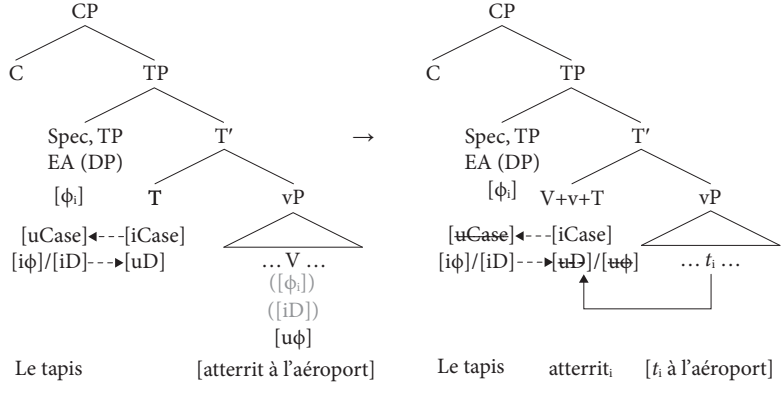
Besides [iD], I assume that the verbal ending with pronominal (referential) nature carries semantic ϕ-features, which for the sake of simplicity have not been represented in the examples above. An additional overt subject in the structure in (2.28a) must thus be in a non-argumental position, which results in a sort of 'doubling construction.' This DP in A′-position (i.e., [Spec, TP] is considered to be a non-argumental position) carries semantic ϕ-features which are coreferent with the semantic ϕ-features of the verbal ending under T°, as represented in the Catalan example in (2.29a). The external argument (*La catifa* 'the carpet') and the verb (*aterra* 'lands') are not part of the same agreement chain but are simply coindexed. The verb raises to T° and checks the EPP feature on its own. If the conditions

described in the preceding chapters apply (i.e., opacity of the function of the doubling constituent, high frequency, etc.), the coreferent sets of semantic features can be reinterpreted as a single syntactic chain ((2.29b) for French, a non-null-subject language). Since only one occurrence in the chain can be interpretable, the ϕ-features of the verbal morphology in T° must be modified – the semantic [ϕ] on the verb can be dispensed with. Consequently, from this moment on verbal endings are non-pronominal, i.e., non-referential: they constitute ϕ-feature bundles with the function of agreement markers. As discussed above, the verbal morphology can no longer check the EPP due to its new non-pronominal status and the insertion of other elements c-commanding [uD] is required. [Spec, TP] is now an A-position where structural case is assigned.

(2.29) a.



b.



The EPP has a visible effect on linearization, but it is not directly legible for the conceptual-intentional interface. Therefore, the very nature and existence of the EPP feature has been questioned as a "vacuous" and "non-explanatory" notion (Grohmann et al. 2000: 154). Alexiadou & Anagnostopoulou (1998: 519) suggest a "parasitic" connection of the EPP to case checking. Alternative devices, instead of an EPP feature, seem to be possible. Accordingly, there are a number

of approaches that still try to account for the differences in word order and null subjects in the two language types or language stages illustrated in (2.29) without relying on an EPP feature.

Let us assume that syntactic movement is motivated by the need for formal features to agree in the proper configuration – i.e., [uF] is c-commanded by [iF]. The EPP as conceptualized by Holmberg (2005) would then no longer be necessary if we find an [uF] that must be properly dominated and triggers movement.

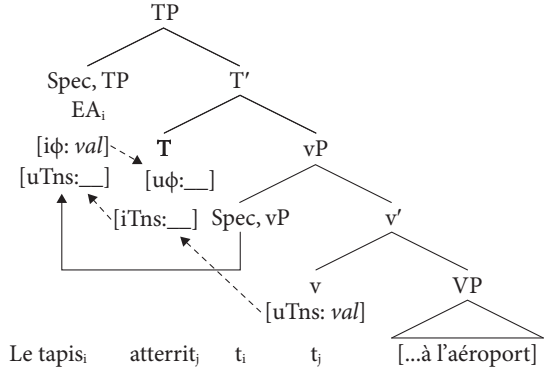
In early minimalist proposals, movement was motivated by the strength of formal features (strong features attracted the associate whereas weak features allowed long-distance agreement) (cf. Chomsky 1993; Lasnik 1999), which in some sense already renders EPP-features dispensable. Roberts (2010) formalizes movement by diacritics attached to other formal features (or functional heads), with a similar function as the one the EPP originally had, or with the function of keeping elements active for the next phase (i.e., edge features). However, these diacritics are supposed to have some unique properties (e.g., they do not need valuation), so that it seems more adequate to treat diacritics and formal features separately. Yet in this case it is not clear whether they are actually indispensable, if locality conditions and inclusion relationships (e.g., Biberauer & Roberts 2015), i.e., the structural configuration itself, are sufficient to explain when movement applies and when it does not. The latter is preferable for theoretical reasons. In my analysis of verbal agreement, thus, I will dispense with the idea of an EPP feature and support an account based exclusively on the distribution and properties of the motivated formal features in the syntactic structure.

Recall that nominative case is a manifestation of uninterpretable tense features on the noun (Chapter 5.3). Following Pesetsky & Torrego (2004, 2007), the subject is assigned case via the agreement chain built on [Tense]. As shown above, Pesetsky and Torrego characterize Agree as a valuation operation within 'agreement chains.' Basically, chain formation is subject to two constraints: first, only one member of the feature chain can be interpretable; second, the feature value cannot be contradictory among the different occurrences of the feature.[5] Assuming that interpretable features must c-command their uninterpretable counterparts (i.e., upward agree) and that [Tense] is interpretable under T°, the subject DP receives nominative case in situ through value sharing within the agreement chain. The canonical word order, however, must depend on other factors. Verb position is possibly determined by its own restrictions (cf. Koeneman & Zeijlstra 2014; Bobaljik 2008 and Zwart 2017 provide arguments supporting post-syntactic verb movement). Movement of the subject DP is probably triggered by uninterpretable ϕ-features

5. Provided that there is no value in the chain for a certain feature, the interface module may reconstruct a default value after spell-out (see Chapter 5.3).

on T° rather than case, as commonly assumed. In non-pro-drop languages (such as French, German or English), the verbal morphology is non-pronominal. This means that the verbal ϕ-features are not semantic but rather (uninterpretable) formal features. For this reason, the subject DP raises to [Spec, TP] in order to c-command [uϕ] there ((2.30) for French). In the absence of an appropriate DP, another nominal element can be inserted (in some cases with default values) to fill this position and satisfy feature checking before spell-out. From this it follows that the obligatory presence of overt subjects must be somehow linked to the status of verbal morphology.

(2.30)

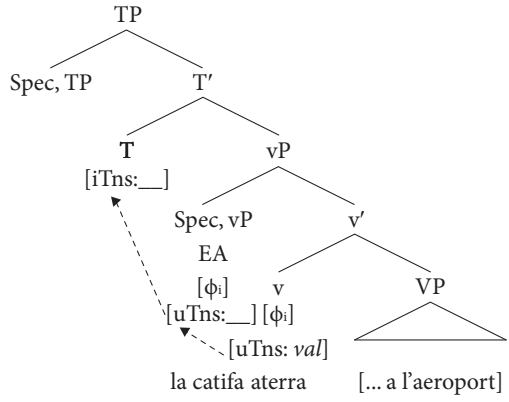


In contrast, if verbal morphology is pronominal (as in pro-drop languages such as Spanish or Catalan), its ϕ-features are not necessarily formalized, but are still semantic. As a pronominal element, it is able to mark the referent on its own. The presence of an overt subject (generated in a specifier position within VP or elsewhere) introduces a doubled set of semantic features coreferential with those carried by the verb itself (marked with indexes on [ϕ] in (2.31), a sentence in Catalan before verb movement), which are not engaged in syntactic Agree, though. Since [iTns] dominates all uninterpretable instances of [Tns], Agree properly applies and the value in v is shared in the entire agreement chain. Verb placement does not seem to be directly related to verbal morphology in null-subject languages, since it is found as high as C°/T° in some languages (see references in Navarro et al. 2017) but within VP in others, for example, Chinese (see Huang 1994, among others).[6]

Just like Latin, Old Romance languages (including French) used to be null-subject languages. They thus followed the agreement pattern in (2.31). Overt subjects introduced an additional set of semantic ϕ-features; hence they gave rise to

6. A possible motivation for verb movement could be the postulation of uninterpretable ϕ-features in T°, and consequently interpretable ϕ on the verb morphology. This would lead to obligatory verb movement, i.e., through incorporation of the verb in T°, the [uϕ] could be checked before spell-out.

(2.31)



a doubling construction. This structure has proven to be quite stable, though. As observed by Alexiadou & Anagnostopoulou (1998), the subject position in these languages has A′-properties. This could be due to the fact that the subject DP is understood as clause-external (e.g., topicalized) to a certain degree, and does not form a syntactic chain for ϕ-agreement.

If, for unrelated reasons, the information structural or the pragmatic function of the subject DP bleaches – possibly due to the ambiguity between topicality and subjecthood (cf. Li & Thompson 1976) – a grammaticalization process may begin, as described in (2.20). First, the two sets of coindexed semantic features are integrated into one series. In order to link the two elements, verbal morphology and the subject DP, it is necessary to postulate the existence of formal features that enter into an Agree relation with each other – [uϕ] is assigned to the verbal element and [iϕ] to the noun, since the interpretation of these ϕ-features is nominal reference at LF. Lastly, the semantic features of the (pronominal) verbal morphology may completely disappear due to economy requirements. At the same time, (morpho-)phonological erosion and syntactic simplification of the verbal ending may optionally take place. At this point, the subject DP becomes compulsory and subject-verb agreement responds to the structure in (2.30). The subject should be analyzed as being consistently clause-internal in an A-position within VP/TP.

The proposed analysis of subject-verb agreement tries to reduce the number of different devices and mechanisms necessary to explain how agreement works and how it has changed over time. I have shown that there is no need to postulate empty categories or an EPP feature, but rather the properties of the features attached to LIs and the conditions of Agree on their own are sufficient to shape the cross-linguistic patterns of subject agreement. Grammaticalization 'improves' doubling constructions that are not readily parsed by reinterpreting them as syntactic Agree. The duplicated semantic features (ϕ on T° and on the DP) are reanalyzed as a pair of formal features forming a chain for agreement. Semantic features

that are irrelevant at LF are deleted. This corresponds to the first step in the grammaticalization cline for formal features:

(2.20) **doubled semantic features [σ] > (simple) [σ] + [iF]/[uF] > simple [σ]+ Ø**

Personal pronouns in Pied Noir French and Trentino (cf. Roberge 1990) are a good illustration for the cyclicity of this process (Bahtchevanova & van Gelderen 2016 also show in a convincing analysis how pronouns in Colloquial French and Swiss Spoken French also undergo cyclic change, and, more interestingly, how this process interacts with changes in other phenomena). As can be seen in (2.32), subject pronouns that have become clitics (DP or D°) do not preserve their pronominal value but rather behave like agreement markers (but see De Cat 2005). This allows (obligatory) subject clitic doubling if another DP (formerly a topic) is inserted in subject position (*Les chiens, Mario*). The last step in the cline in (2.20) would lead to the dissolution of syntactic agreement between the verb/clitic and the subject DP – once the verb/clitic does not carry semantic ϕ-features any more, [uϕ] can also be deleted.

(2.32) a. Les chiens ils mangent beaucoup. Pied Noir French
the dog.MPL they eat.3PL a lot
'Dogs eat a lot.'

b. El Mario el magna. Trentino
the Mario he eat.3SG
'Mario eats.'

7.3 On the role of case in grammaticalization and language change

From the discussion so far, it follows that parametric and diachronic variation can be modeled on the basis of grammaticalization processes that affect the formal features of the verb or the noun. If my analysis is on the right track, ϕ-features are responsible for subject placement and, indirectly, for the availability of null subjects, rather than case (i.e., [uTns]), which stays constant. This account, though, challenges the common assumption that argumental movement to the subject position (i.e., Spec, TP) is due to the case filter, i.e., the necessity of nominative case assignment or checking.

As Zeijlstra (2012) and Bjorkman & Zeijlstra (2014) extensively discuss, case and ϕ are interdependent features. In traditional generative accounts that assume downward probing/upward valuation, the uninterpretable ϕ-features on T° probe down for a goal within its c-command domain – the interpretable ϕ on the subject DP. This results in 'reverse agreement' for case: [uCase] in the noun is checked (and valued) against a higher goal in T°. Still, subject placement must be independently

motivated (by an EPP feature, feature strength of case, etc.). Adopting upward valuation as I propose following Zeijlstra (2012) and Bjorkman & Zeijlstra (2014), the inconsistency of inverse checking does not arise and no additional features other than case and ϕ-features are needed, so the derivation is in general terms more economical. Whether these features are semantic, interpretable or uninterpretable depends on the degree of grammaticalization. Under their approach (but also generally in a phase-theoretic framework), the case feature seems to be a conceptual necessity for agreement to take place. The existence of case features renders the goal active for ϕ-agreement. Without [uCase], the subject DP would not be eligible, or even accessible, for [uϕ] on T°. The properties of ϕ in the verb are the only means by which subject placement can be explained, unless artifacts such as feature strength, diacritics or the EPP are assumed.

However, the obligatoriness of nominal case (licensing the DP to bear an argumental function) has also been challenged. Diercks (2012); van der Wal (2015) and Sheehan & van der Wal (2016), for example, suggest that Bantu languages lack abstract case. In these languages, it is possible to find double nominative constructions (with the nominative being the unmarked case, i.e., the absence of case). The arguments in the clause are arranged according to the animacy hierarchy – a semantic feature inferred from our general knowledge of the world. If the distribution of theta-roles among the arguments does not conform to the animacy hierarchy – i.e., if the subject/agent is not the most animate participant – special verbal morphology is used to express the inversion of this correspondence. Another peculiarity of these languages is the productive use of applicative morphology to mark thematic relations and thus minimize the role of case (cf. Pylkkänen 2002, among many others).

Like other formal features, [Tns] is also subject to grammaticalization processes, which means that, under certain circumstances, this feature may gradually disappear. The weakening of case opens the way for the development of new case markers from prepositions with more or less identifiable semantic meanings – a process which is very similar to the emergence of DOM to mark atypical objects in Spanish and Catalan once accusative case has disappeared from full DPs. The grammaticalization cline in (2.20) underpins this process, whose last step is the complete omission of the case feature. Rather than structural case, theta-role assignment seems to suffice to establish grammatical relations. In addition, the fact that languages have different case alignments – nominative-accusative, ergative-absolutive, or mixed types – strongly suggests that case is not a necessary universal feature of languages, but rather an emerging property resulting from grammaticalization processes.

The analysis of subject-verb agreement presented here also reveals some interesting effects of grammaticalization (feature formalization) on syntactic operations and language change phenomena. The requirements of chain formation and feature valuation can trigger syntactic operations (especially movement). Some of

these outcomes are quite pervasive in the sense that they can also be captured as parametric variation – i.e., variation manifested by linguistic cues in the input and with clustering effects, as Gallego (2011) puts it. The cluster of properties in (2.26) can be derived from different properties of the features contained in the lexical items (the verb, pronouns, etc.). In this way, grammaticalization can be the trigger of a parametric change from pro-drop languages to non-null-subject languages.

If language is optimally designed to satisfy interface conditions, features that exist only in the syntax, such as formal features, should not be found for economy reasons. However, syntactic features are not only necessary, they can even be considered the most economical alternative to avoid markedness or opacity of structures endowed with two coreferential sets of semantic features. Formal features are not preferred because they "keep the derivation going," as van Gelderen (2011) claims, but rather as 'last-resort' strategies. Van Gelderen's claim stems from a misled conception of the distinction between interpretable and semantic features. Of course, "select[ing] two words from the lexicon with only interpretable features" does not help the derivation, but this does not lead to converging structures. Moreover, constructions with doubled semantic features, albeit marked, are quite common. Even if formal features are not economical per se, they are still the best option to reduce parsing problems. Consequently, if a formal feature is not needed in order to rescue a complex structure or does not unambiguously trigger syntactic effects, there is, in principle, no need for the language learner to postulate the existence of such a feature, be it case, ϕ or a different one. The loss of case is thus predicted by the grammaticalization cline in (2.20) if these conditions are met.

Since parametric variation is encoded in the formal features attached to LIs, their grammaticalization, conditioned to a certain degree by pragmatics or information structure, may bring along re-parametrization, observable in a number of syntactic effects. In the case of the grammaticalization of subject pronouns, the change from being full DPs to becoming agreement markers involves a change in the null-subject parameter (e.g., subjects must be obligatorily realized), followed by other syntactic effects such as new word order restrictions.

In sum, the complete process of grammaticalization (i.e., the emergence and loss of formal features) is guided by language economy: formal features relieve the cognitive burden of semantic doubling, but once their task is fulfilled and there is no syntactic evidence to postulate them (if they do not "keep the derivation going"), formal features are superfluous and disappear. Still, one question remains open, namely if and to what extent an inverse relationship would be possible – i.e., syntactic phenomena having an effect on the further grammaticalization of certain features, thereby giving rise to new parameter settings. This issue will be discussed in the following chapters.

PART THREE

Past participle agreement in Catalan

An empirical study

In the preceding chapters, I have provided an overview of the behavior of past participle agreement (PPA) in different Romance languages (mainly French, Italian and Catalan). I have then extensively discussed several previous accounts and argued that almost all of them fail to explain some important aspects of the data. This is due to the fact that they focus on certain properties (structural, semantic or pragmatic), while overlooking the evidence that agreement involves the interaction of morphology with syntactic constraints as well as aspect and definiteness/specificity, and that several phenomena concerning object syntax (e.g., object movement, clitic doubling and differential object marking) are interconnected. While the idea that position is responsible for PPA seems to prevail (e.g., Rosselló 2002; Poletto 2014, etc.), it has been shown that different readings for certain wh-elements emerge in French when they are used with or without PPA (cf. Obenauer 1992; Déprez 1998; Belletti 2008). Similarly, Salvà i Puig (2017) shows agreement patterns in Majorcan Catalan that depend on aspectual features of the verb and are thus not covered by merely structural approaches. Even though these data are rather marginal, their existence is very revealing of the process of change. Additionally, the variability and optionality attested across Romance and within each Romance language that maintains PPA have to be explained.

A diachronic perspective seems to be more appropriate to deal with all these facts. In fact, all these properties of PPA look like interface effects. As I have suggested above, interface phenomena (independently of their theoretical status) come with more vulnerability to language change, therefore a diachronic view is appropriate to properly analyze such interface effects. This does not mean that the positional criterion is not adequate to account for some cases of PPA in certain languages and/or varieties, but position alone will hardly account for the synchronic data in its entirety. In this sense, I regard diachronic evidence as a necessary component in the explanation of PPA, especially with respect to its optionality and correlations with aspect, definiteness and/or specificity.

In Part Two, I have claimed that the grammaticalization of the subject ϕ-features can explain different diachronic stages in the development of subject-verb agreement in Romance (Chapter 7). The proposal presented in Chapters 5

and 6 proved to be adequate to account for this phenomenon. Following Kayne (1984 and subsequent work), I assume that object-verb agreement (including PPA) shows a behavior parallel to that of subject-verb agreement. According to Tsakali & Anagnostopoulou (2008), there is variation as to how object features are checked in the syntax – bundled in a single functional head or split among two (or more) heads (see Chapter 2.3.4.). As I have done for subject-verb agreement, I will show that the grammaticalization of the verbal ϕ-features is essential to understanding the loss of PPA across Romance. At some stages of the development, agreement seems to interact with accusative case assignment, understood as agreement of an uninterpretable aspect feature [uAsp] on the noun. This gives rise to specificity effects, which, however, will be considered LF effects rather than being syntactically motivated. In addition to grammaticalization, I will show that economy pressures can lead to syntactic change (in a broader sense) or re-parametrization: a reduction in the number of syntactic operations in a derivation – i.e., a preference for bundle-checking over split-checking (cf. Tsakali 2014) – may result in a new distribution of formal features in functional heads. In turn, a consequence of the conflation of these two functional projections is the advance of grammaticalization: if the ϕ-features in AgrO and Asp conflate under a single functional projection, the actual trigger for movement to the pre-verbal position is concealed. Superfluous features (in this case, the formal ϕ-features of the participle) are thus doomed to disappear, according to the last step in the grammaticalization cline in (2.20). Finally, I will argue that optional morphological agreement in Modern Romance can be seen as a post-syntactic operation, supporting the claim that syntactic change precedes morphological change.

This section is organized as follows: In Chapter 8 and Chapter 9, I will describe the criteria and data found in a newly compiled corpus for participle agreement in Old Catalan, and the results of an acceptability judgment task developed to test some particularly conflicting structures (e.g., the specific vs. non-specific readings of the partitive clitic *en*, etc.) in Modern Catalan. At the end of Chapter 9, I will argue that the collected data can be captured as a cyclic change, directly connected with the Clitic Doubling Cycle (Vega Vilanova et al. 2018). In Chapter 10, I will analyze the different stages of the PPA cycle according to the framework proposed in Part Two and will try to give an answer to the research questions stated at the beginning of this book: What is the role of aspect and specificity in the synchronic and diachronic analysis of PPA in Catalan? How are economy, grammaticalization and parametric change related to specificity and to each other? What is the connection between syntactic and morphological change?

CHAPTER 8

Data collection

Data on PPA in Catalan are rather scarce. Since PPA in Modern Catalan is felt to be purely optional (an 'embellishment' possibly motivated by prosodic and/or stylistic considerations), it has not received much attention in the literature in recent years. This is probably in part due to the fact that the conditions that affect the realization of overt agreement are rather difficult to capture. Also, the empirical basis for most judgments is not very solid: both prescriptive and descriptive grammars rely on the use of impressionistic data (based on the intuitions or occasional observations of the author) or on the normative models of French and, to a lesser degree, Italian (see Chapter 3.2). Hence, the same conditions that apply to French and Italian are discussed (and sanctioned) for Catalan with the help of a few judgments and little data. Number and gender inflection in the participle are certainly optional in Catalan under the known conditions (e.g., cliticization, wh-movement…), but some correlations between agreement and aspect and definiteness/specificity (as well as other object phenomena linked to these features) have been found. Therefore, special attention will be paid to the role of these features in language change.

To my knowledge, Old Catalan data have not been thoroughly described yet. Some studies (Par 1928; Moll 1952; Solà 1973; Badia i Margarit 1981; Pérez Saldanya 1998; Farreny Sistac 2004, etc.) comment on aspects of participle agreement in Old Catalan, but they have usually accessed a limited amount of data and do not provide a deep analysis of the development of PPA. Needless to say, the diachronic perspective may be useful to provide a deeper understanding of how PPA works and why it shows such a high degree of variability across Romance. Moreover, it might provide new insights into the sources and the nature of optionality, which is crucial to account for the general tendency to lose participle agreement in Romance.

It is commonly recognized that Old Catalan participles used to agree with any object type (i.e., pre- or post-verbal, irrespective of their features), but aside from some general considerations on the reanalysis of the V+PstPrt+DO complex, the more fine-grained changes from Old to Modern Catalan have not been investigated in detail so far. One of the most exhaustive empirical studies on PPA in Catalan is Gavarró & Massanell (2013). They show that PPA was obligatory up

through the 15th century. They further claim that a slight decay in the realization of agreement began in the 16th century, but that it was not until the 20th century that the omission of PPA had become more or less generalized. Their observations stem from a large corpus search, but they do not provide any analysis that could help identify the triggers for the change. Unfortunately, during the period from the 16th until the end of the 19th century, known as the *Decadença* ('decline'), Spanish was established as the prestige language in Catalonia and the use of Catalan was confined to informal contexts. For this reason, it is rather difficult to find useful written documents in Catalan during the *Decadença*, so that our knowledge about the language during this period is rather sketchy. In this context, my data collection is aimed at confirming the obligatory use of PPA until the end of the 15th century, 'filling the gap' between the 16th and the 19th centuries by presenting newly collected data, and identifying the mechanisms of language change and their triggers. After gathering a consistent sample of data ranging from the 13th to the 19th century, I have codified and analyzed the extracted sentences in order to find effects or correlations (insofar as the limitations of the sample for statistical analysis allow it) that would otherwise have gone unnoticed. This will constitute the starting point for the description of the development of PPA as a cyclic change in the next chapter, and its analysis in terms of grammaticalization and syntactic change due to economy pressures in Chapter 10.

8.1 Old Catalan (11th–15th centuries) and *Decadença* Catalan (16th–19th centuries)

In this section, I will describe the method by which the corpus was compiled. First, I will present general methodological issues. I will then discuss the criteria that I have applied in selecting the texts that are part of the corpus. Finally, I will list the features that have been coded and will present the coding conventions used by myself, two blind-coders and a proofreader.

8.1.1 General methodological issues

The main goal of the corpus search was to document the different constructions with past participles in Catalan from the first records (some fragmentary documents from the 11th century) until the middle of the 19th century, a period of revitalization of the Catalan language and culture known as the *Renaixença*. Although the contexts in which PPA appears are quite restricted (only some verbal forms in the paradigm, besides passives and other marginal constructions), it is a relatively frequent structure. Transitive clauses with a participle form and a

feminine and/or plural DO were the main search target. Clauses with masculine singular objects were ignored, since the masculine singular form of the participle is also used as the default agreement. Since there are reasons to believe that PPA is linked to other phenomena (mainly phenomena affected by definiteness/specificity, such as CLD, DOM and object movement), I have also gathered data concerning samples of other constructions (e.g., passive sentences, absolute small clauses, present participles, gerunds, non-nominative subjects, word order peculiarities, etc.) which might help better understand the behavior of the past participle and/or help shed light on other properties of the clause.

The objective of the search was not to achieve a predetermined total number of sentences. Instead, any target sentences found in the first ca. 100 pages of the selected works have been included in the corpus. Thus, a similar amount of text was analyzed for each author or work.

After I identified the target sentences, they were excerpted and copied with sufficient context into a coding table. The context was often indispensable to discern the values of features whose interpretation goes beyond the sentence boundaries. As a last step, the corpus items were coded according to the parameters listed in Chapter 8.1.3 below. Afterwards, two coders with very good proficiency in Catalan and at least some knowledge of linguistics blind-coded the entire corpus using the same coding conventions, so that the original coding could be checked and amended. Sentences with inconsistent answers were inspected once again by a native Catalan-speaking proofreader.[1]

The Old Catalan corpus contains a total of 2162 full sentences, most of them with past (1681 tokens) or present participles (257 tokens). The rest of the tokens (224) were sampled to illustrate different unrelated structures. This represents enough material for a valuable qualitative analysis. The sampling, however, cannot ensure the representativity of the data, since only a few speakers, for none of whom we could control for any socio-linguistic variable, are analyzed for each century. Consequently, more powerful statistical tests could not be carried out. Unfortunately, expanding the corpus to achieve groups of, say, 30 authors/speakers is, at the moment, an almost impracticable task.

8.1.2 Text selection

The quality and availability of usable texts varies drastically from one century to another. In addition, as Berta (2015) and Stark (2017) point out, PPA is quite

1. I would like to express my gratitude to Svenja Gottschick and Laura Golla for their willingness to help in the codification of the corpus. A big thanks also to Conx Vega for her final review with respect to the consistency in the coding conventions.

sensitive to language register: agreement in Modern French, for instance, is a phenomenon belonging to the cultivated and written language, but not to oral and informal registers. This should be seen as a reason against using literary and in some sense 'artificial' texts in the analysis. Furthermore, Old Catalan data could be skewed by two additional properties – the frequent use of archaisms and Gallicisms by certain authors and/or in certain historical periods. Written formal texts generally show a clear preference for older structures legitimized by the linguistic norm and the prestige variety. Spoken language, in contrast, is more receptive to innovations, so that "novel patterns which arise individually in spoken language may cumulate for a long period of time before they jointly achieve a breakthrough, as a set, into writing" (Janda & Joseph 2003: 140–141). Language change thus affects spoken language first, and only after some time is it reflected in written documents. For this reason, it seems advisable to choose texts that are plausibly closer to spoken registers. Berta (2015) reaches the same conclusion. The rates of PPA in Catalan vary according to the different literary genres. Therefore, I have excluded, among others, texts put into verse because it is possible that the metrical scheme had an effect on the realization (or omission) of agreement morphology. Prose texts that are not primarily scientific were preferred. These comprise chronicles (i.e., narrative texts that more often than not include direct speech), tales and fables (which also show a strong tendency to include direct speech and to avoid complex structures as well as rhetorical devices), personal correspondence and personal diaries (which are not compelled by strong stylistic guidelines). What these text types have in common is a relatively low level of stylistic guidance and a frequent use of direct discourse, which probably reflects some traits of spoken language – but perhaps not all of them, a question that might never be fully answered.

In order to avoid a possible bias toward the speakers' individual preferences, texts by at least three different authors were chosen for each century. A total of 12 longer texts were analyzed, as well as 26 shorter works (such as oaths, letters, etc.). Some of them were consulted directly in the current commercial editions; others were taken from Russell-Gebett (1965); Steinkrüger (2004) and the *Corpus Informatitzat del Català Antic* accessible online at <www.cica.cat>. The list and references of the sources used in the corpus can be found in Appendix I.

Nevertheless, some shortcomings of the selection should be pointed out. Due to the limited availability of texts (especially for the period after the 16th century), not all intended conditions could be met. Also, the sociolinguistic variables with respect to the authors could not be properly controlled for, as these are often unknown. Regional variation, which is likely to be present in these works (differences between Balearic, Catalan and Valencian varieties can be assumed to exist in Old Catalan), has thus been disregarded in the present study. Some of these sociolinguistic variables, however, could have had an important effect on PPA.

Information on the origin of the speaker, which other languages s/he spoke besides Catalan, etc., would be useful in identifying phenomena influenced by language contact situations (or by bilingualism). The predominance of French as a prestige language, for instance, could have led to the retention of agreement morphology, whereas the Castilian influence could have favored the more 'innovative' structure without agreement. Moreover, although all texts are supposed to reflect spontaneous speech in some way, it cannot be excluded that the philosophical or doctrinal purpose of some of these works may have led to the introduction of formulaic and rhetoric expressions. This observation is also valid for historical works (e.g., chronicles and reports). In addition to other inherent difficulties such as the lack of fully reliable judgments on the old language by native speakers of the modern varieties and the impossibility of carrying out acceptability or grammaticality judgment tasks, these are well-known risks when investigating a diachronic phenomenon.

Despite all these obstacles, I believe that the deficiencies in the choice of the texts do not prevent us from drawing valid conclusions. As I will show below, the results of the analysis are consistent, and show tendencies and correlations among the variables that cannot be considered accidental. The decision to include more than two different authors for each period (i.e., for each century) was aimed at reducing the effects of individual variation. Furthermore, the results of my corpus analysis are in line with data investigated by other authors (Par 1928; Moll 1952; Solà 1973; Gavarró & Massanell 2013, etc.). Of course, it would be beneficial to replicate the results from studies that use other texts chosen based on similar criteria (i.e., proximity to spontaneous or colloquial speech rather than formal and prestigious language registers). If, again, similar patterns of PPA are found, this would strengthen the conclusions of the present study. Finally, it would be of great interest to control for the impact of dialectal variation and language contact.

In sum, the analysis presented in the next chapter must be treated with some caution because it is based on corpus data that are, in some respects, flawed, but I am convinced that it still provides relevant new insights into the development of PPA in Catalan.

8.1.3 Coded features and coding criteria

Several features have been claimed to correlate with the production of agreement morphology in Romance (cf. the first section of the present book for an overview). As for Catalan, Fabra (1919) points out gender and number, but position, specificity and aspect have also been shown to be related to PPA. Since participle agreement is a multi-factorial phenomenon that seems to correlate with other phenomena concerning object-verb agreement (cf. Chapter 2), any feature involved in

these other phenomena could potentially account for PPA as well. For this reason, taking a wide range of morpho-syntactic and semantic-pragmatic features into consideration is indispensable.

I have grouped the different morpho-syntactic and semantic-pragmatic features under the categories denoting the domain in which they apply: (a) the verb and verbal phrase; (b) the noun and nominal phrase; and (c) the whole clause. In what follows, I will briefly define the coding categories, the motivation for including them in the corpus and the adopted coding conventions, which were also applied by the blind-coders and proofreader.

8.1.3.1 *The verb*

8.1.3.1.1 *Verbal lexeme.* The motivation for taking the verbal lexeme into consideration for PPA comes from certain accounts of DOM. It has been claimed that, whereas DOM with some verb types depends directly on the properties of the DO (e.g., animacy, specificity or definiteness), certain lexical items are apt to be combined with DOM irrespective of the nominal features carried by their complement (cf. Torrego 1999; García García 2014). The distinction among verb types can be based on different criteria: semantic classes, *aktionsart* and perhaps frequency. Also, the morpho-phonological properties of the lexemes should not be overlooked. It could be interesting to know whether a regular participle (*tancar* → *tancat/-ada* 'to close' → 'closed') is more likely to show PPA than an irregular one (*metre* → *mes/mesa* 'to put' → 'put'), or whether a monosyllabic one (*vist* 'seen') is more likely to agree with the DO than a plurisyllabic one (*comprat* 'bought'). If PPA is constrained by formal features (probably the same that are supposed to constrain CLD, DOM or object movement), then such lexical variation is not expected. If, on the other hand, overt agreement is inserted post-syntactically (provided that syntactic change precedes morphological change and true optionality exists), morpho-phonological features would come to the fore.

8.1.3.1.2 *Form of the lexical verb.* The properties of the past participle in constructions which could potentially have PPA were contrasted with the features of the participle in other constructions and the properties of the present participle. Absolute small clauses (ASCs), albeit rather marginal, are particularly interesting in this respect. ASCs provide helpful information about the nature and development of the past participle, especially with respect to some aspectual constraints. As I have shown in Chapter 3.3.3, ASCs are passive clauses that exhibit a particular type of definiteness restriction, different from the definiteness effects in existential clauses, and also different from the restrictions that have been described for passive main clauses (cf. Vega Vilanova 2016). As in passive main clauses, participle

agreement is virtually obligatory in ASCs. When the restrictions on the use of ASCs increased, the use of a more flexible structure formed around the present participle, the gerundival small clause (GerSC), became more widespread. Although the syntactic structure of the GerSC is assumed to be larger than the structure of the ASC, the number inflection of the present participle (gender distinctions are not morphologically marked in present participles) quickly gets lost. This can be interpreted as a conflation of the present participle and the gerund, which is morphologically identical to the present participle. This syncretic verbal form may grammaticalize further, thereby receiving the properties of a true preposition (e.g., *durant aquests dies* 'during these days'). Therefore, it is interesting to see how changes in these three constructions (participle agreement in main clauses, in ASCs and in GerSCs) correlate and which other properties change.

The corpus sentences were coded with respect to the form of the lexical verb as shown in (3.1).

(3.1) *Form of the lexical verb:*
PP = past participle
Ger = present participle/gerund

8.1.3.1.3 *Auxiliary verb.* Auxiliary alternation has been proposed to correlate with the presence or absence of PPA (Lois 1990; Muxí 1996; see Chapter 1.2.4 for details and discussion). In some languages, HAVE is the only auxiliary for both unaccusative and unergative verbs (Spanish, Portuguese, Romanian and Catalan), while other languages use different auxiliaries (BE vs. HAVE) to mark these verb classes (Italian and French). The correlation between auxiliary alternation and PPA, however, is not strong enough to consider it a reliable diagnostic for agreement. There are still varieties and languages – among them Catalan – which do not fit into Lois's and Muxí's generalization.

Nevertheless, auxiliary selection does show a meaningful asymmetry: constructions with the auxiliary BE (passives, unaccusatives, etc.) trigger nearly obligatory agreement; clauses with the auxiliary HAVE show a higher degree of variation and optionality. The gradual abandonment of the auxiliary BE in unaccusative clauses could also correlate with changes in overt participle agreement or other properties of the constructions in which the past participle is involved.

This feature has been coded as follows:

(3.2) *Auxiliary verb:*
BE = *ser (ésser)*
HAVE = *haver*
OTHERS = *estar, tenir…*
Ø = no auxiliary verb needed (e.g., ASCs and GerSCs)

8.1.3.1.4 *Participle agreement.* Obviously, this is not a trigger for PPA but rather the dependent variable. The past participle inflects for gender and number, the present participle has only number morphology. Default agreement coincides with the masculine singular endings. For this reason, sentences with DOs specified for masculine singular will only be included in the corpus as an illustration of other phenomena, or because the example exhibits an unexpected behavior (e.g., agreement *ad sensum*, agreement with another argument, etc.). In these cases, it is not possible to discern whether the participle has an agreeing form or a default one, since they are identical. The few sentences with masculine singular arguments were therefore coded with '?'.

Agreement with conjoined DPs was considered successful if it follows one of these two agreement patterns: either the participle agrees with the whole conjoined DP (i.e., plural agreement) or with the closest member.

The coding conventions for this feature are shown in (3.3).

(3.3) *Participle agreement:*

+	=	overt agreement on the participle (i.e., agreement with a feminine and/or plural argument)
−	=	no overt agreement on the participle (i.e., use of a default masculine singular form for a feminine and/or plural argument)
?	=	agreement with a masculine singular object (not discernible between + and −)

8.1.3.2 *The object noun phrase (NP/DP)*

8.1.3.2.1 *Gender and number.* In Catalan, there is a strong tendency to avoid agreement with masculine arguments. Fabra (1919) already observed that PPA with feminine plural forms, followed by feminine singular forms, is much more frequent than agreement with masculine arguments. As I have just pointed out, the past participle is sensitive to the gender and number of the DO (and the derived subject), whereas the present participle only responds to the number of the subject argument. Hence, the subject of present participles was only coded for number (i.e., plural).

In a few cases, agreement is controlled by a conjoined DP. Number was then considered plural. When the members of the conjoined DP have different genders, the DP was coded as masculine.

The following coding conventions were used for gender and number:

(3.4) *Gender and number:*

M SG	=	masculine singular DO/derived subject
M PL	=	masculine plural DO/derived subject
F SG	=	feminine singular DO/derived subject
F PL	=	feminine plural DO/derived subject
PL	=	plural subject (only for present participles/gerunds)

8.1.3.2.2 *Person.* Since person was shown to have an effect on PPA in French and Italian (see Chapter 1), it seems interesting to explore which kinds of restrictions concerning the grammatical person might have emerged in Catalan and when and under what conditions. Only 1st and 2nd person were explicitly coded – the 3rd person is left blank, since it is equivalent to the "absence of person" (Benveniste 1971). In the case of coordinated arguments with different person specifications, the DP was coded as 1st person when one of the members was 1st person. The combination 2nd–3rd person was coded as 2nd person.

The coding criteria are summed up in (3.5).

(3.5) *Person:*

1	=	1st person (or 1st + 2nd/3rd person)
2	=	2nd person (or 2nd + 3rd person)
Ø	=	3rd person

8.1.3.2.3 *Case.* Nominative case assignment is essential for the explanation of subject-verb agreement (but see Chapter 7 for a different view). In the same fashion, accusative case has often been discussed with respect to object agreement. Case is therefore a necessary item in the feature repertoire coded in a corpus on object syntax.

Case requirements vary according to the construction type. Passives and unaccusative verbs, where the agreement controller raises to the subject position, mark their argument with nominative case (recall Burzio's generalization). Generally, accusative arguments are associated with transitive verbs. However, there are some cases of partitive marking, either through the presence of a partitive clitic *en* or through the insertion of the partitive article *de*. Sentences in which the DO is introduced by *de* are quite rare in Catalan and should probably be interpreted as French interference. Hence, the evidence of these sentences should be considered cautiously.

In Italian, clitic datives can marginally trigger PPA in reflexive clauses with a phrasal DO (see Example (1.16) in Chapter 1). If the DO itself is cliticized, the participle must agree with the accusative. In both cases, however, the dative and the accusative reflexive pronouns are coreferential with the subject of the clause, and the auxiliary used is normally BE, with which PPA is obligatory. Belletti (2006) is inclined to analyze the reflexive clitic (accusative or dative) as the controller of

agreement, meaning that it occupies the same position as other object clitics. Le Bellec (2009), in contrast, provides evidence that reflexives form a chain with the subject, so that agreement is subject-oriented. This way, all nominal features (case, gender, number, definiteness, etc.) involved in verbal agreement will stem from the subject DP. Consequently, reflexive clauses are subject to the same restrictions as unaccusatives and passives. Since sentences with dative clitics as potential controllers of agreement are very rare in the Catalan corpus, in these cases the features of the dative argument – i.e., of the clitic – have been coded rather than those of the subject, even though the construction will be analyzed as subject-oriented PPA.

The following coding conventions have been adopted for case:

(3.6) *Case:*

NOM	=	nominative case (agreement with the subject of passive, unaccusative and reflexive clauses)
ACC	=	accusative case (agreement with the DO)
DAT	=	dative case (agreement with the dative reflexive clitic)
PART	=	partitive case (agreement with a marked DP, either through the presence of the partitive clitic *en* or the partitive article *de*)

8.1.3.2.4 *Definiteness and specificity.* As discussed in Chapter 2.2.2, definiteness and specificity are two notions that are difficult to keep apart. Definiteness has been identified with familiarity (i.e., the presence of the referent in the discourse or in the speaker's/hearer's mind) or uniqueness (see references above). These conceptions partly overlap with the notion of specificity as "referential anchoring" or "referential intention" (cf. von Heusinger 2011). Both concepts are connected with discourse properties in a way. Sorrenti (2015) suggests a practical solution to establishing coding criteria. She confines definiteness to a basically formal criterion – e.g., the use of certain nominal markers, immediately related to the mentioned semantic-pragmatic content but also sensitive to the morpho-syntactic configuration (for an extensive exploration of the definiteness effect, see Fischer, Kupisch & Rinke 2016). She restricts specificity to a domain that comprises interface information – e.g., specificity as scope over quantification, as epistemic reading, as partitivity, etc. All in all, in this approach the referential values of the nominal phrases pertain to two separate but overlapping domains. In a similar line of reasoning, Leonetti (2007) suggests that specificity does not belong to the possible syntactic features in Romance. It is a matter of fact that the distribution of specificity is not random, so that only certain constructions are associated with specific readings (cf. Diesing 1992, and the discussion in Chapter 2). Specificity is not only responsible for the definiteness effect in existentials, unaccusatives, ASCs, etc., but it has also been proposed that it is related to the appearance of CLD, DOM and

object movement (see Chapter 2.3). Constructions in which specificity is involved show a typical behavior as "interface phenomena" (cf. Sorace 2006). If specificity is not encoded in the syntax, there should be another means of generating the observed interpretation effects and distributional restrictions. In Chapter 10, I will show a possible analysis for PPA in which specificity is understood as the interpretation of syntactic outcomes, rather than their trigger.

That definiteness and specificity could be relevant for PPA has already been shown for Romance. Their codification in the corpus goes without saying. Their coding criteria, however, are complex. Definiteness is understood as a formal trait of the DP. Hence, a DP introduced by the definite article (*el, la*), a demonstrative (*aquest, aquell*…), a possessive (*el meu, el teu*…) or a universal quantifier (e.g., *tots*) has been marked as definite in the corpus. Proper nouns, too, have been considered definite. Bare nouns and DPs introduced by quantifiers other than a universal one have been coded as indefinite.

Unfortunately, it is very difficult to find clear criteria to codify specificity in a diachronic corpus. The tests for specificity according to most definitions require a manipulation of the sentences or the judgments of a native speaker, which, of course, is impossible. The idea of scopal specificity, for instance, is practically useless since not every clause contains the interacting operators required to check the specific reading, and there are no judgments available to confirm the alleged scope reading. Not even in modern languages are there conclusive tests for specificity. For the sake of convenience, I define specific DPs as those phrases referring to entities identifiable to the speaker (epistemic specificity), since I assume that other properties of specificity (e.g., wide scope) are derived from this basic characteristic. I am aware that by doing this, I run the risk of falsifying the results to a certain extent. The accuracy of the results will depend on the correct interpretation of the speaker's intention in the data. Lacking more reliable (and objective) criteria, this is probably the best thing to be done.

Considering that DPs with a mismatch between definiteness and specificity seem to be much less frequent than DPs with the same value (plus or minus) for both features, they are often treated as interchangeable notions in the present work. Non-specific definites (sentences such as 'I read the newspaper every day,' where the DP is interpreted as 'familiar' but is not easily understood as identifiable, or is not intended to refer to some identifiable newspaper) are certainly rare in the corpus. However, four possible feature combinations have been coded (3.7).

(3.7) +Definite +Specific
+Definite −Specific
−Definite +Specific
−Definite −Specific

8.1.3.2.5 *Genericity.* Generic DPs do not refer to individuals but rather to categories that are presupposed as being familiar as a whole with none of the single items of this category being identifiable in the context of the utterance (cf. Kupisch & Müller 2009: 313–314). They are marked by means of definite or indefinite determiners in some languages, and by means of bare nouns in others. Their interpretation is closer to that of non-specific DPs, since they do not refer to uniquely identifiable entities. Thus, it would be interesting to check whether (non-)genericity has a similar effect on agreement to that which definiteness or specificity is supposed to have.

Genericity is a binary feature, i.e., it has only a positive or negative value. However, it is usually difficult to decide when a DP is unambiguously interpreted as generic. Therefore, only clear cases of generic DPs have been marked as 'non-referential.' Due to the fact that generic objects seem to be rather infrequent in the sample, other non-referential object DPs (e.g., objects that refer to a class or are combined with light verbs such as *fer mostra* 'to show', *posar mans* 'to take', etc.) have also been tagged as 'non-referential.' In sum, although genericity does not provide enough data for a quantitative analysis, it may nevertheless contribute valuable qualitative information to better understand the phenomenon.

8.1.3.2.6 *Animacy.* Animacy has been claimed to be relevant for DOM and CLD (alone or in conjunction with specificity). It is thus another candidate to explain PPA. Since animacy is a binary feature as well, I have distinguished between animate (humans, animals, etc.) and inanimate objects (all other arguments). Institutions (cf. Nishida 2012) have been included under the animate group when they refer to the group of individuals rather than to the infrastructure belonging to the institution.

8.1.3.3 *The clause*

8.1.3.3.1 *Construction type.* Some of the relevant properties for PPA are not ascribed to single constituents (the verb or the noun) but to the entire sentence. The corresponding criteria are construction type, word order peculiarities, position of the DO with respect to the verb and adjacency of the DO to the verb. As for construction type, I have distinguished the syntactic structures in which PPA is involved according to data found in previous accounts (cf. Chapter 1). The following constructions have been included as coding categories:

(3.8) *Construction types:*

ASC	=	absolute small clause
GerSC	=	gerundival small clause
Caus	=	causative (or control) verb (e.g., *fer* 'let' or *oir* 'to hear')
Mod	=	modal verb (e.g., *voler* 'to want' or *poder* 'can')
Clitic	=	cliticized DO
Rel	=	the DO is a relative pronoun
WH	=	the DO is a wh-word
Fronting	=	the DO is a pre-verbal full DP (but there is no clitic resumption)
Refl	=	PPA is mediated by a reflexive (or reciprocal) pronoun
Unacc	=	unaccusative clause
Pass	=	passive clause
Main	=	main clause with postposed DO
CP	=	embedded clause with postposed DO

A priori, all categories can be combined, with the exception of 'Main' and 'CP,' used only when no special construction applies. Clitic left dislocation (CLLD) has not been coded as fronting for two reasons: first, the closest controller of agreement is the clitic, not the dislocated DP; and second, it is not univocally accepted that the DP moves out the VP since there are also good arguments for a base-generation analysis. CLLD has thus been listed under 'Observations.' Passives, unaccusatives and reflexives have been coded as three distinct categories, although they have in common that the controller of agreement occupies the subject position.

8.1.3.3.2 *Word order, position with respect to the verb, adjacency.* Other clausal properties that have been coded in the corpus are word order (which allows us to see how many constituents are placed before and after the auxiliary and/or the participle, whether a constituent is extraposed, what the relative order of the subject and the different objects is, etc.), position with respect to the verb (i.e., before or after the participle) and adjacency (i.e., whether other constituents intervene between the participle and the controller of agreement or not).

Not all information extracted from these parameters is relevant for PPA. Apart from object position (i.e., in situ vs. displaced), one of the most pervasive explanations for PPA in Romance, and adjacency, it is not expected that other word order properties are directly related to agreement. The constituency analysis, although it will be useful for future research on other topics, has not been used in the analysis of the present phenomenon (PPA).

Observations. Besides the coding features just presented, I have annotated any other outstanding properties that do not match the mentioned categories. Quantification, DOM, CLLD and unaccusatives with the auxiliary HAVE are the most common ones. It is not possible to make a quantitative analysis on the basis of the data available. Instead, the annotation of this information makes it possible to retrieve a series of unsystematic traits. Like the word order properties, many of these observations do not serve to explain PPA but might be useful for future analyses.

8.2 Modern Catalan

The data assembled in the Old Catalan corpus has been gathered from sources covering up to the middle of the 19th century. According to Gavarró & Massanell (2013), there was another turning point in the development of PPA during the last century, i.e., a rapid decrease in the use of agreement. The data available for PPA in Modern Catalan, as I have already pointed out, is rather scarce, though, and there is a relative lack of interest on the part of present-day research, probably due to the optional character of PPA. Apparently, participle agreement in Catalan represents nothing more than a tendency guided by stylistic choices, much more than in Italian or even French, where PPA follows clear rules. Speakers' preferences, however, are not very telling, especially if the variability does not follow any system, i.e., the phenomenon is truly optional. In this sense, the aim of collecting Modern Catalan data is not primarily to identify the syntactic contexts in which PPA is preferred or dispreferred (which have already been described), but rather to detect subtle correlations between agreement morphology and effects on interpretation. The interaction of PPA with aspect and definiteness/specificity (hence, with object movement, CLD and DOM as well) could be taken as evidence that a grammaticalization process, already active in *Decadença* Catalan, is guiding the loss of PPA: the current specificity effects could be seen as a residual manifestation of former constraints, and optionality as the last step in a grammaticalization cline.

With this in mind, I have designed an acceptability judgment task to test three constructions related to different effects of grammaticalization. If the results do not show any effects on the overt realization of agreement (i.e., a random distribution of the judgments), this can be taken as evidence that the grammaticalization process of PPA is very advanced.

8.2.1 Target constructions of the test

It is uncontroversial that PPA is no longer allowed in Catalan with post-verbal objects (with the exception of some cases in Majorcan Catalan discussed in Salvà

i Puig 2017) and PPA in passives is obligatory. In some constructions with preposed objects, agreement is optional. Since it is not possible to test all possible structures – this would require an overload of test items, which might lead to unreliable answers due to fatigue or habituation – I selected a few structures for the questionnaire that I consider of particular interest for an analysis of PPA based on grammaticalization. More specifically, the test is focused on the following three constructions:

i. the possibility of interpolation of certain adverbials (*mai, pas*) between the auxiliary and the past participle, which is taken as a symptom of the degree of grammaticalization of the auxiliary verb and the compound tense form. Interpolated elements point to a looser link between the finite verb and the participle and, consequently, a more natural presence of agreement morphology (hence, speakers that accept interpolation should be more apt to use PPA).
ii. PPA with cliticized arguments of control/causative verbs. This construction is included due to the discrepancy between normative impositions in the form of a complex rule system, and the description of the effective use of agreement. Normative works prescribe agreement with the embedded subject of certain control verbs, but not with the embedded object, while this distinction does not hold true for spontaneous uses. I will thus test whether the grammatical relation (embedded object, embedded subject and embedded derived subject) does in fact show different patterns of acceptability (which would be expected if normative rules apply) or not (which would be consistent with the observations of more descriptive papers). From a theoretical point of view, a purely positional constraint on PPA (as proposed for Italian) also predicts no discrimination among different argumental relations of the preposed DP, as long as the clitic that has climbed to the main verb (i.e., to the left of the auxiliary verb) bears accusative case. It is difficult to figure out how the clitic would have reached this position without going through the participle projection in some cases, but not in others.
iii. PPA with the partitive clitic *en*. The interpretation of the associate DP in these constructions was manipulated according to the context in which the clitic is used: in some contexts, the specific reading was stimulated, in others, the non-specific reading. Unfortunately, it is not possible to fully control for whether the participants may accept or reject the sentence based solely because of the intended interpretation. Since specificity has been shown to be linked to the realization of PPA in other constructions, I expected to find some effects in the rates of acceptability according to different readings of the partitive clitics as well. The absence of any measurable effects will be interpreted as a more advanced stage in the grammaticalization of the PPA structure.

In sum, by means of this questionnaire I seek to test three crucial factors that are supposed to be involved in PPA: grammaticalization of the verb, position of the DO and specificity.

8.2.2 Structure of the questionnaire

Because of the optionality of PPA in Modern Catalan, grammaticality judgments do not seem to be adequate to obtain useful data on the phenomenon. Hence, the test was designed as an acceptability judgment task. The participants were asked to rate the acceptability of PPA in certain constructions, choosing answers that should reflect their spontaneous language use (or their perception of it). More specifically, the goal of the questionnaire was to find out which properties or features (i.e., adjacency of the participle to the auxiliary, position of the clitic vs. grammatical relation, specificity) favor the acceptance of PPA.

The test (see Appendix II) consisted of a total of 22 randomized items, including 12 experimental sentences. These were assigned the following conditions: 2 items have supposedly ungrammatical agreement with 1st or 2nd person clitics (items #1 and #2), 4 items show agreement with embedded arguments with different grammatical relations (items #3–6), 2 items are constructed with interpolated adverbs between the auxiliary and the participle (items #7 and #8), and 4 items contain partitive clitics that trigger PPA with a specific (items #9 and #10) or a non-specific reading (items #11 and #12). All experimental items have overt participle agreement. PPA is in all cases grammatical, although optional (except in items #1 and #2). Furthermore, there were 10 distractors. Half of them were grammatical, the others were ungrammatical. The distractors were made up of a variety of more or less unrelated phenomena (ASC, different types of CLD, and existential sentences). Item #19 was used as a control item: the agreement pattern of this sentence is clearly ungrammatical. Speakers that rated this sentence as fully acceptable were excluded from the study. This decision proved to be well grounded: a brief check of the other answers in the test showed that these participants had not understood the task and that they categorically accepted all the items.

The questionnaire was administered to the participants in printed form as well as online as a pdf file. The participants needed around 20–25 minutes to complete the task. At the beginning, they received explicit instructions about how to answer, i.e., they were told that their answers should not reflect normative rules but rather how they personally judge the sentences in their language use and that there were no correct or incorrect answers. They were also encouraged not to go back in the questionnaire to correct or revise previous answers, but rather to answer as spontaneously as possible. They were then provided with two examples from the Catalan variety of Tortosa to show them that forms deviating from Standard Catalan were tolerated.

Each item of the questionnaire was introduced by a short context of one or two lines. The test items were marked in boldface. For each of the 22 test items, the participants had to decide to what extent they accepted or rejected it according to their own language use. A four-point scale ranging from '1–fully acceptable' (*acceptable*) to '4–fully unacceptable' (*inacceptable*) with two intermediate degrees ('2–rather acceptable/3–rather unacceptable,' *més aviat acceptable/inacceptable*) was used. When the participants rated an item with 3 or 4, they were also requested to correct the sentence to make it sound acceptable. Only if the correction had to do with the respective test condition were the ratings included in the analysis. If the sentence was rated as unacceptable due to other phenomena, an arbitrary value of 1.5 was assigned (i.e., it was considered that the speaker accepts the test item).

Finally, the participants were asked for some information about their language use as well as sociolinguistic variables.

8.2.3 Participants

A total of 33 Catalan native speakers took the test. Nine out of these 33 speakers, however, failed to reject the control item and were excluded from the analysis.

The mean age of the remaining 24 participants was 32.9, ranging from 18 to 47. The speakers were divided into two groups according to the place where they had acquired their L1 (up to the age of 16) following the main Catalan dialectal partition: Oriental Catalan (roughly the provinces of Girona, Barcelona and the North of Tarragona) and Occidental Catalan (roughly the province of Lleida, Andorra, the South of Tarragona and the Comunitat Valenciana).

Based on their answers about language use (when and with whom they speak Catalan: with their family, with friends, at work, in everyday situations, etc.) and on the self-assessment of their language dominance (obtained mainly from their answer to the question about their mother tongue in the sociolinguistic part of the questionnaire), they were further divided into Catalan-dominant bilinguals and Spanish-dominant bilinguals.

The four resulting groups are shown in Table 3.1.

Table 3.1 Distribution of the participants according to their Catalan variety and language dominance

	Catalan-dominant bilingual	**Spanish-dominant bilingual**
Oriental Catalan	9 speakers	6 speakers
Occidental Catalan	4 speakers	5 speakers

CHAPTER 9

The PPA cycle

In what follows, I will present the results of the corpus research and the questionnaire. In Chapter 9.1, I will look into the effects of those features that could be assumed to play a role in PPA in Old Catalan up through the 19th century. As in Chapter 8.1.3, I will distinguish features in the verbal, nominal and clausal domains to offer a systematic analysis of the data. For each feature, I will try to interpret the results under the theoretical assumptions elaborated in Part One and Part Two. This will establish the basis for the analysis of the loss of PPA as a grammaticalization change presented in Chapter 10.

As for the Modern Catalan data (Chapter 9.2), I will only discuss the three special constructions presented in Chapter 8.2.1. In the third part of this chapter, I will try to systematize the conclusions drawn from the empirical data. I will show that the process from obligatory agreement in the first written records up to the optionality (or even the complete loss) of PPA in Modern Romance languages can be captured as a cyclic change, an idea that is consistent with a widespread view of general language change patterns.

9.1 Old Catalan: Results of the corpus analysis

As a first step in the analysis of the corpus data, I have distinguished between different sentence types. This was necessary to separate constructions with very different requirements. Passive sentences, for instance, have obligatory participle agreement in Old and Modern Romance, a fact which is probably linked to the presence of the auxiliary BE instead of HAVE. Unaccusative verbs formed with the auxiliary BE do not show variation either. The data coming from these constructions is thus not very meaningful regarding the conditions of PPA when the auxiliary is HAVE and a greater deal of variation is attested. Absolute small clauses (ASC) have also been treated separately. They are passive clauses – thus quite similar to passive full clauses – but they show several idiosyncrasies that deserve special attention (see Chapter 3.3.3). For the same reason, gerundival small clauses (GerSC) were kept apart.

The second main division in the data is based on auxiliary selection – clauses with auxiliary HAVE or auxiliary BE. This division partly overlaps with sentence type: sentences with BE, for example, comprise passives and unaccusatives. The behavior of PPA in unaccusatives varies according to auxiliary selection. For auxiliary BE – as is the case in French and Italian as well as Old Catalan – agreement is (almost) obligatory. Auxiliary alternation, though, gradually disappears, as can be seen in the corpus data, and unaccusative verbs in Catalan nowadays are subject to analogous restrictions to those affecting other sentence types formed with HAVE[1] (but see Chapter 10.3.3 for further discussion on unaccusativity). In this case, the restrictions on agreement are more complex, giving rise to optionality.

The general distribution of the corpus items combining the criteria of sentence type and auxiliary selection is shown in Table 3.2. ASCs and GerSCs have been dealt with in Chapter 3.3.3. Clauses containing auxiliary BE do not undergo language change with respect to participle agreement. Passives and unaccusative verbs with auxiliary BE practically show obligatory agreement throughout all periods, as shown in Table 3.3: only five examples out of 321 do not show agreement. Unaccusatives formed with the auxiliary HAVE are included under the category 'HAVE.' Taking this into consideration, I have decided to focus on sentences containing the auxiliary HAVE (i.e., 1185 tokens).

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1. Hualde (1992: 88–89) discusses the possibility of having PPA with an unaccusative verb combined with the auxiliary HAVE in Modern Catalan:

(i) ?? Les cartes han **arribades**.
the letter.FPL have.3PL arrive.PSTPRT.FPL
'The letters have arrived.'

(ii) ?? Unes cartes han **arribades**.
some letter.FPL have.3PL arrive.PSTPRT.FPL
'Some letters have arrived.'

(iii) Han arribat cartes interessants?
have.3PL arrive.PSTPRT.DEF letter interesting.FPL
Sí, n' han **arrib-at/-ades** unes de molt interessants.
yes CL.PART have.3PL arrive.PSTPRT.DEF/FPL some.FPL of very interesting.FPL
'Did you get any interesting letters? Yes, I got some very interesting ones.'

The sentences in (i) and (ii), with a pre-verbal definite or indefinite subject, sound odd. However, (iii) is readily accepted. These contexts for PPA certainly resemble the conditions described for participle agreement in Modern Catalan with clauses containing the auxiliary HAVE, namely, that only 3rd person clitics (here the partitive clitic *n'*) trigger agreement, but mainly when the indefinite DP can be interpreted as specific.

Table 3.2 Overall distribution of corpus data according to auxiliary selection

Century	Work	Tokens (all)	ASC	GerSC	BE	HAVE	Others
Before 13th	*Miscell.*	16	0	0	0	15	1
13th	*Meravelles*	203	3	7	28	151	14
	Desclot	162	0	0	27	125	10
	Miscell.	31	0	4	3	22	2
14th	*Eximenis*	141	0	25	12	91	13
	Somni	329	39	70	57	160	3
	Lletres privades	28	0	0	5	22	1
	Sereneta	90	0	0	11	73	6
15th	*Urgell*	185	40	66	25	50	4
	Curial	309	70	53	49	124	13
	Flor	63	0	4	14	37	8
16th	*Tortosa*	227	26	26	41	87	47
	Estefania	123	0	0	9	68	46
	Hipòlita	69	1	0	22	35	11
17th	*Successos*	77	1	2	10	53	11
	Noble vigatà	20	0	0	0	18	2
18th	*Can Torres*	25	0	0	5	15	5
	Anglasell	40	0	0	1	25	14
19th	*Mata del Racó*	19	0	0	1	12	6
	Cardoner	5	0	0	1	2	2
Total		**2162**	**180**	**257**	**321**	**1185**	**219**

Before the 16th century, PPA in clauses with the auxiliary HAVE can be considered obligatory – but with a few meaningful exceptions, hence not as a categorical rule. Agreement decays at the beginning of the 16th century (approximately half of the tokens lack agreement). The period between the 16th and the 18th century is relatively stable, but at the turn of the 19th century, at the latest at the beginning of the 20th century, there is a sudden decline in PPA again. However, recall that the data during this period, known as the *Decadença*, have to be interpreted with caution, since the number of texts and the number of target sentences is much lower than for the centuries before due to a decrease in the use of Catalan as a written language. The general development of PPA in constructions with the auxiliary HAVE in Catalan is shown in Figure 3.1, based on the data in Table 3.3.

Table 3.3 Rates of PPA according to the auxiliary verb (BE/HAVE) in Old Catalan

Century	Work	Tokens (all)	BE	#Agree (BE)	% Agree (BE)	HAVE	#Agree (HAVE)	% Agree (HAVE)
Before 13th	*Miscell.*	16	0			15	13	86.67
13th	*Meravelles*	203	28	28	100.00	151	148	98.01
	Desclot	162	27	27	100.00	125	120	96.00
	Miscell.	31	3	3	100.00	22	18	81.82
14th	*Eiximenis*	141	12	12	100.00	91	82	90.11
	Somni	329	57	57	100.00	160	118	73.75
	Lletres privades	28	5	5	100.00	22	22	100.00
	Sereneta	90	11	10	90.91	73	69	94.52
15th	*Urgell*	185	25	24	96.00	50	45	90.00
	Curial	309	49	48	97.96	124	114	91.94
	Flor	63	14	13	92.86	37	36	97.30
16th	*Tortosa*	227	41	41	100.00	87	47	54.02
	Estefania	123	9	9	100.00	68	40	58.82
	Hipòlita	69	22	22	100.00	35	21	60.00
17th	*Successos*	77	10	10	100.00	53	23	43.40
	Noble vigatà	20	0			18	6	33.33
18th	*Can Torres*	25	5	4	80.00	15	10	66.67
	Anglasell	40	1	1	100.00	25	11	44.00
19th	*Mata del Racó*	19	1	1	100.00	12	2	16.67
	Cardoner	5	1	1	100.00	2	0	0.00
Total		**2162**	**321**	**316**	**98.44**	**1185**	**945**	**79.75**

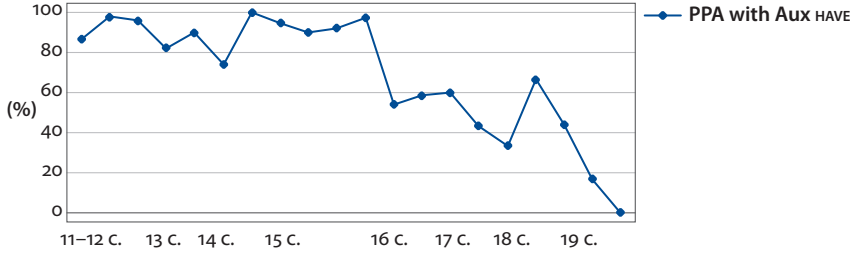


Figure 3.1 Rates (%) of PPA with auxiliary HAVE in Catalan

The picture in Figure 3.1 is basically the same as that found by Gavarró & Massanell (2013). They show that agreement was common up through the 15th century even in contexts where it is not allowed in Modern Catalan any more, i.e., with post-verbal DOs, objects in the embedded clause of any type of control or causative verb, relative pronouns, etc. (3.9).

(3.9) a. cor […] a cecs à retut o veser
because […] to blind people have.3SG give.PSTPRT.MSG the seeing
e a sortz l'auzir […], e à **feyts**
and to deaf people the hearing […] and have.3SG make.PSTPRT.MPL
mortz ressucitar
dead.MPL resurrect
'since […] he has made blind people see, deaf people hear […] and resurrected dead people' (1275–1299, Vides: 104)

b. aquí trobà misser Tisí Dòria et d' altres amichs que
here find.PST.3SG M. Tisí Dòria and ART.PART other friend.MPL REL
havia **sabuts** guanyar
have.PST.3SG know.PSTPRT.MPL win
'he found here M. Tisí Dòria and other friends that he had known how to make,' (1352, Muntaner, *Crònica*: f. 106va)

c. molts marits [que sos parents e amichs li
many husband.MPL REL her parent.MPL and friend.MPL CL.DAT.3SG
havien **volguts** donar] havia **refusats**
have.PST.3PL want.PSTPRT.MPL give have.PST.3SG refuse.PSTPRT.MPL
'he had refused many husbands that her parents and her friends had wanted to give her' (1429, *Decameró*: 268)

From the 16th century on, however, Gavarró & Massanell (2013) show some cases of missing agreement in contexts in which PPA is impossible in Modern Catalan (e.g., post-verbal or masculine objects). They illustrate the change by comparing the original version of *Blanquerna* by Ramon Llull in the 13th century (3.10a, c) with the modernized translation of the 16th century (3.10b, d). PPA is not the only change made to the original text: several lexical differences are noticeable (*la verge sancta Maria* instead of *nostra Dona*, or *la qual* instead of *qui*), which seems to point to additional stylistic considerations in the translation.

(3.10) a. he **haüda** conexença de Déu
have.1SG have.PSTPRT.FSG knowledge.FSG of God

b. yo he **hagut** coneixença de Déu
I have.1SG have.PSTPRT.DEF knowledge.FSG of God
'I have had knowledge of God'

c. beneyren nostra Dona qui ·ls havia
bless.PST.3PL our Lady who CL.ACC.3MPL have.PST.3SG
volguts remebrar
want.PSTPRT.MPL remember

d. beneïren a la verge sancta Maria la qual los
bless.PST.3PL to the Virgin Saint Mary REL.FSG CL.ACC.3MPL
havia **volgut** recordar
have.PST.3SG want.PSTPRT.DEF remember
'they blessed our Lady who was willing to consider them'

The question that remains to be answered is what the trigger of these changes is. Gavarró & Massanell (2013), following Guasti & Rizzi (2002), suggest that the distribution of PPA is explained by syntactic verb movement, in other words, agreement is a manifestation of morphological checking taking place in the syntax (cf. Guasti & Rizzi 2002: 177). They see evidence for different movement operations in interpolated adverbs: a sentence such as (3.11a) is ungrammatical in Catalan, but Old Catalan even allowed interpolated full DPs between the auxiliary verb and the participle (3.11b). Closely related to the traditional accounts relying on the grammaticalization of the auxiliary and the reanalysis of the Latin small clause, they seem to assume that the emergence of the analytic verb forms carries restrictions on the positions in which the past participle can be placed, PPA thus being excluded in certain constructions, mainly when the object does not move. The interaction between verb movement and agreement in the different diachronic stages, however, is not illustrated in enough detail. Moreover, their assumption of verb movement is quite speculative. Even if verb movement were a crucial factor in explaining PPA, it is still not clear which feature or features react to the new syntactic conditions, i.e., which functional projections are involved in the change. Therefore, an inspection of the effects linked to the different features coded in the corpus is needed in order to identify the actual trigger of PPA.

(3.11) a. *Han ben acollit l'espectacle només ells.
have.3PL well accept.PSTPRT.MSG the performance.MSG only they
'Only they have accepted well the performance.'

b. E quant agren les péres **venudes**, donaren lo
and when have.PST.3PL the pear.FPL buy.PSTPRT.FPL give.PST.3PL the
preu a pobres.
price to poor people
'and as they had bought the pears, they gave the money to the poor people.' (1275–1299, *Vides*: 89)

9.1.1 The verb

9.1.1.1 *Verbal lexeme*

One of the main problems when analyzing the influence of lexical choice on agreement is the fact that many lexemes are underrepresented. In my corpus, there are

276 different verbs. Most of them, however, are used only once or twice, or only in specific works or by certain authors. Almost all of the most frequently used verbs express telic events. In Table 3.4, I show the twelve most frequent verbs of the corpus and their agreement rate. Since around 20% of the whole corpus lacks agreement, the deviation from the mean values is in most cases not very strong.

Table 3.4 Rates of PPA with the most frequent verbs in Old Catalan

Verb	# of tokens in the corpus	Without PPA #	Without PPA %
fer 'to do'	188	37	19.68
haver 'to have'	65	6	9.23
dir 'to say'	62	10	16.13
donar 'to give'	49	12	24.49
prendre 'to take'	41	5	12.20
tenir 'to have'	33	19	57.58
veure 'to see'	33	8	24.24
rebre 'to receive'	32	4	12.50
oir 'to hear'	29	4	13.79
voler 'to want'	14	5	35.71
deixar 'to let'	12	5	41.67
poder 'can'	11	4	36.36

The case of the verbs *haver* and *tenir*, though, is very meaningful. The former was replaced in Modern Catalan by the latter, so the non-agreement rate of *haver* as a main verb is much lower (9.23%) than for *tenir* (57.58%). This can be directly ascribed to the fact that the rate of agreement in Old Catalan up through the 15th century was higher than from the 16th century on.

Other verbs with particularly high rates of default agreement are *voler, deixar* and *poder* (35–42% of the examples lack PPA). But as these verbs are control verbs and agreement is with the embedded argument, the effect of the syntactic construction could be responsible for these results. In sum, frequency does not seem to correlate with participle agreement in Old Catalan and *Decadença* Catalan.

As for the form of the participle, I have distinguished between participles with the ending *-t* (regular verbs and some irregular ones) and participles with the irregular ending *-ès* (irregular verbs). In the former group, building the masculine plural form produces a consonant cluster (*-sts*); in the latter, masculine plural morphology adds a syllable to the stem (*-esos*). It can be assumed that the second variant is phonetically more salient and easily retained, i.e., irregular verbs ending with *-ès* should favor the realization of agreement. Only 8 verbs in my corpus

require participles ending with *-ès* (Table 3.5) and, indeed, they show a preference for the overt realization of morphological agreement.

Table 3.5 Rates of PPA with irregular (strong) participles in Old Catalan

Verb	# of tokens in the corpus	Without PPA #	Without PPA %
prendre 'to take'	41	5	12.20
trametre 'to transmit'	20	0	0.00
metre 'to put'	8	1	12.50
entendre 'to understand'	6	0	0.00
prometre 'to promise'	3	0	0.00
cometre 'to commit'	2	1	50.00
desprendre 'to detach'	2	1	50.00
emprendre 'to undertake'	1	0	0.00
Total	**83**	**8**	**9.64**

9.1.1.2 *Auxiliary verb*

As mentioned above (cf. Table 3.3), auxiliary selection is directly reflected in the rates of PPA. Only in five examples with the auxiliary BE (passives and unaccusatives) is agreement missing (3.12). The first example is particularly interesting: only the main verb, not the auxiliary, shows agreement. (3.13) shows that participle agreement of the passive auxiliary is possible.

(3.12) a. con són **estat** **pagats** los traginés qui
since be.3PL be.PSTPRT.DEF pay.PSTPRT.MPL the carrier.MPL who
els ó àn duyt.
CL.DAT.PL CL.ACC.NEUT have.3PL bring.PSTPRT.MSG
'since the carriers who have brought it to them have been paid.'
(14.Sereneta_10: 7–11)

b. li fou **aportat** una creu ab lo crucifix
CL.DAT.SG be.PST.3SG bring.PSTPRT.DEF a cross with the crucifix
'a cross with the crucifix was brought to him' (15.Comte_50: 14–16)

c. en lo qual alguna impressió de Amorós plaer encara no
in the which any impression of lovely pleasure yet not
era **entrat**,
be.PST.3SG enter.PSTPRT.DEF
'whom no feeling of the pleasure of love had touched til now,'
(15.Curial_50: 17–20)

d. que los bons espanyols, cavallés, noples y altres
that the good Spaniard.MPL gentleman.MPL noble.MPL and other
particulas catalans se heran **espantat**
particular Catalan.MPL CL.REFL.3 be.PST.3PL frighten.PSTPRT.DEF
'that the good Spaniards, gentlemen, noble people and other private Catalans were scared' (18.Can Torres_271: 3–5)

(3.13) las diffinitions e renuntiations que éran **estades**
the absolution.FPL and concession.FPL REL be.PST.3PL be.PSTPRT.FPL
promeses fer
promise.PSTPRT.FPL do
'the absolutions and concessions that they promised to do'
(15.Comte_94: 20–22)

The realization of morphological agreement in passives and unaccusatives, which are formed with the auxiliary BE in Old Catalan, is very stable over time. The loss of auxiliary selection does not seem to correlate with the change in PPA, which only affects constructions with the auxiliary HAVE. In fact, the first instances of unaccusative verbs using auxiliary HAVE show participle agreement under the same conditions as other sentence types. Gavarró & Massanell (2013) give the following examples (taken from Massanell & Mateu 2006) of unaccusative verbs formed with auxiliary HAVE, in which the participle agrees with pre- and post-verbal subjects (3.14). Such agreement patterns will disappear after the 16th century.

(3.14) a. fustes diverses hic han **vengudes** e vós no
ship diverse.FPL CL.LOC have.3PL come.PSTPRT.FPL and you not
havets curat scriure ·ns
have.2PL care.PSTPRT.DEF write CL.1PL
'many ships have come and you haven't cared to write us'
(1413–1416, *Epistolari*: c. 624)

b. com comensaven les festes y saraus, à
when begin.PST.3PL the festivity.FPL and party.MPL have.3SG
venguda nova que era mort lo fill menor
come.PSTPRT.FSG news.FSG that be.PST.3SG dead.MSG the son younger
del rey de Portugal
of-the king of Portugal
'as the celebrations and festivities began, the news arrived that the younger son of the king of Portugal was dead'
(1525–1542, Liori i Requesens, *Epistolaris*: c. 115)

9.1.1.3 *Participle agreement*

This is the dependent variable, so it is only discussed in conjunction with the other factors.

9.1.2 The object noun phrase (NP/DP)

9.1.2.1 *Gender and number*

According to Fabra's (1919) (and many others') intuitions on Modern Catalan, the rate of agreement with feminine singular DOs should be higher than with feminine plural DOs, which, in turn, should be higher than with masculine plural objects. My data do not show any clear preference for PPA when the DO is feminine singular until the 17th or 18th century (Figure 3.2). Other feature specifications, however, still show high rates of overt agreement (3.15a–b). The restriction according to gender and number thus seems to be a relatively recent development, or a development restricted to colloquial or oral speech. Agreement with masculine plural objects, however, is already dispreferred, and agreement with feminine singular objects already preferred, from the 16th century on in certain texts (3.15c).

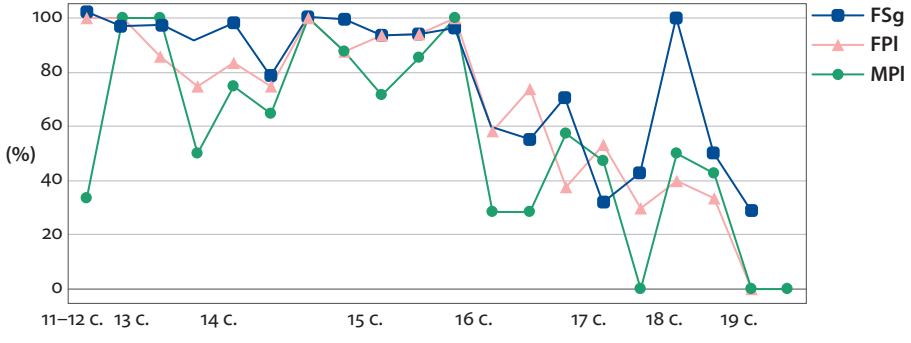


Figure 3.2 Rates of PPA according to the gender and number of the DO in Catalan

(3.15) a. e no me ·n vendré tro que Déus vula
and not CL.1SG CL.PART come.FUT.1SG until that God want.SUBJ.3SG
que ajam la terra **conquesta**,
that have.SUBJ.1PL the land.FSG conquer.PSTPRT.FSG
'and I will not come back until God's will is that we have conquered the land,' (14.Desclot_71: 10–11)

b. Quant agren **desbaratats** los sarraÿns e
when have.PST.3PL disperse.PSTPRT.MPL the Saracen.MPL and
conquestes moltes ciutats,
conquer.PSTPRT.FPL many city.FPL
'When they had dispersed the Saracens and conquered many cities,' (14.Desclot_37: 3–6)

c. mas sols conta los que aprés han **tengut** aquells
but only against REL.MPL afterward have.3PL have.PSTPRT.DEF that
noms,
name.MPL
'but only against those who have had those names afterward,'
(16.Tortosa_86: 4–5)

9.1.2.2 *Person*

In Modern Romance, there is a bias between the 1st and 2nd person, on the one hand, and the 3rd person, on the other. The development of PPA with 3rd person objects mostly overlaps with the general development of PPA. Unfortunately, there are not enough target sentences with 1st/2nd person objects to draw reliable conclusions. It seems that up through the 15th century, PPA was obligatory with 1st/2nd person clitics (3.16a). For the 16th and 17th centuries, there are only 5 tokens containing the 1st person, 3 of which include agreeing participles. Agreement should thus be considered optional (3.16b–c). The person restriction found in Modern Catalan (and Modern French), i.e., the unacceptability of PPA with 1st and 2nd person clitics, must have emerged later.

(3.16) a. Muira aquest qui ens ha **fets** tornar
die.SUBJ.3SG this who CL.1PL have.3SG do.PSTPRT.MPL become
orats!
crazy.MPL
'that this who has made us go crazy dies!' (14.Eiximenis_39: 23–24)

b. Lo bale d'Ebrera m' à **pregada** recordàs a
the mayor of Ebrera CL.1SG have.3SG beg.PSTPRT.FSG recall.SUBJ.1SG to
vostra senyoria son negosi
your Lordship his business
'the mayor of Ebrera asked me to remind your Lordship about his business' (16.Estefania_13: 98–100)

c. lo que sentiren molt los Consistoris per havernos
REL.NEUT feel sorry.PST.3PL much the council.MPL for have=CL.1PL
desemparat en esta ocasio
abandon.PSTPRT.DEF in this occasion
'what the councellors strongly regretted since they had abandoned us on this occasion' (17.Successos_236: 21–23)

9.1.2.3 *Case*

Since different case values depend on construction type, some aspects of this feature will be dealt with below, where construction types are discussed. However, I would like to comment on some details of sentences that bear cases other than accusative – i.e., unambiguous partitive marking by means of the partitive clitic *en* or the partitive article *de*, or dative. As for the latter, no cases of participle agreement controlled by dative arguments were attested in the corpus.

For the 14th century, four sentences have been unequivocally coded with partitive case. Only one of them lacks agreement (3.17a). Two things must be noted: when triggering PPA, the partitive object is either preposed, accompanied by a partitive clitic *en*, or both (3.17b). Otherwise, PPA does not apply. The low number of examples in the corpus does not allow us to make generalizations; rather, these observations suggest that the constraints on agreement with partitive objects are quite similar to the positional rules stated for Modern Romance. These issues are closely related to definiteness and/or specificity. Hence, they will be discussed in more detail below.

(3.17) a. puis tots los sants han **haut** de mes candeles
since all the saints have.3PL have.PSTPRT.DEF ART.PART my candle.FPL
'since all saints have had some of my candles' / 'since I have lit candles for all saints' (14.Eiximenis_69: 1–3)

b. [de marits] e havia 'n **haguts** ja tres
[of husband.MPL] and have.1SG CL.PART have.PSTPRT.MPL already three
o quatre.
or four
'since I have already had three or four (husbands).'
(14.Eiximenis_28: 17–21)

9.1.2.4 *Definiteness and specificity*

One of the most salient characteristics of the Old Catalan data up through the 15th century is the observation that position does not play a role in the realization of PPA – which is different from Old Italian, as claimed by Poletto (2014). The participle agrees with pre- and post-verbal DOs (3.18). This means that the positional rule cannot have appeared before the 16th century in Catalan.

(3.18) a. e membrà les paraules que la pastora li
and recall.PST.3SG the word.FPL REL the shepherdess CL.DAT.3SG
havia **dites** de Déu
have.PST.3SG say.PSTPRT.FPL about God
'and he recalled the words that the shepherdess had said to him about God' (13.Meravelles_28: 17–19)

b. com en aquest món hage **haüts** molts més
as in this world have.SUBJ.3SG have.PSTPRT.MPL many.MPL more
hòmens de molt gran santadat,
man.MPL of much big sanctity
'as there have been many more men of great sanctity in this world,'
(13.Meravelles_118: 19–22)

Instead, definiteness/specificity seems to be related to the realization of overt participle agreement. Although the corpus has been coded according to the four categories presented in Chapter 8.1.3 (Example (3.7)), only very few objects fell into the mixed categories – 'Indefinite specific' and 'Definite non-specific' – so that these data have not been dealt with in the representation of the results below. Definiteness and specificity are thus treated without distinction here. Since the excluded data do not constitute a large sample and almost all items (in both groups) showed a similar pattern of PPA, this decision does not substantially affect the interpretation of the data.

The relation between definiteness/specificity and PPA is shown in Figure 3.3.[2]

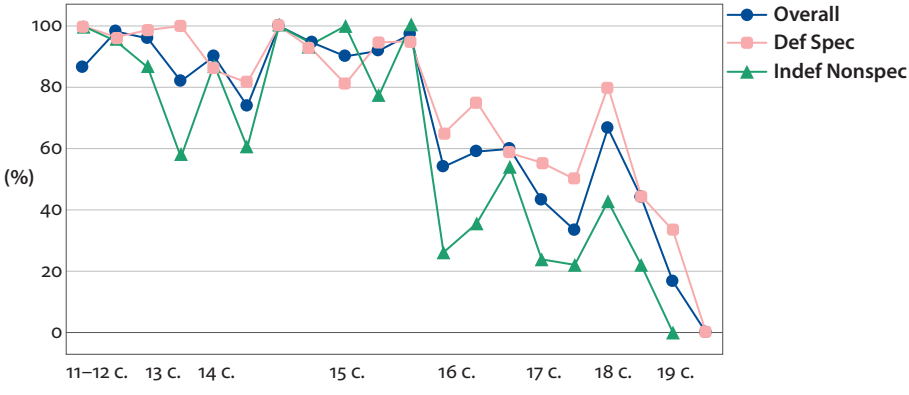


Figure 3.3 Rates of PPA according to the definiteness/specificity of the DO in Catalan

Non-specific indefinites have a tendency to be employed with default agreement on the participle (3.19) by some authors in the 14th century. This pattern is generalized from the 16th century on. Hence, PPA is more likely to be associated with specific definite objects than with indefinite ones – agreement with post-verbal definite DPs is still found in the 18th century (3.20). In fact, the first examples of (optional) non-agreeing participles in linguistic studies on Old Catalan like the ones mentioned above show indefinite DPs (3.21) – a fact that often goes unnoticed.

2. Wh-elements have also been excluded from this figure. Although they are generally considered to be indefinite, due to their status as CP-operators, they show a different behavior. In fact, wh-elements trigger participle agreement slightly more frequently than indefinites in general.

(3.19) Natura ha **donat** vianda a sustentació de vida,
nature have.3SG give.PSTPRT.DEF food.FSG to sustenance of life
'nature has given food for the preservation of life,' (14.Somni_164: 13–14)

(3.20) he **feta** la Prezent nota perlo molt que nos
have.1SG do.PSTPRT.FSG the present note.FSG for=the much that CL.1PL
vol ÿ el volem.
love.3SG and CL.ACC.3MSG love.1PL
'I have written the present note because he loves us so much and we love him.' (18.Anglasell_285 l.: 3–9)

(3.21) a. perquè tan prestament havien en sa cort **trobat**
because so promptly have.PST.3PL in his court find.PSTPRT.DEF
cavallers qui ·ls havien **deliurats**.
knight.MPL who CL.ACC.3MPL have.PST.3PL release.PSTPRT.MPL
'since they had very promptly found knights in his court who had released them.'
(1490 [1460], Martorell, Tirant: 290, from Gavarró & Massanell 2013)

b. Parents has **perdut**, los quals, aquella matexa
parent.MPL have.2SG lose.PSTPRT.DEF which.MPL that same
fortuna qui ·ls donà, los te ha
fortune who CL.ACC.3MPL give.PST.3SG CL.ACC.3MPL CL.2SG have.3SG
levats
remove.PSTPRT.MPL
'You have lost your parents, which the same fate that has given them to you has taken them away'
(1490 [1460], Martorell, *Tirant*: 1306, from Gavarró & Massanell 2013)

However, it is often assumed that specificity interacts with position (cf. Chapter 2.3), hence the results ascribed to this feature could instead be due to positional restrictions. It is true that the effects of position on PPA strongly resemble the pattern of definiteness/specificity. Around 80% of the pre-verbal objects are definite, and almost all of them (92%) trigger agreement. By and large, Figure 3.4 has the same shape as Figure 3.3.

Nevertheless, there are also reasons to assume that PPA is associated with specificity rather than with object placement (which feature or property is the real trigger of agreement will be further discussed in Chapter 10). For one thing, there are some theoretical considerations. Recall the discussion on object movement, definiteness effects, DOM, etc. in Chapter 2, and especially Diesing's (1992) Mapping Hypothesis (1.53), according to which specific objects are forced to leave the VP. Accordingly, the intended interpretation of the DP triggers syntactic movement, while movement is arguably responsible for the analysis of other phenomena

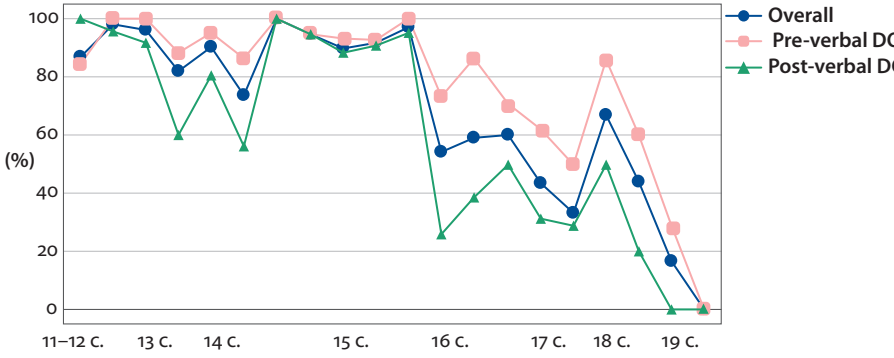
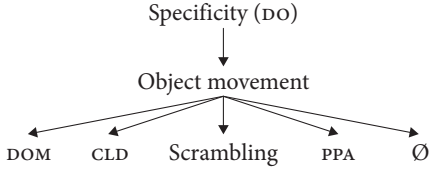


Figure 3.4 Rates of PPA according to object position in Catalan

such as DOM. As Fischer (2010) and Navarro et al. (2017) argue, Catalan has undergone a language change with respect to verb movement by which the positions available for A′-moved objects are lost. The expression of specificity can no longer be object placement; other means of conveying this information must appear – i.e., clitic doubling, which allows the object to be interpreted outside the VP by means of a chain whose head is the clitic. Depending on the landing site for the object, movement can result in different constructions – see, for example, López's (2012) short scrambling account for DOM. The resulting constructions (DOM, CLD…) would ultimately be motivated by specificity. In other words, as the positional freedom of the object gets more constrained, the contexts in which PPA is possible (i.e., the syntactic positions that govern agreement) decrease. At the same time, other phenomena that recover the information otherwise lost in this process may arise. This is summed up in (3.22): object movement is forced by specificity, but depending on the constraints on possible landing sites for the DO, different constructions can be found in a language. In Chapter 10, I will discuss how this proposal is compatible with a grammaticalization approach to PPA in Catalan and will reconsider some aspects of it.

(3.22)



In addition, there is empirical evidence supporting the idea that specificity rather than merely object position could determine PPA. First, if position were the only factor at work, only post-verbal objects would be expected to lose PPA, but the figures show that agreement becomes optional at the same rate in both contexts, i.e., with pre- and post-verbal objects, simultaneously. What is more, there are some

asymmetries in the distribution of definite/specific objects according to their position with respect to the verb, especially during the period from the 16th to the 18th century (see also Table 3.7 below and the corresponding discussion). Here, pre-verbal indefinites show a higher rate of agreement than post-verbal ones. This may be due to information structure, i.e., the need for focalization or topicalization, so that some of these objects could, in fact, be analyzed as specific indefinites. Finally, almost half of the 240 non-agreeing participles with auxiliary HAVE in the corpus take indefinite objects, and around 20% take a wh-constituent. Considering that an overwhelming majority of the corpus sentences have definite objects, it is particularly interesting that less than a third of the default participles are controlled by definites.

For these reasons – i.e., the constraints on object placement and their diachronic change, the parallel development of PPA with pre- and post-verbal objects, and asymmetries in the distribution of indefinite objects – I conclude that specificity plays a crucial role in the realization of participle agreement in Catalan. However, increasing restrictions conditioned by the verb movement parameter could give rise to a reinterpretation of the constraints on PPA. Since only a few positions are available for the verb, only a subset of the definite/specific objects still show overt movement, namely those that are cliticized or wh-moved. These are precisely the structures that still trigger participle agreement. In a further step, the restrictions on PPA can be reinterpreted as a positional criterion, as analyzed in the approaches presented in Chapter 1.2.4 and 1.2.5. This is also the situation we find in Italian (and Old Italian varieties) and in Catalan from the 19th century on.

9.1.2.5 *Genericity*

Unfortunately, there are not many unambiguous sentences containing generic objects or objects used non-referentially. Up through the 15th century, there are only very few cases in which agreement is missing with non-referential objects (3.23). In the 16th century, only half of the generic/non-referential examples show PPA (3.24). From the 17th century on, agreement with this type of object is no longer attested. Genericity thus seems to follow the same path as definiteness/specificity and is probably dependent on this feature; however, lacking a sufficient amount of data, these conclusions must be taken as provisional and await empirical verification.

(3.23) a. e molts més són estats los hòmens qui han
and many more be.3PL be.PSTPRT.MPL the man.MPL who have.3PL
enganades dones,
cheat.PSTPRT.FPL woman.FPL
'and many more have been the men who have cheated on women,'
(14.Somni_156: 22–23)

b. com si totstemps havien navegat, o **fet**
as if always have.PST.3PL sail.PSTPRT.DEF or do.PSTPRT.DEF
mercaderia d'aquell (vi).
trade.FSG of that (wine)
'as if they had always sailed and traded with that (wine).'
(14.Somni_123: 23–24)

(3.24) a. Ý aquest any no y à **fet** fretura lo virrey,
and this year not CL.LOC have.3SG do.PSTPRT.DEF lack.FSG the viceroy
'and this year the viceroy was not needed here,' (16.Estefania_14: 29–31)

b. perquè no han **tingut** ocasió d' alterar
because not have.3PL have.PSTPRT.DEF occasion.FSG of modify
-la com los valencians;
CL.ACC.3FSG like the Valencians
'because they haven't had the chance to modify it the way the Valencians did;' (16.Tortosa_52: 15–16)

9.1.2.6 *Animacy*

Animacy did not give rise to any observable effects.

9.1.3 The clause

9.1.3.1 *Construction type*

Certain constructions have already been discussed, among them ASC and GerSC, passives and unaccusatives. I refer to the preceding discussion.

Only 34 tokens in the whole corpus contained the past participle of a causative or modal verb. Until the end of the 14th century, PPA is almost obligatory (3.25) irrespective of the position and grammatical relation of the embedded argument. Later, it is more difficult to find the appropriate contexts in the corpus. Based on the few tokens, it seems that PPA is not obligatory, even if the raised argument is a clitic (3.26). However, the collected data are not enough to delimit the restrictions that apply to control, modal and causative verbs at different diachronic stages, since, as can be seen in the examples below, other discussed factors (e.g., definiteness) are most probably interacting here.

(3.25) a. que per boca d'aquest infant ha **volguda** tan
that through mouth of this child have.3SG want.PSTPRT.FSG so
piadosament corregir ma error!
mercifully correct my fault.FSG
'that he so mercifully wanted to correct my fault through the words of this child!' (14.Eiximenis_96: 3–5)

b. Les gallines hic havie **fetes** tornar,
the hen.FPL CL.LOC have.PST.3SG make.PSTPRT.FPL come back
'he had made the hens come back there,' (14.Lletres_5: 39–40)

(3.26) A la jermana de na Serana, n' é **fet** dar altres
to the sister of the Serana CL.PART have.1SG make.PSTPRT.DEF give other
dos quarteres.
two sack.FPL
'I have ordered to give Serana's sister two more sacks.' (16.Estefania_18: 41)

As for the remaining constructions, it is expected based on current standard grammars of Catalan that sentences with a clitic will mainly trigger agreement throughout the whole corpus, whereas sentences in which the controller of agreement is a wh-word or a relative pronoun will progressively lose the possibility to have PPA. Table 3.6 shows the rates of agreement according to these constructions. The numbers at the top in each cell show how many items out of the total number of tokens found for that period show PPA. The numbers at the bottom provide the percentages for agreement. Under 'Others' I have subsumed any sentences that do not belong to one of the preceding types (i.e., causative verb, unaccusatives, clitic constructions, etc.).

Table 3.6 Rates of PPA in Old Catalan according to construction type

	Clitic constructions	Wh/Rel constructions	Others	Overall results (constructions with HAVE)
11th–13th centuries	46 / 46 100%	89 / 92 96.74%	157 / 168 93.45%	299 / 313 95.53%
14th century	71 / 74 95.95%	61 / 70 87.14%	146 / 186 78.49%	291 / 346 84.10%
15th century	35 /35 100%	73 / 76 96.05%	82 / 93 88.17%	195 / 211 92.42%
16th century	34 / 39 87.18%	31 / 47 65.96%	39 / 92 42.39%	108 / 190 56.84%
17th–19th centuries	10 / 12 83.33%	15 / 25 60%	11 / 37 29.73%	52 / 125 41.60%
Total	**196 / 206** **95.15%**	**269 / 310** **86.77%**	**435 / 576** **75.52%**	**945 / 1185** **79.75%**

As for clitic constructions,[3] the expectation is confirmed. Although there are some cases of default agreement from the 16th century on, PPA is almost obligatory

3. This includes reflexive clitics. Although PPA is controlled by the subject, it is also mediated by the reflexive clitic, which is placed in the same position as other object clitics. The person feature, as discussed above, did not give rise to any effects.

(3.27a). Wh-moved objects still trigger agreement in only 60–65% of the sentences at the same period, even if they regularly trigger agreement up through the 15th century (3.27b). Most examples of non-agreement, however, show complex structures – for example, PPA combined with a control or causative verb, or the controller of the agreement is separated from the participle by parenthetical phrases as in (3.27c). Main and embedded clauses with the canonical word order (S)VO have the most marked decrease in PPA: 80–90% until the end of the 15th century (3.27d–e), and 30–40% from the 16th century on (3.27f–g).

(3.27) a. é agut a pendre sinquanta ducats de miser
have.1SG have.PSTPRT.DEF to take fifty ducat.MPL of miser
Toredemer lo qual, per socórerme, los m' à
Toredemer REL.MSG for help=CL.1SG CL.ACC.3MPL CL.1SG have.3SG
dexats,
lend.PSTPRT.MPL
'I have had to borrow fifty ducats from miser Toredemer, who has lent them to me to help me,' (16.Hipòlita_155: 4–6)

b. Si io et demanava ara aquests vint sous que t'
if I CL.2SG ask.PST.1SG now this twenty coin.MPL REL CL.2SG
he **posats** al puny,
have.1SG put.PSTPRT.MPL in-the fist
'If I asked you now for those twenty coins that I put in your hand,' (14.Eiximenis_81: 12–16)

c. menysprees los dons que amor, pus piadosa de tu que
disdain.2SG the gift.MPL REL love more merciful of you than
tu mateix, t' à **ofert**.
yourself CL.2SG have.3SG offer.PSTPRT.DEF
'you disdain the gifts that love, which is more merciful to you than you are to yourself, has offered you.' (15.Curial_49: 34–37)

d. ha **ornada** la terra ab bells edificis.
have.3SG embellish.PSTPRT.FSG the Earth.FSG with beautiful buildings
'he has embellished the Earth with beautiful constructions.' (14.Somni_30: 15)

e. jamai no volguera haver **demanat** uns patins ne
never not want.SUBJ.3SG have ask.PSTPRT.DEF some shoes.MPL nor
un vel,
a veil.MSG
'never would she have wanted to ask for some shoes or for a veil,' (14.Somni_158: 26–27)

f. que lo exercit enemich avia ya **vistas** las murallas
that the army enemy have.PST.3SG already see.PSTPRT.FPL the wall.FPL
de la ciutat,
of the city
'that the adversary army had already seen the walls of the city,'
(17.Successos_243: 26)

g. dos galeras que estavan y se trobavan dins la abadia
two galleys REL be.PST.3PL and CL.REFL.3 find.PST.3PL inside the bay
de Rosas que avian **aportat** provisions a dita Fortaleza
of Rosas REL have.PST.3PL bring.PSTPRT.DEF supply.FPL to said fortress
'two galleys that were there and were located on the bay of Rosas, which had brought supplies to the mentioned fortress' (17.Successos_249: 1–3)

In addition, if we take a look at the indefinite objects of (S)VO main and embedded clauses, an interesting effect can be seen, as shown in Table 3.7. Whereas the rate of agreement controlled by indefinites does not differ from the global proportions in constructions with HAVE (third column) up through the 15th century, it decreases drastically in the 16th century. Missing agreement is attested to a lower degree with pre-verbal indefinites and post-verbal definites – and is even lower with pre-verbal definites. In other words, optional PPA is found in main and embedded (S)VO clauses as in almost all contexts, but again an effect of definiteness is attested.

Table 3.7 Effects of definiteness on the rates of PPA in Old Catalan (S)VO clauses

	Main and embedded clauses	**Main and embedded clauses with indefinite objects**	**Overall results (constructions with HAVE)**
11th–13th centuries	157 / 168 93.45%	**68 / 76** **89.47%**	299 / 313 95.53%
14th century	146 / 186 78.49%	**96 / 118** **81.36%**	291 / 346 84.10%
15th century	82 / 93 88.17%	**32 / 37** **86.49%**	195 / 211 92.42%
16th century	39 / 92 42.39%	**20 / 75** **26.67%**	108 / 190 56.84%
17th–19th centuries	11 / 37 29.73%	**4 / 23** **17.39%**	52 / 125 41.60%
Total	435 / 576 75.52%	**220 / 329** **66.87%**	945 / 1185 79.75%

In short, clitics, which are inherently definite/specific, usually trigger PPA whereas wh-elements (i.e., CP-operators) allow for optionality. The remaining items (most

of them with post-verbal DP objects, which are an optimal place to put new information, i.e., a privileged place for indefinite/non-specific DPs) show lower agreement rates, but this rate becomes even lower from the 16th century on, in particular if they are clearly indefinite/non-specific objects.

9.1.3.2 *Word order, position with respect to the verb, adjacency*

Data about word order were collected to provide information that might potentially be useful for future research, albeit not directly related to PPA.

Object position with respect to the verb has already been discussed in connection with definiteness/specificity, hence I refer the reader to the preceding discussion in this chapter.

It must be noted that adjacency, i.e., the possibility of separating the agreeing participle from the controller of the agreement, does not play a role until the 17th century (3.28a). The percentages for agreement practically coincide for adjacent and non-adjacent objects (Figure 3.5). After this, the requirement to keep the object close to the verb in order to have PPA becomes stronger (3.28b). This can be interpreted as a growing structural fixation of the clause. The reduction in the contexts in which PPA is applicable (alongside with changes in the verb movement parameter which affected the positions available for the object to move to) arguably led to a reinterpretation of the trigger for agreement, i.e., a positional criterion emerged (cf. the discussion with respect to specificity above). The data thus suggest that the structural motivation for PPA is gaining ground from the 17th century on. Finally, if optional PPA were analyzed as a morphological relic of a previous diachronic stage without a syntactic counterpart – i.e., as post-syntactic agreement built upon the output structure of narrow syntax – adjacency would be required as well: the closer the DO is to the participle, the easier it is to link the object features with the participle.

(3.28) a. Cant Blanquerna hac **recomptada** […] a Fèlix a
when Blanquerna have.PST.3SG tell.PSTPRT.FSG to Fèlix the
rahon
reason.FSG
'when Blanquerna had told Felix the reason' (13.Meravelles_104: 16–17)

b. havent **donat** la Ciutat a cada tercio les armes que
having give.PSTPRT.DEF the City to each regiment the weapon.FPL REL
avian menester,
have.PST.3PL need
'the City having given to each regiment the weapons they needed,'
(17.Successos_236: 32–36)

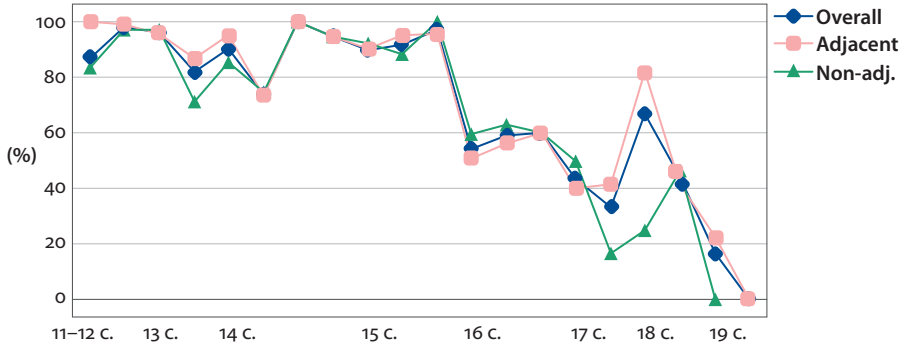


Figure 3.5 Rates of PPA according to adjacency of the DO and the participle in Catalan

9.2 Results of the questionnaire for Modern Catalan

9.2.1 Interpolation

The first of the three constructions tested by means of the acceptability judgment task for Modern Catalan (cf. Chapter 8.2) is interpolation, i.e., the possibility of inserting an adverbial between the auxiliary verb and the participle. As already discussed, this property is considered to be connected with the degree of grammaticalization of the auxiliary verb and the compound tense form, which, in turn, is believed to correlate with the possibility of having PPA.

The speakers had to rate two sentences with an interpolated element (the negative adverbials *mai* and *pas*) and participle agreement (3.29). In both sentences, the trigger of participle agreement is a clitic in a dislocated construction, which is one of the most favorable contexts for PPA.

(3.29) a. Aquestes paraules, jo no les he pas **dites**!
this word.FPL I not CL.ACC.3FPL have.1SG not say.PSTPRT.FPL
'These words, I have not said them!'

b. Ell no l' hauria mai **feta**,
he not CL.ACC.3FSG have.COND.3SG never make.PSTPRT.FSG
aquesta bestiesa.
this silly thing.FSG
'He would have never made this silly thing.'

According to the corrections provided by the participants, interpolation was rejected in 29.2% of the cases, although most participants rejected only one of the two test sentences (only two participants rejected both). This means that interpolation is still seen as grammatical in Modern Catalan, even if only marginally. Two-thirds of the participants that had corrected interpolation rejected participle agreement

in the same sentence. Among the tokens in which interpolation was accepted, PPA was corrected in only one-third of the cases. Almost half of all ratings (45.8%) considered PPA with interpolation to be acceptable. The results are shown in Table 3.8.

Table 3.8 Acceptability ratings of the interaction between PPA and interpolation in Modern Catalan

N = 48	With PPA	Without PPA
With interpolation	22 (45.8%)	12 (25.0%)
Without interpolation	5 (10.4%)	9 (18.8%)

Two conclusions can be drawn from Table 3.8. First, interpolation does not impede but rather fosters PPA, hence the high acceptability rates of sentences with PPA and interpolation. Speakers that prefer PPA also allow interpolation (45.8 vs. 10.4%). However, speakers that reject PPA do not show such a clear preference for or against interpolation (25 vs. 18.8%). Second, in this domain, too, there is optionality so that all possible answers are represented. The claimed tight connection between grammaticalization of the verbal construction and participle agreement cannot be observed.

9.2.2 Causatives

As already pointed out, the corpus search did not provide conclusive data about the restrictions on causative, control or modal verbs in Old Catalan. The participants of the questionnaire had to give judgments about the acceptability of PPA triggered by a climbed clitic that was coreferential with an embedded object (3.30a), an embedded subject (3.30b) or an embedded derived subject (3.30c), in two sentences for each condition.

(3.30) a. Les instruccions, me les ha **fetes**
the instruction.FPL CL.1SG CL.ACC.3FPL have.3SG make.PSTPRT.FPL
repetir tres vegades.
repeat three times
'He made me repeat the instructions three times.'

b. A aquestes noies, ja les he **vistes**
DOM[4] this girl.FPL already CL.ACC.3FPL have.1SG see.PSTPRT.FPL
demanar almoina moltes vegades.
ask alms.FSG many times
'These girls, I have already seen them many times asking for alms.'

4. The use of the preposition-like element *a* before the direct object (i.e., DOM) is usually very restricted in Catalan. In (3.30b) we have one of the contexts where the insertion of *a* is widespread but, as discussed in Escandell-Vidal (2009), it rather seems to be a topic marking for dislocated DOs.

c. La seva mare les ha **fetes** anar al
the their mother CL.ACC.3FPL have.3SG make.PSTPRT.FPL go to-the
pis de dalt.
floor of top
'Their mother made them go upstairs.'

In consonance with the descriptions found in some of the descriptive grammars (e.g., Rosselló 2002), the difference between embedded objects and embedded subjects was not very salient. The mean value of the ratings for agreement with the embedded object was 2.18 on a four-point scale (1 = completely acceptable, 4 = completely unacceptable). The mean rating for agreement with the embedded subject was 2.24. Embedded derived subjects, i.e., subjects of embedded unaccusative verbs, received a lower rating, 2.58, which means that this construction is slighty less acceptable. Again, one can conclude that PPA is optional in this kind of construction, but is not restricted in the way proposed by Fabra (1919) and many others. Grammatical relations were only relevant when there was an embedded subject of an unaccusative verb, which can be ascribed to the special properties of these arguments – e.g., greater structural or computational complexity due to the additional movement operation required by unaccusatives.

9.2.3 Partitive objects

I have argued above (Chapter 9.1) that specificity/definiteness plays an important role in PPA (at least between the 15th and the 17th century), as is the case with the other object constructions discussed in Chapter 3.3. This is why items expressing different readings with respect to specificity were included in the test.

Due to the context, (3.31a) is more easily interpreted as specific (the speaker mentions two particular skirts he or she liked; the further specification by the relative clause, with indicative mood, reinforces a specific interpretation). In contrast, (3.31b) is interpreted as non-specific (the speaker refers to a large number of works by the author rather than to some particular titles; the DP expresses cardinality).

(3.31) a. *Context*:
Necessito una faldilla nova. Avui he anat de compres…
'I need a new skirt. Today I went shopping…'
Test item:
i n' he **vistes** dues que m' han
and CL.PART have.1SG see.PSTPRT.FPL two.FPL REL CL.1SG have.3PL
agradat força.
like.PSTPRT.DEF quite
'and I have seen two (skirts) which I liked quite a lot.'

b. *Context:*
El meu escriptor preferit és la Mercè Rodoreda.
'Mercè Rodoreda is my favorite writer.'
Test item:
De les seves obres, ja n' he **llegides** moltes.
of the her work.FPL already CL.PART have.1SG read.PSTPRT.FPL many.FPL
'I have already read much of her work.'

Specific sentences such as (3.31a) received an acceptability rating of 2.01, whereas the rating of non-specific contexts such as in (3.31b) was 2.21. Once more, the difference is quite small. PPA was not unanimously rated as completely acceptable (the values are much lower than 1.00), but it is also not categorically rejected. In other words, participle agreement with the partitive clitic *en* is basically optional and no definiteness/specificity effect could be positively attested in the results of the questionnaire.

9.2.4 Influence of dialect and language dominance

Lastly, I divided the participants according to their variety (Occidental or Oriental Catalan) and the self-assessment of their language dominance (Catalan- or Spanish-dominant), and checked whether there was a correlation with their acceptance/rejection of PPA in the different constructions of the questionnaire.

The differences between the two variety groups are not relevant. There is a slight tendency for speakers of the Occidental variety to accept interpolation of *pas* and *mai* (it was corrected only four times, instead of 10 times as by speakers of Oriental Catalan), a fact that was rather unexpected as this property tends to be associated with Northern Catalan varieties of Oriental Catalan. Speakers of Oriental Catalan were more likely to accept agreement controlled by the partitive clitic *en*, especially with a specific reading (see Table 3.9). The differences for agreement in causative constructions are negligible.

Table 3.9 Acceptability ratings of PPA according to language variety

PPA with:	Oriental Catalan	Occidental Catalan
+Specific partitives	1.95	2.11
−Specific partitives	2.10	2.39
embedded subject	2.27	2.17
embedded object	2.05	2.12
embedded derived subject	2.53	2.67

The results for the effect of language dominance are presented in Table 3.10. Unexpectedly, Spanish-dominant Catalan speakers show a tendency to accept agreement controlled by the partitive clitic *en* more frequently than Catalan-dominant speakers. The latter also have a slight tendency to reject interpolating elements. These results are striking since Spanish-prominent speakers are using properties in Catalan (PPA, interpolation) that are absent in their dominant language. This could be interpreted as an overgeneralization, i.e., a strategy to magnify the distinctive traits between the two languages, in order to speak 'proper' Catalan.

Table 3.10 Acceptability ratings of PPA according to language dominance

PPA with:	Catalan-dominant	Spanish-dominant
+Specific partitives	2.27	1.70
–Specific partitives	2.40	1.98
embedded subject	2.33	2.07
embedded object	2.00	2.14
embedded derived subject	2.54	2.64

To sum up, the results of the acceptability judgment task show that the embedded argument of control or causative verbs optionally triggers participle agreement irrespective of its grammatical function in the embedded clause (except when it is a derived subject of an unaccusative verb, which showed lower ratings in any speaker group). Also, specific readings showed an effect on the acceptability of PPA controlled by the partitive clitic *en*, especially in Oriental Catalan and Spanish-dominant speakers. The differences, however, are rather small and the variation in the answers in all groups shows that the judgments are not clear-cut. In fact, the results of the test suggest that there are no clear patterns of agreement and the decision to use PPA or not is unsystematic, i.e., PPA and default agreement are not associated with interpretive differences, contrary to Obenauer's (1992) conclusions for French. Instead, the kind of optionality in Catalan seems to be based on personal preferences that are, in turn, based on stylistic considerations. In a way, this situation can logically be considered the last stage before the complete loss of agreement, i.e., the final step in the respective language change process (i.e., grammaticalization).

9.3 Interpreting the data: A PPA-cycle

At first sight, default agreement in sentences with auxiliary HAVE seems to be possible in any context in Old Catalan and *Decadença* Catalan. There is no single

feature that unambiguously determines when overt agreement must take place or not. ϕ-features, definiteness, specificity, object placement, adjacency to the verb, or construction type are all features that correlate with the change in PPA from Old to Modern Catalan. However, none of these seems to account for the whole process, at least in an evident way. While some features interact with each other, the effects do not remain stable over time. For instance, indefinite objects, especially when positioned post-verbally (in situ), showed lower rates of agreement than definite DPs during the 16th and 17th centuries, but the effects of definiteness on current language use are insignificant.

Taking into consideration the data from both the corpus and the acceptability judgment task, different well-defined tendencies can be identified (the relevant data have been discussed in Chapter 9.2). The development of PPA in Romance languages, and especially in Catalan, is summed up in (3.32). Up through the 15th century, PPA is almost obligatory, with only a few exceptions (Stage 1). In the 16th century (Stage 2), the situation is very different: Lack of agreement is allowed, but indefinite or non-specific objects seem to favor it. Preposed topicalized objects and cliticized definite objects trigger agreement more frequently than indefinite post-verbal ones. Object placement has been understood as a function of the specificity value of the DO (see (3.22) and the discussion there). The link between PPA and specificity has also been observed in other Romance languages or varieties; hence it is plausible to think that a period in which specificity was the determinant for the realization of agreement could generally have existed in any Romance language. From this perspective, PPA exhibits the behavior expected for interface phenomena (i.e., it combines restrictions at different linguistic modules), which would explain its variability and optionality, i.e., its synchronic and diachronic instability. By the 19th century, post-verbal objects do not trigger agreement any more. At this stage (Stage 3), a positional rule (or set of rules) emerges, such as that found in Italian.[5] The distribution of agreement in Romance, though, is language-specific, which means that a different set of rules may apply in each language – the constructions that trigger agreement in different languages (e.g., 3rd person clitics vs. 1st and 2nd person clitics, wh-elements, etc.) may vary considerably. In Stage 4, default agreement is accepted in those contexts in which PPA was obligatory in Stage 3, an extension of the optionality. Finally, Spanish, Portuguese and

5. Subject-verb agreement in French has undergone a similar change (cf. Salvesen & Bech 2014): post-verbal subjects used to trigger agreement in Old French, whereas only pre-verbal subjects trigger agreement in Modern French (see also fn. 3 in Chapter 2). The apparent asymmetry found in Modern Romance languages (i.e., post-verbal objects do not show verbal agreement whereas post-verbal subjects do) can probably be explained in the same framework (cf. Fuß 2005: 87 and references therein).

Romanian represent the last step in the process, in which PPA is obsolete and disappears (Stage 5).

(3.32) *Cyclic development of PPA in Catalan (applicable to other Romance languages):*
Stage 1 → Obligatory PPA – 12th to 15th century
Stage 2 → PPA linked to definiteness/specificity – 16th century (possibly until the 18th century)
Stage 3 → PPA controlled by object placement (i.e., pre-verbal position after A- or A′-movement) – 17th to 19th century (also normative Italian)
Stage 4 → Optional PPA – 20th and 21st century (also spoken French)
Stage 5 → Complete loss of PPA (Spanish, Portuguese and Romanian)

To some extent, the development of PPA seems to mirror the CLD cycle described in Vega Vilanova et al. (2018). CLD starts out in a few optional contexts (e.g., only strong personal pronouns are doubled by a clitic) and gradually spreads to other constructions (to highly accessible datives, to definite accusatives, to specific indefinites…) until it is generalized for all kinds of arguments. Finally, the pronoun loses its grammatical status as a clitic and becomes an agreement marker. The last step in this process would be morpho-phonological erosion of the inflectional affix and the complete loss of CLD, which would be equivalent to the initial state of the cycle. Hence, both the PPA-cycle and the CLD-cycle can be captured as two runs of a more general 'object agreement cycle' (cf. van Gelderen 2011; see also Maddox 2019 for an extensive and accurate analysis of the object agreement cycle in Spanish focusing on the grammaticalization of the different clitic pronouns).

The development of PPA goes in the opposite direction. PPA shows increasing restrictions: The contexts that require PPA become fewer and more specific. Compulsory agreement becomes optional in these few constructions. Finally, PPA is lost. This reverse relation has already been noticed by Franco (1994); Tsakali (2006) and Tsakali & Anagnostopoulou (2008). A common development of both phenomena is thus not far-fetched. When PPA reaches the last stages of the change process, other elements can be introduced to restore the function that was lost along with PPA – for example, the externalization of specific readings.

It could be objected that the paths of change of CLD and PPA are too different. Animacy, which is intimately related to CLD, for instance, does not play a role in PPA. Case is assumed to be involved in CLD but not directly in PPA. What is more, the controller of PPA (i.e., the clitic) is at the same time the morpheme that replaces the agreement morphology on the verb. This is not necessarily a problem. As I have shown in Chapter 3.3.2, CLD and PPA do not co-occur within the same clause. In discussing (1.83), repeated here as (3.33), I argued that a sentence with both PPA and CLD is ungrammatical and that either agreement must be omitted

or the object must be dislocated to 'repair' the structure. Additional factors could also be at work in the explanation of different phenomena. For the explanation of CLD, for instance, it was necessary to look at the grammaticalization path of the clitic (with its own associated features) and the specifications of the verb movement parameter (cf. Fischer et al. 2019). Even if the same factors are involved in PPA, their role could be different in this case, as the participle itself has a different feature make-up. Furthermore, according to the assumptions about the operation Agree, the feature configuration of the clitic cannot be the same in PPA and in CLD. Whereas the clitic must be endowed with interpretable ϕ-features c-commanding [uϕ] on AgrO when it triggers participle agreement, its ϕ-features must be uninterpretable in the case of CLD so that the doubled DP can bear their interpretable counterparts, to avoid having a chain with two sets of interpretable features.

(3.33) a. Avui les he **vist** a elles.
today CL.ACC.3FPL have.1SG see.PSTPRT.DEF to them.FPL
'I have seen them today.' → √ CLD/ DOM

b. * Avui les he **vistes** a elles.
today CL.ACC.3FPL have.1SG see.PSTPRT.FPL to them.FPL
→ * CLD/ DOM + PPA

Avui les he **vistes**, a elles.
→ √ CLRD + PPA

In Chapter 6, I have suggested that grammaticalization can apply at the feature level and that doubled constituents, which emerge due to pragmatic needs or information structure, are the source of the entire grammaticalization process. I have shown that subject-verb agreement can be analyzed according to these assumptions (cf. Chapter 7) – the properties of a doubling set of ϕ-features, rather than case, are responsible for several changes with respect to the null-subject parameter, subject placement, etc. Building on a strict analogy between subject-verb agreement and object-verb agreement (cf. Kayne 1985, among others), in Chapter 10 I will propose an account of the diachronic data of PPA in Catalan based mainly on the grammaticalization of formal features. Keeping in mind the conclusions of this section, I will provide a syntactic analysis for the different stages in the PPA cycle and show how and why different restrictions emerge in each stage of the cycle.

CHAPTER 10

Diachronic analysis of past participle agreement in Catalan

A grammaticalization approach

Based on the results of my empirical research on Catalan, I have characterized past participle agreement (PPA) as a cyclic change that could be included in a more general pattern, which van Gelderen (2011) calls 'the object cycle.' This characterization of the data is compatible with the proposal in Fischer et al. (2019) on clitic doubling as a cyclic change. In fact, PPA seems to interact with a series of unrelated properties and constructions, CLD possibly being only the most obvious one. The aim of the present diachronic analysis will be to account for the interface effects attested in PPA across Romance – i.e., variability and optionality – while unifying the explanation of the emergence, spread and loss of CLD and PPA.

Based on the results presented in Chapter 9.3, I suggest that the conditions that govern PPA are not the same in all periods. First, agreement is obligatory; then, it correlates with definiteness/specificity; after this, a positional criterion arises and PPA becomes optional and eventually disappears. Now I will try to discern whether these restrictions derive from a unified criterion, a single syntactic mechanism or language change process. I will suggest that grammaticalization processes that apply to formal (syntactic) features can account for the different stages, and that the interplay with CLD follows automatically, even though other properties are involved there (grammaticalization of the clitic, changes in the verb movement parameter). Moreover, I will show that, as in the case of subject-verb agreement, only a few features (i.e., ϕ-features and case/aspect) are necessary to derive the relevant structures.

This chapter is organized as follows: In Chapter 10.1, I will present some additional theoretical assumptions concerning specific properties of object constructions needed in order to accommodate the analysis for subject-verb agreement to the analysis of PPA. In Chapter 10.2, I will present my analysis and discuss the interaction of different kinds of language change processes involved in the development of PPA. In the last section, I will discuss further issues that my proposal implies, and some difficulties of my approach.

10.1 Additional assumptions

Before proceeding with the analysis of the different stages in the development of PPA in Catalan, it is necessary to point out some peculiarities of object syntax.

An important element of Pesetsky & Torrego's (2004, 2007) approach to subject-verb agreement is the definition of nominative case as an uninterpretable tense feature on the noun, [uTns], since nominative case can only be assigned in finite clauses. In their account, [Tns] forms an agreement chain between T, v and the subject DP. Following a rigorous parallelism among grammatical relations, accusative case should be analyzable in the same fashion.

As discussed in Chapter 2.2.2, aspect is the verbal category closest to the DO. Aspect is often assumed to be structurally low within IP, or even to be merged within VP (cf. Cinque 1999; Belletti 2006). Hence, there is a parallel between the more 'external' feature [Tns], which translates into nominative case on the external argument, and the 'lower' feature [Aspect], expressed as accusative case on the internal argument. Furthermore, certain properties of the DO give rise to different aspectual meanings in the clause, and, vice versa, aspect features may give rise to different readings of the object DP (cf. Krifka 1989; Leiss 2000; Ritter & Rosen 2001; Fischer 2005, etc.). In some languages, this is manifested in case alternation (or DOM), for example, in Turkish, Finnish and Slavic languages. In this sense, if an uninterpretable aspect feature on the noun is interpreted as accusative case, we still need to define how the interpretation of the DP as +/−specific (so closely related to aspect) arises – either specificity is directly linked to case or it is interpreted in the course of the derivation.

I think it is not necessary to postulate a direct link of case to specificity or definiteness. This does not seem to be a necessary property of the object position. For instance, the internal argument of unaccusative verbs does not carry [uAsp] and is not assigned accusative case, which is not even available. The internal argument is raised to the subject position, where it checks nominative case (cf. Burzio 1986). But if object case corresponds to verbal aspect, there is no motivation for the ban on [uAsp] here, since unaccusative clauses do not lack aspect (for a deeper discussion of unaccusatives, see Chapter 10.3.3 below). I therefore propose that the noun only has an unspecified uninterpretable feature for case, probably a verbal feature, which can be checked against the next adequate verbal goal. This notion of structural case makes it possible to unify nominative and accusative under the same condition. If the higher goal [Tns] has already been checked, the DP will try

to agree with the next possible candidate, [Asp].[1] This is how, in transitive clauses, the DO is regularly associated with aspect. Furthermore, according to Karimi (1990) and Leonetti (2007), specificity does not belong to the feature repertoire of Romance (it is rather an effect of mapping syntactic outputs at the CI-interface). In sum, case is neither aspect nor specificity, but there is a natural connection between them. For the sake of expository clearness, I will tag accusative case as [uAsp]. The features that will be taken into account in the following analysis of PPA are thus the object ϕ-features and [Asp].

Another difference between subject-verb and object-verb agreement resides in the organization of the functional material in the syntactic tree. According to Tsakali & Anagnostopoulou (2008), functional projections hosting object agreement are more complex than the projections for subject agreement. Different object features can be bundled into one node or be spread over AgrO (with gender and number features) and ClVoice (with only a person feature) (see Chapter 2.3.4.). These phrases, however, are apparently vacuous, i.e., their labels do not make explicit what they contribute to the interpretation of the clause. This is unwelcome under the theoretical framework adopted in this book. I propose substituting AgrO and ClVoice by an aspect phrase AspP and a 'participant phrase' PartP, following a proposal by Koeneman & Zeijlstra (2014). According to this idea, the higher projection, AspP, hosts [Asp] and is thus associated with accusative case assignment through the agreement chain with [uAsp] in the noun. All ϕ-features are contained in PartP, a projection in charge of identifying event participants and, possibly, assigning a thematic role and referential values to them. An advantage of this representation is that it offers a quite flexible structure that provides enough slots for the participle and the DO to be in different positions. Also, both projections are semantically motivated. Being separated from each other, it is easy for both sets of features to be grammaticalized independently. As I will discuss later, syntactic change can easily take place in such a configuration, either because the formal features of these two functional heads are reorganized into a single head (independently of the grammaticalization stage of the formal features), or because one of these heads is deleted after some feature(s) grammaticalizes – recall the grammaticalization cline in (2.20) and (2.21).

1. Nota bene: According to this, the checking of the Tense-feature (or the building of the [Tns]-chain) must occur within VP in order to have the correct correspondences external-argument–nominative and internal-argument–accusative. Recall that, according to Pesetsky & Torrego (2007), v has valued [uTns], which can be transmitted to the external argument in [Spec, vP] before proceeding to the next higher phase. The object DP, which still requires the satisfaction of its case feature, has only [Asp] available. For more details and some implications, see Chapter 10.2 and 10.3.

In the following, I will show that the restrictions that apply during the five stages of the PPA cycle are subject both to grammaticalization changes in the formal features of the object as well as to other independent syntactic changes that arise in order to render the derivation more economical. These processes, in turn, interact with each other.

10.2 Grammaticalizing formal features and avoiding redundancy

10.2.1 Stage 1: Obligatory agreement

In Chapter 7, I have argued that in some cases, verbal morphology may carry semantic ϕ-features. These are of a pronominal nature and, consequently, the presence of an overt argument with the same ϕ-features should be considered a case of doubling from an extra-sentential (A′-)position rather than pure agreement.

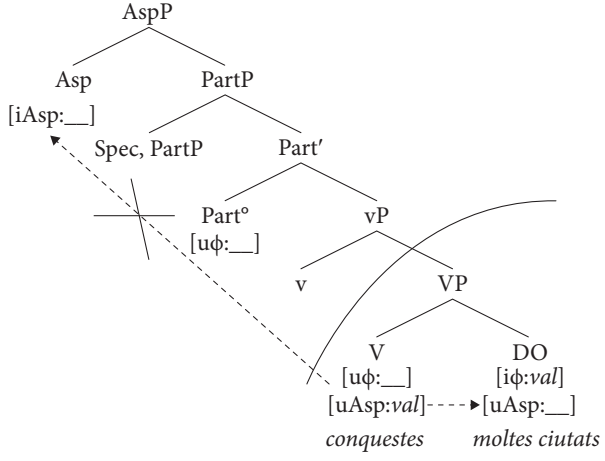
Some analyses of passive clauses assume that the (passive) participle absorbs case and theta-role (see, e.g., Lois 1990: 240 and fn. 7 in Chapter 1). In a preliminary stage, the agreeing morphology of the past participle can also be considered to be pronominal (see fn. 1 in Chapter 7), i.e., endowed with semantic ϕ-features doubling the ϕ-features of the object, in a very similar way to subject-oriented verbal endings in null-subject languages (recall the discussion in Chapter 7.1). Remember also that the DO and the past participle in Proto-Romance used to form a small clause governed by the main verb, which cannot yet be considered an auxiliary verb (cf. Macpherson 1967 and others). The DO thus functions as a subject in these constructions, before the grammaticalization of the auxiliary verb HAVE advances and the small clause is reinterpreted as a compound tense form plus a canonical object. Already from this moment, the verbal ending can be assumed to have been endowed with formal features. The relation PstPrt–DO then constitutes an agreement chain in narrow syntax. However, object-drop is not attested in the Old Catalan corpus. This fact strongly suggests that the verb alone cannot satisfy the subcategorization requirements of the verbal valency by means of inflectional morphology (as opposed to passive participles and finite verbs in null-subject languages). I take this as evidence that semantic ϕ-features on the participles are bleached and replicated by uninterpretable formal ϕ-features.

The past participle also carries aspect features. The respective agreement chain contains unvalued interpretable aspect under Asp°, [iAsp:__] (just like T° has [iTns:__]; see Chapter 7). The verbal morphology on the participle is valued, but not interpretable, [uAsp:*val*]. Finally, the object DP requires case assignment, i.e., an uninterpretable verbal feature must be valued there, [uAsp:__] for accusative. In sum, two feature chains are involved in object agreement: [ϕ] and [Asp].

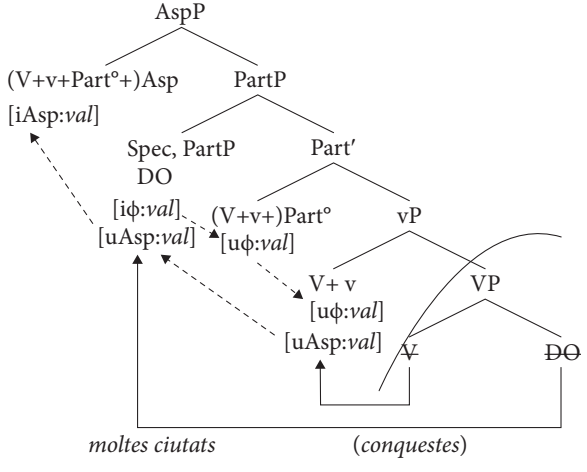
According to Tsakali & Anagnostopoulou (2008), split-checking is used in languages with PPA. I therefore assume that the ϕ-feature chain is placed lower than Asp°, namely in the participant phrase, as dicussed in the preceding section. For Old Catalan sentences with obligatory PPA, I propose the structure in (3.34).

(3.34) *agren conquestes moltes ciutats* 'they had conquered many cities'

a.



b.



Since interpretable aspect c-commands all other members of the chain, the value of [uAsp:*val*] in V can be shared by the entire chain. The chain conditions are met: only one occurrence of aspect is interpretable and the chain does not contain contradictory values, but rather a single shared value. Verb movement is subject to its own constraints, but is probably placed quite high (e.g., Fischer 2010), although the participle under V is not forced to move higher than v because it is already properly c-commanded by an interpretable occurrence of [Asp].

The agreement chain for [ϕ], however, shows a different pattern. The object DP carries interpretable and valued ϕ-features. The uninterpretable features in PartP, however, must be properly c-commanded by [iϕ] in order to fulfill the well-formedness requirements of the agreement chain. Hence, the object must raise to [Spec, PartP] in order to prevent the derivation from crashing. This has an additional benefit. Assuming a derivation by phases, [uAsp:__] on the object DP could not have entered the agreement chain headed by Asp°, i.e., accusative case assignment would be impossible, because the base-position of the object belongs to the lower phase, which has already been sent to spell-out. What is more, the presence of [uϕ] in PartP has visible syntactic (and interpretive) effects and is thus indispensable (i.e., PPA is obligatory).

The past participle in compound tenses in Old Catalan (as, possibly, in Proto-Romance) also carries ϕ-features which agree with the ϕ-features of the DO. It could be speculated that they are directly derived from the Latin small clause. Since the DO functions as the subject of the small clause, its ϕ-features should agree with the uninterpretable ϕ-features under the verbal head in the small clause, in the same way as subject ϕ-features agree with the uninterpretable ϕ-features under T°. The ϕ-features in V° are easily maintained because they can be incorporated into the agreement chain between PartP and DO, which has a clear syntactic effect (the object leaves the lower phase in order to c-command the uninterpretable features under Asp°). The restructuring change from the small clause leads to a split and duplication of [uϕ] in Part° and V°. The occurrence of [uϕ] in Part° overrides the prominent role formerly carried out by the [uϕ] of V° in the small clause, because it provides clear cues for the correct parsing of the clause. This could represent a first step toward the deletion of the formal features present in the verbal morphology.

It must be noted that according to this analysis PPA is independent of case assignment as well as aspect and specificity – [uAsp:__] is satisfied in the course of the derivation, but it is not the real trigger for any syntactic operation. The main function of ϕ-agreement is to establish a referent that qualifies as a bearer of a thematic role. This means that definite and indefinite DPs as well as accusative and partitive objects can trigger agreement at this stage.

10.2.2 Stage 2: PPA controlled by specificity?

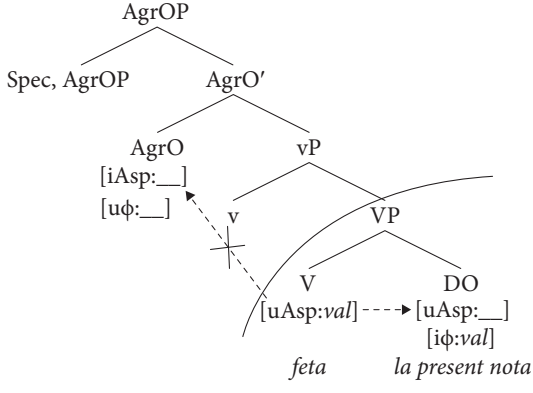
From the 16th century on, a correlation between PPA and specificity is noticeable. The first cases of missing agreement are linked to indefinite/non-specific objects, especially in post-verbal position (cf. Chapter 9). I argue that this can be taken as evidence that the functional projections concerning the object syntax – PartP and AspP – conflate, a syntactic change for reasons of economy. I will label the new

projection AgrO°. Bundle-checking is a prerequisite for the emergence of clitic doubling, although it does not imply the existence of CLD constructions in the language. And indeed, the first optional CLD examples are attested in Old (more specifically, *Decadença*) Catalan (cf. Vega Vilanova et al. 2018).

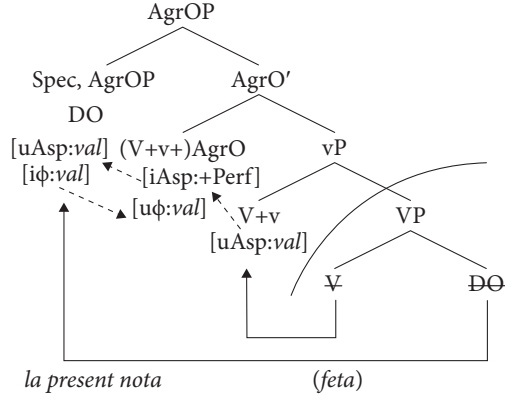
A possible syntactic analysis for this stage is shown in (3.35).

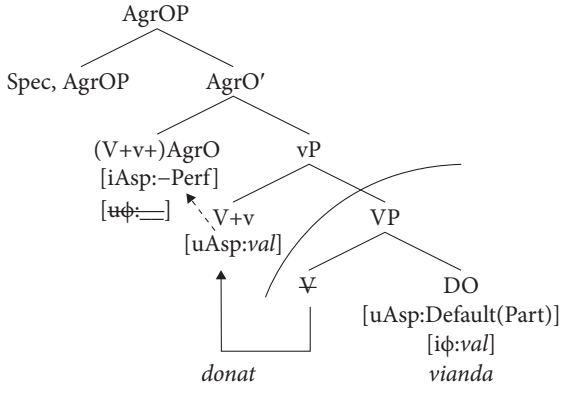
(3.35) *he feta la present nota* 'I have written the present note'
vs. *ha donat vianda* 'he has given food'

a.



b.





c.

The motivation for unifying PartP and AspP stems from considerations of language economy. Agreement in a single step, if possible, should be preferred to a two-step operation (Merge once is better than twice). Data on language acquisition of PPA (Tsakali & Wexler 2004; Tsakali 2014) show that children first use bundling strategies in their first language, even if it is a split-checking language. The move toward simpler structures can be seen as a 'syntactic change' not directly motivated by the properties of the formal features (i.e., re-parametrization) or by their modification through grammaticalization. The result of this change is rather a reorganization of the formal features contained in the lexicon into new feature bundles, which are associated with certain functional heads.

ϕ-agreement is still the trigger for object movement, since the interpretable occurrences of the ϕ-features are placed in a lower position than their uninterpretable counterparts. However, at the end of the medieval period and the beginning of *Decadença* Catalan, aspect and ϕ-features seem to be fused, possibly as a consequence of the combination of AspP and PartP. These two features are coupled to the point that the ϕ-features under AgrO° are only active if aspect receives a positive value in a sort of 'analogical extension,' i.e., all features hosted in a functional head should adopt 'harmonic' values. Note that also Salvà i Puig (2017) makes a similar point, in his case postulating a simultaneous presence or absence of a quantization feature [q] with ϕ-features in a single functional head (see Chapter 3.3.1). If AgrO does not instantiate [uϕ], the DO is not forced to leave the VP. The uninterpretable aspect feature under v becomes the value [–Perf] from AgrO; the same feature on the noun gets a default value, i.e., partitive/default case, since it failed to be inserted into a chain (cf. Belletti 1988)[2] – default morphology is the indicator of failed Agree; since the feature is only 'readable' in narrow syntax, it

2. There is still a technical problem in this analysis. The object in situ would be excluded from the aspect/case chain, since it is placed in the lower phase and has already been sent to spell-out. Hence, an additional movement operation to the phase edge should be postulated. Since the

does not have any further consequence for interpretation at LF. The formal interpretable ϕ-features in the DP form a vacuous chain which can simply be sent to spell-out, since it fulfills the criteria of interpretability and valuation.

From this follows a 'specificity effect' – since the object moves outside the VP whenever AgrO has uϕ-features and perfect aspect, PPA seems to correlate with specificity. However, specificity is not coded in the syntax, as I have argued in Chapter 2.2.2. In Romance languages, specificity is rather a semantic/pragmatic property of the clause. Specific readings arise from how the CI-interface interprets syntactic outputs. If there is object movement triggered by ϕ, the construction is mapped as [+specific], otherwise it is interpreted as [−specific]. If this is on the right track, the connection between specificity and aspect is mediated by the syntactic operations that happen during the derivation (e.g., ϕ-feature agreement). In this sense, it could be assumed that it is not specificity that triggers agreement, but rather the other way around. The fact that agreement is instantiated in narrow syntax has an implication for the interpretation, which 'translates' as specificity.

However, 'feature harmony' can be considered to be optional, as the corpus results clearly show. In many cases, PPA is still used with indefinite/non-specific objects, while definite/specific objects allow lack of agreement in some cases. With respect to participle agreement, mapping narrow syntax to interface properties (cf. Diesing 1992) seems to pose problems for language use, since the different morphological markings do not behave homogeneously. Such a conclusion is consistent with the claims of the Interface Hypothesis, but the reasoning as to how this comes to be differs in relevant details.

10.2.3 Stage 3: Positional rules on agreement

It is commonly accepted that information structure has an effect on word order, more specifically, on object placement in Old Catalan (see Fischer 2010 and references therein). In several modern languages, object shift and scrambling are constrained by definiteness or specificity; other syntactic operations (fronting, cliticization, etc.) only affect definite/specific DPs. There is a range of constructions that are linked to specific readings. Different languages select one or more of them to convey these readings, but this selection can also change over time and an alternative structure can fill the gap of an older one. I suggest that this is the situation we find in the beginning stages of Modern Catalan – replacement of object movement by CLD and DOM.

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main argument for the realization of PPA depends on the satisfaction of ϕ-feature agreement, I will not discuss the details here.

An increase in the restrictions due to changes in the verb movement parameter (Fischer et al. 2019) leads to a new situation in the transition from Old to Modern Catalan: free object placement, which had been dependent on information structure, is progressively lost. Only certain operations trigger clear object movement – cliticization and wh-movement to the CP (or even DOM in some accounts, e.g., López 2012). Object placement is not unambiguously motivated by ϕ-agreement any more. The presence of ϕ has become dependent on the other feature found in the same LI or functional head, so that the language learner does not encounter clear evidence for the fact that the object has to be moved in order to check uninterpretable features in AgrO°, as was the case in previous stages of the PPA cycle. This allows us to redefine the restrictions on participle agreement as a range of positional criteria, discarding ϕ – i.e., a set of language-specific rules. The syntactic analysis would look exactly like the one presented above in (3.35).

Stage 3 is instantiated in *Decadença* Catalan, Standard French and normative Italian. In these languages, PPA is linked to certain construction types rather than to the properties of formal features. Since both are placed in the same functional position, the trigger for agreement has become ambiguous between ϕ and aspect/case. The conditions for cliticization and wh-movement, in contrast, are easily identifiable, since they provide unambiguous cues. The additional marking on the verb (i.e., PPA) is redundant: there are no cases in which participle morphology disambiguates the interpretation of the clause, perhaps with the exception of the examples discussed in Obenauer (1992) and Salvà i Puig (2017), and some others. These are however cases in which word order disposition could not be used to express different readings.

Summing up, structural accounts seem to adequately describe the data in French and Italian, which correspond to the third stage in the PPA cycle. However, the diachronic perspective provides valuable information for understanding some of the peculiarities of these constructions. For example, the occasional interaction of specificity and agreement can only be understood if the way in which PPA evolves is taken into consideration. As I have argued with respect to the EPP-like features in Chapter 7, past participle agreement also seems to require a semantically empty category as a trigger for the movement. In fact, the existence of this category (and the feature therein) can be seen as the result of the bleaching of the content of a previous projection whose function has become obsolete (e.g., because it has been transferred to other functional heads, features or constructions).

10.2.4 Stage 4: Optional agreement

As a result of the conflation of AspP and PartP, the triggers for object movement (and the consequent differences in the semantic/pragmatic interpretation) have

been shifted. In such a configuration, the formal ϕ-features of the verb and under AgrO°, which emerged for the reasons already discussed and which had a semantic motivation (e.g., they were linked to the identification of the referent for the event participant, or mapped to specific readings of the object), become superfluous. Besides an optional morphological expression on the verb, there are no syntactic cues to postulate the existence of [uϕ] in AgrO° – movement of the object is dependent on the need for an appropriate host (if it is a clitic), on the properties of a wh-element, etc. In sum, [uϕ] in AgrO° does not "keep the derivation going" (cf. van Gelderen 2011): the derivation can successfully converge without it.

According to the grammaticalization cline in (2.20), repeated below, redundant formal features undergo phonological reduction and disappear, leaving semantic features (i.e., the ϕ-features of the DO) on their own in the structure. While the first steps of the cline have been illustrated based on the development of subject-verb agreement (Chapter 7), the loss of PPA in Modern Romance represents the two last steps (in boldface).

(2.20) doubled semantic features [σ] > **(simple) [σ] + [iF]/[uF] > simple [σ]+ Ø**

As an intermediate – but perhaps necessary – step in the grammaticalization of formal features, a more or less extended period of optionality can be observed. As discussed in Chapter 2.1, optionality, especially when considered from the perspective of language change, can be understood among other possibilities as a set of competing grammars (building on Kroch 2000) or as 'true' optionality in the form of unpredictable variation due to hesitation, interference, etc., as predicted by the Interface Hypothesis (which has been reformulated there following current assumptions about grammar organization). According to the results of the acceptability judgment task for Modern Catalan (cf. Chapter 9.2), the variability in the realization of PPA cannot be unambiguously linked to different interpretations or syntactic structures – an explanation that postulates different pathways and positions for the DO (e.g., two different movements of the clitic to reach its host) leads to circularity (cf. Chapter 1.2.4). This shows that nowadays PPA is realized optionally in Catalan.

Pineda (2016) proposes an interesting analysis for the variability observed in dative clitic doubling, which is parallel to the analysis of PPA developed here in some relevant ways. Contrary to Demonte (1995) and Cuervo (2003), Pineda argues that the structural asymmetry between using or not using a doubling dative clitic in ditransitive verbs (3.36) does not apply in Catalan (nor in Spanish). The analyses that treat optional dative clitic doubling as dative alternation – i.e., analyses that assume different underlying structures – are not feasible. None of Demonte's and Cuervo's tests (i.e., c-command asymmetries caused by reflexivization and bound pronouns, passivization, and lexical-semantic differences) provide

clear evidence for a different analysis of sentences with or without clitic doubling. Instead, Pineda claims that the same syntactic structure (e.g., a structure in which both objects are equidistant to the finite verb) is linked to two different morphological exponents – one with an overt dative clitic, one without. My data are also compatible with such an analysis: certain syntactic structures (e.g., constructions with an A′-moved object) are associated with two different morphological exponents – one with agreeing morphology, one with default agreement, evidence for syntactic differences (e.g., different movement paths or landing positions) being non-existent.

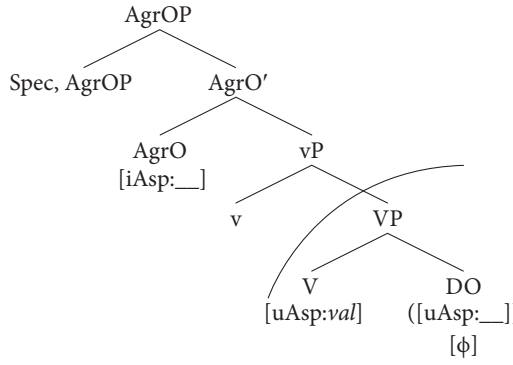
(3.36) El premio Nobel (le) fue concedido a Cela el año pasado.
the prize Nobel CL.DAT.3SG be.PST.3SG award.PSTPRT.MSG to Cela the year past
'Last year the Nobel prize was awarded to Cela.' (Demonte 1995: 12)

In stage 4 of the PPA cycle, thus, the grammaticalization of the formal ϕ-features under AgrO is even more pronounced. Since they are detached from interpretive and syntactic effects, an increase in cross-linguistic variation (with each language developing a slightly different set of restrictions) and optionality is attested, which is a favorable situation for further change. According to my assumptions about the grammaticalization of formal features (cf. Chapter 6), the next steps in the process would lead to the complete loss of PPA. In fact, participle agreement is already disappearing in Catalan. The retention of alternative morphological exponents could be explained by a stylistic preference of the speakers, especially of those who consider it a distinctive trait of their identity (cf. Chapter 3.2). The archaic forms with PPA are felt to be more authentic than the more grammaticalized default agreement. Following Pineda's (2016) proposal, the competing forms are syntactically non-distinct and can be considered post-syntactic morphological insertions (cf. Bobaljik 2008). In this way, the postulation of 'competing grammars' that differ only in this point, i.e., the morphological realization of participle agreement, is avoided.

10.2.5 Stage 5: Loss of agreement

In Spanish, Portuguese and Romanian (as well as in spoken French and probably for some Catalan speakers), PPA has completely disappeared. The syntactic structure, thus, looks like the one in (3.37).

(3.37)



Only the semantic ϕ-features of the DO are still present in the derivation; formal ϕ-features have been deleted. At the end of the grammaticalization process, the structure has become simpler. There are fewer duplicated features, formal or semantic. Due to new pragmatic requirements (e.g., emphasis, but also information structure), a new element could now be introduced, starting a new cycle. A clitic pronoun, for instance, could double the referential features of the object. As a result of this doubling structure, the grammaticalization process in (2.20) would begin anew.

Besides the grammaticalization and deletion of ϕ-features, changes in the realization of aspect (and case as [uAsp]) are also plausible, or even predicted. I refer to the discussion in Chapter 7.3 on the grammaticalization of [uTns], i.e., nominative. In this respect, the object DP bears uninterpretable case features that do not give rise to visible syntactic (or interpretive) effects. According to the premises developed so far, accusative case should be suppressed in the same manner as other formal features. The gradual expansion of DOM in Spanish, for instance, could be taken as evidence for this. The DO no longer receives structural case, instead another element – the preposition-like element *a* – is introduced to assign case to 'non-canonical' objects. A detailed analysis of this process, however, cannot be developed here.

10.3 Outcomes, shortcomings, outlook

In this chapter, I have provided a syntactic analysis for each stage of the participle agreement cycle presented in Chapter 9.3 under the main assumption of linguistic change due to the grammaticalization of formal features. When trying to motivate the change from one stage to the next, it became evident that other factors are at work. More specifically, the conflation of two functional heads – PartP and AspP – led to a new syntactic configuration that may have speeded up the

grammaticalization of the [uϕ] under Asp°/AgrO°. Erosion of case (i.e., [uAsp]) could also be related to this process of syntactic simplification.

The present account raises several interesting questions. First, it seems to confirm that the theoretical framework developed in Chapters 5 and 6 provides an adequate tool for analyzing several phenomena while avoiding a circular explanation. PPA is not explained by means of postulating the existence of a certain structural position (i.e., a dedicated position for PPA), but by means of the grammaticalization of formal features from doubled semantic features in the clause, which is independently motivated. Drawing a parallel to subject-verb agreement, I have proposed that object ϕ-features, instead of case, as commonly assumed, are responsible for the distribution and development of participle agreement in Romance. Crucially, this allows us to avoid the postulation of vacuous features (e.g., the EPP, a welcome result in the light of recent developments in syntax theory) and the proliferation of functional heads (e.g., AgrO in the classic sense, being there only to generate agreement morphology); instead, the ϕ-features under Asp°/AgrO° evolve from the pronominal nature (hence, referentiality) of the verbal morphology. A similar idea is found in D'Alessandro's (2016) analysis of 'omnivorous participle agreement' (among other phenomena) in some southern Italian varieties. She argues that a microtypology of v accounts for different constructions in which the object is involved, and that the position of π, a projection endowed with person features (and not case or simply agreement), is decisive for the generation of the structures discussed in her paper. The data obtained by means of a typological or diachronic perspective, thus, lead to conclusions that could not have been reached in a strictly synchronic analysis.

A language system with a very small number of operations (e.g., Merge and Move) and operating features is certainly very economical, and therefore desirable under the assumptions of the Minimalist Program. The analysis of PPA in the preceding section was limited to the presence and particular distribution of case- and ϕ-features. Unrestricted syntactic operations, though, run the risk of overgenerating syntactic structures. The restrictions imposed by the mechanisms of language change could be a means to constrain possible syntactic outcomes. In Chapter 7, I have shown that the grammaticalization of subject ϕ-features implies a re-parametrization of the null-subject parameter. With respect to object-verb agreement, it is not enough to look at the properties of the ϕ-features, but it is also necessary to pay attention to how the different object features are distributed along the available functional heads. The conflation of Asp° and Part° is a crucial moment in the process that ends in the elimination of participle agreement. It allows resetting the clitic doubling parameter from a split-checking language (with PPA) to a bundle-checking language (potentially with CLD) (cf. Tsakali & Anagnostopoulou 2008). What is more, the conflation of the syntactic structure fosters

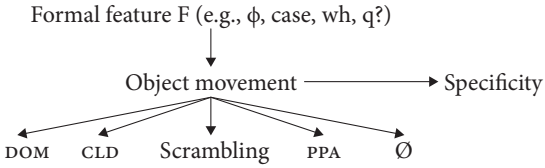
the already ongoing grammaticalization process. Interestingly, a syntactic change strengthens the following grammaticalization steps regarding the formal features so that in the end there is a new parameter choice. Alternatively, the reorganization of the formal features in a new functional head (i.e., the conflation of PartP and AspP) could be modeled as another kind of parametric change. Under this view, all types of language change are ultimately connected to the specifications of the formal features in the lexicon. Any type of language change (e.g., grammaticalization) would then have repercussions on the other types (e.g., parametrization and 'syntactic change') through modifications of the properties of the LIs.

10.3.1 The division between narrow syntax and the interfaces

I have previously shown that in some cases, PPA gives rise to a series of effects correlated with a [+specific] interpretation of the DO (in the synchronic as well as the diachronic data). However, in my approach to the diachronic development of PPA in Catalan, specificity played practically no role in the entire process of language change, but was treated rather as a side effect.

In (3.22), I have suggested that specificity is the motivation for object placement, which, in turn, constrains the realization of CLD, DOM, PPA, etc. However, in Chapter 10.1 and afterwards, I have proposed, following Karimi (1990) and Leonetti (2007), that specificity is not instantiated in narrow syntax in Romance. Still, specificity is not equivalent to definiteness. Specific readings can be found in perfective and imperfective clauses, with either definite or indefinite objects. Specificity cannot be identified with case, either – they sometimes overlap but are more often than not independent from each other. Instead, specificity is a semantic interpretation of the syntactic output at the conceptual-intentional interface. Specificity, thus, does not trigger syntactic (or morphological) operations, since this would lead to *look-ahead* problems (i.e., the object moving to satisfy a feature that the current working module cannot yet foresee). Leonetti (2004) solves the conflict between the necessity of the DO to vacate the VP and the interpretation of the object itself as [+specific] as a 'pragmatic inference.' As a consequence, this feature does not even have to be present in the numeration: it is inserted post-syntactically to fill up gaps in the interpretation. If there is no [Specificity] feature (formal or semantic) responsible for syntactic movement, the trigger for movement should be found elsewhere. According to the outputs generated by the other object features available, the CI-interface assigns the specific reading to certain configurations. This means that the figure in Example (3.22) should be modified as follows:

(3.38)



This scheme accounts for the vagueness of the notion of specificity. Heterogeneous structures are mapped as [+specific]. In a way, the specificity effects shown by Obenauer (1992) could be accidental. The wide scope of specific DPs, for example, simply emerges from certain syntactic requirements that DOs be raised quite high in the structure, but not from their semantic interpretation as specific. Moreover, this notion of specificity seems to weaken the Interface Hypothesis, which correctly predicts the variability and optionality of the phenomenon in Modern Romance, but relies on a quite different conception of grammar from the one adopted here. Minimalist assumptions seem to imply that 'interface phenomena' cannot exist since the different language modules (i.e., narrow syntax, CI- and AP-interfaces) work independently of each other. According to this, however, the attested interface effects remain unexplained. A possible alternative is to consider that these effects are a necessary byproduct at some step within the grammaticalization cline of formal features. This process, which naturally leaves space for optionality at some points, would be the main source of variation. This is an important issue that remains open for further research. Moreover, the connections between aspect and specificity, as well as between definiteness and aspect (and, possibly, between definiteness and specificity), should be further investigated in order to gain a full understanding of the matter. A way to rehabilitate the validity of the IH would be a slight reformulation of it. The mapping of syntactic outputs to semantic or pragmatic properties seems to be more demanding in some cases than in others. A next step would then be to determine which criteria have an influence on the degree of processing complexity attributable to different mapping operations, a goal that is beyond the scope of the present work.

Another consequence of my analysis is the reduction of optionality (in certain stages of language change) to a post-syntactic operation, which supports the claim that morphological change follows syntactic change, rather than the other way around (contra Drijkoningen 1999; Guasti & Rizzi 2002; Poletto 2014). Under a strict division of narrow syntax and interfaces, the association with determined morphological exponents is mapped to syntactic outputs in the same way the CI-interface associates semantic or pragmatic properties with them. Since the assignment of more than one morphological exponent to a syntactic structure, i.e., morphological optionality detached from syntactic variation, is not in line with what is commonly considered an efficient computation, different devices can

be in charge of reducing this redundancy (cf. Fuß 2012). These, however, may be restrained or redirected by language policies, but a language-internal drift seems to prevail (cf. Chapter 3.2).

10.3.2 Consequences of grammaticalization for accusative case

My account runs contrary to another common assumption: the role of case as a licenser of DPs in argument position – i.e., the case filter and subsequent concepts deriving from it (cf. Chomsky 1981; see also the discussion on nominative case in Chapter 7.3). The loss of accusative case is a logical consequence of the mechanisms of grammaticalization presented here, but a detailed analysis of this process is still required and the question of whether the emergence of the accusative can be subsumed under a doubling structure (e.g., as a 'duplication' of aspectual features on the noun) still needs to be answered. The question that will be briefly addressed here is whether the grammaticalization path for (accusative) case is comparable to the grammaticalization of the object and subject ϕ-features on the verb shown so far, and how the former is interconnected with the latter.

If PPA depends on the grammaticalization of doubled ϕ-features, it is puzzling that only accusative argumental objects can trigger agreement. In the context of the discussion on the dative alternation in English, it is often claimed that the indirect object c-commands the DO (e.g., Larson 1988; Gonçalves, Duarte & Hagemeijer 2016). Pineda (2016) argues that both arguments are equidistant to the finite verb in Spanish and Catalan. In both accounts, it would be expected that the indirect object is able to trigger PPA, or perhaps agreement with the dative should even be preferred. In other words, agreement with accusatives should be blocked by the intervening ϕ-features of the indirect object in ditransitive clauses, which is clearly not the case. The only cases that apparently allow PPA with datives are certain reflexive clauses in Italian, but they can be assimilated to the other unaccusative cases, i.e., to participle agreement with the nominative (see Chapter 1.1.1 above and also Chapter 10.3.3 below). PPA with datives is generally excluded in Romance languages. This deserves a closer inspection and here I will only provide some initial ideas for a more detailed analysis in the future.

There are several ways to derive ditransitive clauses, but a quite widespread solution is to assume some kind of applicative projection. In some languages, applicative morphology may alter verbal valency (cf. Pylkkänen 2002; McGinnis 2008). This function is syntactically represented in an applicative projection around an Appl°. The dative clitic in clitic doubling constructions has been proposed to be the head of such a projection (e.g., Cuervo 2003). Even if the Appl°-head is phonetically null, it can be assumed to be covertly present (cf. Pineda 2016). The dative argument agrees with this head and the potential intervention effects are thus

avoided, so that agreement between the participle and the remaining argument, the DO, can take place in a second step. Alternatively, PPA could be considered the externalization of another applicative projection. However, this line of argumentation leads, again, to a growth of hardly motivated syntactic structure. A simple way to solve this problem would be to identify the applicative heads with the referential features of the arguments, i.e., to put them in charge of associating event participants with thematic roles (the Participant Phrase adopted in the analysis above). This link has already been formulated in several accounts. One of the most recent ones is probably Bobaljik (2008), who assumes that ϕ-agreement may distinguish the proper goal among different candidates on the basis of case. This approach has two implications: first, it circumvents the question of the equidistance (or intervention effects) between the probe or probes and the goal DPs; second, it predicts that the grammaticalization of case should follow, not precede, the grammaticalization of ϕ-features, since one important function of case is to help the probe discriminate among potential goals – if ϕ-agreement no longer takes place, abstract case (as an element of the formal feature repertoire) is subject to change.

Furthermore, connecting case and ϕ-features seems to motivate the otherwise somehow arbitrary 'feature harmony' (see Chapter 10.2.2). The formal features attributed to the DO do not operate in isolation but rather are interconnected. In this sense, it is not surprising that all object-related features influence each other – this is plausibly an efficient cognitive strategy. Above, I have argued that the values of all features contained in the functional head which results from the conflation of Asp° and Part° should 'harmonize,' that is, be set to an analogous value. This notion was intuitively linked to a typological generalization found in Hawkins (1982), the Cross-Category Harmony Principle. This has been reformulated more recently as the Input Generalization strategy by Biberauer & Roberts (2015: 7): "if a functional head F sets parameter P_j to value v_i then there is a preference for all functional heads to set P_j to value v_i." What I have claimed here is not only that similar heads tend to adopt similar feature values, but also that within a head all features tend to adopt the same kind of value. In other words, functional heads with homogeneous features should be preferred (less marked, easier to process) over more complex heads with heterogeneous combinations. The question to be answered is still whether this scenario is transferable to other known cases, either to other constructions in Romance languages or, generally, to unrelated languages. These are in my opinion important issues to be addressed in future research, but which go beyond the scope of the present book.

Large-scale typological studies could also be very valuable in supporting another idea derived from the grammaticalization framework proposed here. For the sake of internal consistency, the case feature on the object should be subject to the same restrictions and should undergo the same grammaticalization processes

(whenever the appropriate conditions are met) as any other formal feature. In this respect, two claims should be proven from a typological perspective: first, the sources for an initial doubling of the verbal features on the noun (i.e., structural case) should be identifiable; then, examples of languages in each stage of the grammaticalization cline should be found. The development of oblique and ergative cases (e.g., McGregor 2017 for an overview of the emergence of ergative case markings cross-linguistically) has often been investigated. How structural case emerges in a nominative-accusative alignment is much less clear. How the available cross-linguistic data fit into the present theory needs to be examined thoroughly. As for the last stages of the grammaticalization cline, it seems much easier to get evidence – the Romance languages show different degrees in the dissolution of case marking. And the possibility of completely dispensing with abstract case, the last expected step in the cline, has already been claimed to apply in certain Bantu languages (see Chapter 7.3 and references therein). The logical consequences of my approach can potentially be confirmed. The loss of abstract case along with its morphological marking should be a necessity due to computational economy, which is reflected in the mechanisms of language change described in the preceding chapters.

10.3.3 Some remarks on unaccusativity

Still another construction needs further clarification: clauses with unaccusative verbs. Throughout this entire discussion they have been put aside since they show a very different distribution from PPA with the DOs of transitive verbs. In fact, their structure is more similar to that of passive clauses, which also have a very different behavior compared to the active transitive verbs. Some differences between these verb categories are very salient: agreement does not depend on the position of the overt argument (since reflexives are always expressed through a reflexive clitic, this does not apply for them: the clitic is always directly attached to the verb) and the realization of agreement strictly correlates with the use of the auxiliary BE. In my corpus there are only a few examples violating this rule, all of them in a period in which Catalan was losing auxiliary alternation. The dependency on auxiliary alternation is even clearer when one considers contrasts as in (3.39) – languages that use the auxiliary BE have obligatory agreement; in Catalan, which uses HAVE instead, agreement is out.

(3.39) a. Mi sono **guardata** allo specchio. Italian
CL.1SG be.1SG watch.PSTPRT.FSG to-the mirror
'I have watched myself in the mirror.' (Belletti 2006: 496)

b. Elles se sont **reprises**. French
they.FPL CL.REFL.3 be.3PL recover.PSTPRT.FPL
'They have recovered.' (Belletti 2006: 497)

c. *Ses filles no s' han **pentinades**. Catalan
their daughter.FPL not CL.REFL.3 have.3PL comb.PSTPRT.FPL
'Their daughters have not combed their hair.'

The trigger for participle agreement should be sought within the properties of the auxiliary verb rather than in the features contained in the object or in the participle. There are crucial differences in the syntactic analysis of unaccusatives (including reflexives). The vP, being theta-incomplete, does not constitute a phase (cf. D'Alessandro & Roberts 2008, who use this to justify PPA with unaccusatives). Agreement is not bound by a 'canonical' object placed in an object position but by the subject, or more precisely by the argument that occupies the subject position (recall the arguments by Le Bellec 2009, discussed in Chapter 1.1.1), that is, an argument in nominative case. If the projection that hosts participle agreement is sensitive to case marking, it follows that unaccusatives should be treated separately. Notice that the origin of PPA in small clauses (cf. Macpherson 1967) is not applicable to passives, which are related rather to copula constructions (cf. Danckaert 2017). Unaccusatives seem to be more compatible with the latter scenario than with the former. This radical differentiation could also explain why agreement is independent from the aspectual configuration of the sentence and does not seem to go through the same stages as PPA with auxiliary HAVE in (di)transitive clauses.

Summing up, the reasons for the retention or loss of PPA with unaccusatives must have to do with properties specific to these constructions and therefore the analysis proposed so far is not necessarily affected by these data. But, of course, a closer inspection of participle agreement with unaccusatives (and passives) could still reveal interesting insights that are also applicable to the constructions that have been the focus of attention of this book. These must unfortunately remain topics for future research.

10.3.4 Open issues

Besides the need for a deeper exploration of issues addressed in the preceding sections (due to an insufficient understanding of how accusative case undergoes grammaticalization, the lack of a more precise motivation for the harmonic values under AgrO°, etc.), the proposed analysis should be verified through replicated samplings of corpus data, not only of different Romance (and even unrelated) languages, but also of Catalan corpora using a different text selection. As I have already suggested, the data collection is not unproblematic.

In Chapter 8.1, I pointed out that access to written documents in some periods of Catalan (especially *Decadença* Catalan up through the 19th century) is very restricted, and the required quality cannot always be guaranteed. Hence, the data found in the last period before the *Renaixença* – i.e., the revival of the Catalan culture at the end of the 19th century – could be insufficient to draw solid conclusions. More generally, it is also almost unavoidable that a few features or constructions are underrepresented in the whole corpus – this is in the nature of the data since some elements are used less frequently, at least in written registers. However, the results of the corpus search seem to be consistent with the data collected by means of the acceptability judgment task, i.e., there seems to be a coherent trend from the most recent corpus data to the current acceptance of PPA as depicted in the questionnaire. The PPA cycle (see (3.32) in Chapter 9.3) is based on solid assumptions about grammar architecture and language change and correctly captures the data from the different sources. This by no means should lead us to underestimate the potential benefits of extending the corpus data. This is in fact an important desideratum, though not only restricted to the present study.

The reasons for excluding passive sentences from the analysis have been listed in the preceding section. Not only are the empirical data on passives quite uninformative with respect to agreement – PPA is obligatory in all cases in all Romance languages, (almost) no variation is allowed – but their syntactic structure also seems to diverge from that of transitive verbs with the auxiliary HAVE in relevant ways. The properties of the different auxiliaries, of the vP and the featural configuration of the participles, among other things, are only some topics that should be further studied, by themselves and in relation to the different processes of language change (especially grammaticalization). For similar reasons, the analysis of unaccusatives was not pursued further. Halfway between passives and transitives, they seem to be more permissive than the cases analyzed here (see fn. 1 in Chapter 9), but their constraints seem to run tangentially to the distribution found in transitive verbs across Romance. Unfortunately, the data at hand do not allow us to shed any light on these questions, which, certainly, deserve special attention.

Aside from the just mentioned empirical problems, some theoretical issues should be explored further. I have proposed that the emergence of formal features is required to reduce the markedness of semantic doubling. Markedness is a central notion for typology but also from a cognitive viewpoint. That some constituents are more or less marked depending on their frequency, cross-linguistic spread, naturalness, simplicity, etc. is beyond dispute. The role of markedness in language change, however, is more controversial. Whereas marked structures tend to be avoided in first language acquisition, it is assumed (e.g., Biberauer & Roberts 2015) that language change goes the opposite way, i.e., down the parameter hierarchy with increasing markedness. Fischer et al. (2019), however, challenge

this view and show that, in the case of cyclic change, both directions must be possible. In this sense, a more precise definition of markedness is needed to determine the way in which it affects grammaticalization processes. In the grammaticalization cline of (2.20), I applied the idea that doubling structures are more marked due to a processing complexity, a 'pragmatic overload.' It seems to be true that from a typological perspective, languages that make use of both head-marking and dependent-marking strategies (which would translate into a kind of doubling construction) are rare. What is more, formal features cannot be considered 'economical' solutions per se. In fact, in order to reduce the complexity due to doubled semantic features, formal features are introduced into narrow syntax, which in the end increases the number of required syntactic operations – a new Agree operation, possibly also Move. This has been shown in Chapter 7 for the change from long-distance agreement between the verb and the subject to a strict Spec-Head relation, which requires an additional movement. In sum, if markedness is relevant for language change, it has to be defined in such a way that violations of this principle (avoid markedness, avoid complexity) are not only tolerated, but even necessary for the sake of efficiency.

Finally, the analysis presented here has been reduced to a few tools based on the mechanisms of grammaticalization. However, other factors are considered to have an impact on the changes related to the object syntax as well. Some proposals can be found in the pertinent literature. Changes in the verb movement parameter, which have a direct effect on CLD, could add new limitations on word order which might have rendered [uϕ] prematurely obsolete. Labeling (see fn. 2 in Chapter 5), as van Gelderen (2015) suggests, could also be responsible for certain well-known changes, for example the reduction of phrases to heads (cf. (2.16) in Chapter 6.2). Although Labeling proved at first to be irrelevant for the explanation of PPA, it should be incorporated in an all-encompassing language change framework that is based on the properties of the features contained in the LIs. In the end, a better understanding of all these diachronic phenomena would improve our knowledge about the lexicon, its organization and its link to narrow syntax and, in general, to the other linguistic modules.

Concluding remarks

The diachronic exploration of participle agreement in Catalan has been imbued with two central ideas – the consideration of PPA as a multi-factorial phenomenon (i.e., the identification of grammatical triggers for agreement), and the problematic nature of its optionality within current assumptions about the modularity of grammar and the interfaces. I have introduced these two concerns in Chapters 1 and 2, in which I have broadly presented data on PPA in Italian and French, discussing previous approaches that investigated this construction from different perspectives. Many of the observations put forth in these papers are basically correct, but they cannot account for all of the data: PPA has to do with the grammaticalization of the auxiliary and the reanalysis of the small clause, and correlates with auxiliary selection, but only certain structural considerations help understand some of the positional restrictions, while yet a different approach is required in order to account for the interpretive effects and diachronic development of PPA. Hence, I have suggested addressing the phenomenon from the point of view of the Interface Hypothesis (Sorace 2006; White 2011, etc.), at least as a starting point. The IH offers an attractive framework to analyze optionality. The behavior of participle agreement in Italian and, especially, in French strongly resembles an interface effect as predicted by this theory. Considering PPA an interface phenomenon is prima facie well motivated. In Chapter 3, I have shown that PPA in Catalan, too, is a multi-factorial and optional phenomenon and, as such, that similar considerations to those for French and Italian can be made for Catalan.

Some of the first questions that logically arise are whether and to what extent the IH is compatible with current linguistic developments in the theory of grammar, and whether and how it can be adapted to the new premises. In Chapter 5, I have established my theoretical framework, deduced from prevailing minimalist assumptions. A rigorous symmetry between the checking conditions for subject-verb and object-verb agreement, the avoidance of 'vacuous' categories (i.e., features such as the EPP or functional heads such as AgrS and AgrO) and the reduction of the set of operations within UG to Merge and Agree (and probably Move and Labeling as by-products) are essential postulates that I have adopted in my analysis of PPA. In addition, I have assumed there to be a strict separation between narrow syntax and the interfaces (CI and AP), as well as a clear distinction between three

types of language features – semantic, phonological and formal/syntactic features (Zeijlstra 2012), which are operative basically in their respective domains and are more or less 'invisible' to each other. These assumptions, however, challenge the very existence of the IH. If the computation requires a sequential application of the different linguistic modules so that the interfaces can only interpret the output of narrow syntax without having any influence within the syntax itself (a ban on *look-ahead* mechanisms), there are a priori no differences in the cognitive load of one computation over the other. Interface effects should rather be related to syntactic complexity, measured, for example, by the number of operations needed in a derivation or the number of branching nodes or embedded constituents, or possibly by the greater heterogeneity of features combined. In this fashion, the spirit of the IH can be maintained, even within the current syntactic theory.

There is probably another answer to the problem of optionality, which does not involve the concept of interfaces: optionality is a step on the grammaticalization path of formal features. In other words, optionality is directly related to language change. But the crucial questions are when is optionality possible or predictable, what factors make it possible and how is it explained diachronically? At best a universally valid pattern should be detected. In Chapter 6, I have elaborated a new characterization of grammaticalization that affects the properties of LIs through the manipulation of their formal features. This has been captured under the grammaticalization cline in (2.20). The starting point of this type of grammaticalization is the presence of a pragmatically determined construction that contains doubled semantic features, which are converted into a syntactic agreement relation. This temporary increase in the syntactic complexity contributes to the pragmatic simplification of an assumed cognitively marked construction; it releases the semantic load and translates it into formal material. If the syntactic cues for postulating the existence of formal features disappear (or become opaque or ambiguous), a disintegration of these formal features is expected, which leads to a more or less extended period of optionality. This allows us to define necessary conditions for the emergence of free variation, i.e., optionality.

According to this, syntactic agreement is interpreted as a parsing strategy to repair pragmatically marked structures. The application of this approach to the diachronic analysis of subject-verb agreement (Chapter 7) and object-verb agreement (on the basis of a corpus with over 2000 sentences for Old Catalan until the middle of the 19th century, and an acceptability judgment task for Modern Catalan; see Chapters 8–10) reveals far-reaching consequences. First, the role of ϕ-features, rather than case as is commonly claimed, is fundamental to understanding syntactic movement (of the subject as well as the object) and the loss of PPA (and null subjects). In the same way, I have shown that specificity does not play a role in the distribution and development of participle agreement, since it

is a semantic/pragmatic feature that is inserted after all the syntactic operations have taken place. Second, the progress of grammaticalization can be altered by other types of language change (i.e., parametric change, or 'syntactic change' due to language economy principles), but grammaticalization can also trigger parametric change – for example, the change in the null-subject parameter (Chapter 7) and the CLD/PPA parameter, which has been represented as a cyclic change in Chapter 9 (cf. Tsakali & Anagnostopoulou 2008; Fischer et al. 2019). Finally, since the properties of formal features are decisive in many synchronic (e.g., movement) and diachronic processes (e.g., grammaticalization, parametrization and syntactic change due to language economy principles), morphological change can be relegated to a secondary position under this approach (cf. Cole et al. 1980 and Fischer 2010; and Drijkoningen 1999; Guasti & Rizzi 2002 and Koeneman & Zeijlstra 2014 for the opposite view). Morphological change (which is understood as a post-syntactic operation) follows syntactic change and 'true optionality' seems to be possible (cf. Fuß 2012). This opens the way to a more elegant explanation of the data, which do not have to be interpreted in a specific direction in order to avoid the possibility of a free morphological choice; the theory also does not need additional stipulations beyond the few assumptions around the nature of the lexical items and their featural composition. Nonetheless, optionality under this approach is not unrestricted – it is not a mere descriptive tool.

Based on these results, I would like to conclude by reviewing the hypotheses formulated in the introduction, and elaborated on in Chapter 4, which can now be verified or falsified. The following answers to the research questions thus sum up the main findings of this book.

The first hypothesis (1.89, repeated below) was concerned with PPA as an interface phenomenon and contained two claims: that agreement is not dependent on position alone since semantic and pragmatic features also play a role, and that this is the case over time but with changing properties, so that 'true optionality' may arise at certain points. The first claim was only partially confirmed: it is neither position nor a semantic feature (e.g., specificity) that accounts for the development of PPA in Romance languages but rather the grammaticalization of ϕ-features, which also accounts for the attested interface effects. As the formal object ϕ-features bleach due to further grammaticalization, positional rules may be introduced (as in Modern Romance), but a positional criterion is a misinterpretation of the data in previous stages. 'True optionality,' as proposed in (1.89b), is possible in this grammaticalization path but it does not conform to the expectations of the Interface Hypothesis (which has been reinterpreted). The motivation for PPA relies much more on formal properties of the clause than on semantic or pragmatic interpretation (or the combination of different modules).

(1.89) *Hypothesis 1: PPA as an interface phenomenon*

a. PPA is not governed by object position, but rather by a semantic/pragmatic feature (definiteness/specificity/aspect). This allows us to analyze PPA as an interface phenomenon, with all the consequences this has (instability, vulnerability to language change, optionality, etc.).

b. The effects of definiteness/specificity can be observed in all diachronic stages of Catalan, but their properties are in constant change. The distinctions expressed by these features may become so opaque that 'true optionality' arises.

The second hypothesis (1.90) tried to identify different processes of language change and how they interact in the loss of participle agreement, and was divided into three statements: change is directional and due to economy; different types of change are dependent on each other; and change is cyclical in the sense that new structures come to replace older ones. All these claims have been confirmed. Assuming that languages with agreement have split-checking of object features and languages potentially with clitic doubling have bundle-checking, the tendency toward the more economical operation (bundle-checking) can be seen in all Romance languages, in which PPA is progressively being abandoned. This leads to a cyclical change from PPA languages to CLD languages. Old and Modern Romance illustrate all stages of the cycle. As shown in Chapter 9, when PPA is at the end of the grammaticalization cline, other constructions typically emerge – especially DOM and CLD as in Spanish – and the whole cycle begins anew. My analysis of the data (Chapter 7, Chapter 10) has shed light on the multiple interactions among language change processes through the features contained in the lexical items. After conflating the object functional projections for economy reasons (the shift from split- to bundle-checking assumes relocating or regrouping formal features of the lexicon), further grammaticalization of the formal ϕ-features is promoted until their deletion. Since the derivation is coded in the feature composition of LIs and all syntactic operations are driven by those features, many types of change can be reduced to differences in the lexicon. From this it follows that different manifestations of language change are reasonably linked to and interact with each other. This framework provides enough flexibility to allow for a variety of diachronic changes but without being too permissive by allowing change in any direction (i.e., cyclicity and directionality are still contemplated).

(1.90) *Hypothesis 2: different processes of language change that interact in PPA*

a. The pressure of economy principles promotes the change from complex structures (PPA) to simpler ones (default agreement, possibly CLD). This process is unavoidable and irreversible and results in cyclic change.

b. Syntactic change interacts with the grammaticalization of the formal features involved in PPA (aspect, case, definiteness/specificity, ϕ…), and vice versa. Formal features can thus be relocated in the structure, grammaticalized (i.e., detached from their semantic meaning) or even deleted.
c. Change is cyclical – i.e., if specificity is no longer expressed by PPA, other constructions may adopt this function (e.g., CLD and DOM emerge).

Finally, I have discussed the interplay between the modularity of grammar and language change. I have hypothesized that the source of language change is found in the properties of the LIs, which directly determine the shape of syntactic structures, and that morphological change thus occurs later (1.91). Both claims are consistent with the results of my analysis, as follows from the answers to the preceding research questions.

(1.91) *Hypothesis 3: precedence of syntactic over morphological change*
a. The feature configurations encoded in the lexical items are the first ones to be affected by change. This means that change begins with grammaticalization, (re-)parametrization or syntactic change due to economy principles and the first effects of language change are syntactic (e.g., word order).
b. Morphology can be considered a reflex of syntactic change. In some cases, morphology may remain 'fossilized,' thereby giving rise to true morphological optionality as a transitory state after syntactic change has taken place. True optionality (without semantic correlates) is possible, but is subject to further change (e.g., deletion of the morphological exponents).

To sum up, in this book I have tried to provide new insights into the syntax of object constructions in Romance paying special attention to past participle agreement, a construction that, at least for Catalan, still has some intriguing properties. The corpus search and analysis of less known data have permitted us to rethink our assumptions about the phenomenon of participle agreement and to propose innovative analyses for it, which led to a reconsideration of the modularity of syntax with relation to interface effects, the role of the different features in the syntactic output and at the interfaces, and how all this is involved in language change, formal features being understood as the first locus of change. The results are very promising since they make evident how important empirical work is in making advances in theoretical questions such as the ones dealt with here.

References

Abbott, Barbara. 1999. Support for a unique theory of definite descriptions. *Semantics and Linguistic Theory* IX: 1–15. https://doi.org/10.3765/salt.v9i0.2834

Adger, David & Svenonius, Peter. 2011. Features in minimalist syntax. In *The Oxford Handbook of Linguistic Minimalim*, Cedric Boeckx (ed.), 27–51. Oxford: OUP.

Aissen, Judith. 2003. Differential Object Marking: Iconicity vs. economy. *Natural Language and Linguistic Theory* 21: 435–483. https://doi.org/10.1023/A:1024109008573

Alcázar, Asier & Saltarelli, Mario. 2007. The quirky case of participial clauses. In *Romance Languages and Linguistic Theory*, [Current Issues in Linguistic Theory 291], Sergio Baauw, Frank Drijkoningen & Manuela Pinto (eds), 1–18. Amsterdam: John Benjamins.

Alexiadou, Artemis & Anagnostopoulou, Elena. 1997. Toward a uniform account of scrambling and clitic doubling. In *German: Syntactic Problems – Problematic Syntax*, Werner Abraham & Elly van Gelderen (eds), 142–161. Tübingen: Niemeyer. https://doi.org/10.1515/9783110914726-009

Alexiadou, Artemis & Anagnostopoulou, Elena. 1998. Parametrizing AGR: Word order, V-movement, and EPP-checking. *Natural Language and Linguistic Theory* 16: 491–540. https://doi.org/10.1023/A:1006090432389

Anagnostopoulou, Elena. 2005. Clitic doubling. In *The Blackwell Companion to Syntax*, Martin Everaert & Henk van Riemsdijk (eds), 519–581. Oxford: Blackwell.

Anagnostopoulou, Elena. 2016. Clitic doubling and object agreement. In *Proceedings of the VII NEREUS International Workshop: Clitic Doubling and Other Issues of the Syntax/Semantics Interface in Romance DPs* [Arbeitspapier 128], Susann Fischer & Mario Navarro (eds), 11–42. Konstanz: Fachbereich Sprachwissenschaft, Universität Konstanz.

Arche, María J. 2012. On the aspectuality of the individual-level / stage-level dichotomy. *Borealis* 1(2): 109–132. https://doi.org/10.7557/1.1.2.2385

Audibert-Gibier, Monique. 1992. Étude de l'accord du participe passé sur des corpus de français parlé. *Langage et Société* 61: 7–30. https://doi.org/10.3406/lsoc.1992.2573

Badia i Margarit, Antoni M. 1962. *Gramàtica catalana*. Madrid: Gredos.

Badia i Margarit, Antoni M. 1981. *Gramàtica històrica catalana*. València: Tres i Quatre.

Bahtchevanova, Mariana & van Gelderen, Elly. 2016. The interaction between the French subject and object cycles. In *Cyclical Change Continued* [Linguistik Aktuell/Linguistics Today 227], Elly van Gelderen (ed.), 113–136. Amsterdam: John Benjamins. https://doi.org/10.1075/la.227.05bah

Baker, Mark. 2008. *The Syntax of Agreement and Concord*. Cambridge: CUP. https://doi.org/10.1017/CBO9780511619830

Barbosa, Pilar. 1995. Null Subjects. PhD dissertation, MIT.

Bartra-Kaufmann, Anna. 2007. Determinerless noun phrases in Old Romance passives. In *Nominal Determination Typology. Context Constraints, and Historical Emergence* [Studies in Language Companion Series 89], Elisabeth Stark, Elisabeth Leiss & Werner Abraham (eds), 257–286. Amsterdam: John Benjamins. https://doi.org/10.1075/slcs.89.15bar

Bastardas i Parera, Joan. 2003. La concordança del participi dels temps compostos de verbs que governen un infinitiu. *Llengua & Literatura* 14: 97–140.

Bayer, Josef. 1984. COMP in Bavarian syntax. *The Linguistic Review* 3: 209–274. https://doi.org/10.1515/tlir.1984.3.3.209

Belletti, Adriana. 1988. The case of unaccusatives. *Linguistic Inquiry* 19: 1–34.

Belletti, Adriana. 2004. Aspects of the low IP area. In *The Cartography of Syntactic Structures* 2, Luigi Rizzi (ed.), 16–51. Oxford: OUP.

Belletti, Adriana. 2006. (Past) participle agreement. In *The Blackwell Companion to Syntax*, Martin Everaert & Henk van Riemsdijk (eds), 493–521. Oxford: Blackwell. https://doi.org/10.1002/9780470996591.ch48

Belletti, Adriana. 2008. *Structures and strategies*. London: Routledge.

Belletti, Adriana & Rizzi, Luigi. 1988. Psych-verbs and θ theory. *Natural Language and Linguistic Theory* 6: 291–352. https://doi.org/10.1007/BF00133902

Benveniste, Émile. 1971. *Problems in General Linguistics*. Coral Gables FL: University of Miami Press.

Berta, Tibor. 2015. On the lack of agreement of the participle of compound tenses in old non-literary Catalan texts. *Studia Romanica Posnaniensia* 42(5): 23–41.

Bessler, Paul. 1995. L'accord du participe passé dans les langues romanes: Une approche morphosyntaxique. *Canadian Journal of Linguistics* 40: 269–290. https://doi.org/10.1017/S000841310001598X

Biberauer, Theresa & Richards, Marc. 2006. True optionality: When the grammar doesn't mind. In *Minimalist Essays* [Linguistik Aktuell/Linguistics Today 91], Cedric Boeckx (ed.), 35–67. Amsterdam: John Benjamins. https://doi.org/10.1075/la.91.08bib

Biberauer, Theresa & Roberts, Ian. 2012. Towards a parameter hierarchy for auxiliaries: Diachronic considerations. *Cambridge Occasional Papers in Linguistics* 6(9): 267–294.

Biberauer, Theresa & Roberts, Ian. 2015. Rethinking formal hierarchies: A proposed unification. *Cambridge Occasional Papers in Linguistics* 7(1): 1–31.

Bjorkman, Bronwyn & Zeijlstra, Hedde. 2014. *Upward Agree is superior*. Ms. <http://ling.auf.net/lingbuzz/002350> (7 February 2018).

Bleam, Tonia. 1999. Leísta Spanish and the Syntax of Clitic Doubling. PhD dissertation, University of Delaware.

Bley-Vroman, Robert. 1990. The logical problem of foreign language learning. *Linguistic Analysis* 20: 3–49.

Bobaljik, Jonathan. 2008. Where's Phi? Agreement as a post-syntactic operation. In *Phi Theory: Phi-Features across Modules and Interfaces*, Daniel Harbour, David Adger & Susana Béjar (eds), 295–328. Oxford: OUP.

Boeckx, Cedric. 2011. Approaching parameters from below. In *The Biolinguistic Enterprise: New Perspectives on the Evolution and Nature of the Human Language Faculty*, Anna Maria Di Sciullo & Cedric Boeckx (eds), 205–221. Oxford: OUP.

Boeckx, Cedric. 2014a. What principles and parameters got wrong. In *Linguistic Variation in the Minimalist Framework*, M. Carme Picallo (ed.), 155–178. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780198702894.003.0008

Boeckx, Cedric. 2014b. *Elementary Syntactic Structures. Prospects of a Feature-Free Syntax*. Cambridge: CUP. https://doi.org/10.1017/CBO9781139524391

Bošković, Željko. 2009. More on the no-DP analysis of article-less languages. *Studia Linguistica* 63: 187–203. https://doi.org/10.1111/j.1467-9582.2009.01158.x

Bošković, Željko. 2011. On unvalued uninterpretable features. In *Proceedings of the North East Linguistic Society 39*, Susan Lima, Kevin Mullin & Brian Smith (eds), 109–120. Amherst MA: GLSA.

Bošković, Željko. 2016. What is sent to spell-out is phases, not phasal complements. *Linguistica* 56(1): 25–66. https://doi.org/10.4312/linguistica.56.1.25-66

Bouchard, Denis. 1987. A few remarks on past participle agreement. *Linguistics and Philosophy* 10: 449–474. https://doi.org/10.1007/BF00628066

Brandt, Patrick & Fuß, Eric. 2013. *Repairs. The Added Value of Being Wrong*. Berlin: Mouton de Gruyter. https://doi.org/10.1515/9781614510796

Brissaud, Catherine & Cogis, Danièle. 2008. L'accord du participe passé: Reconsidération d'un problème ancient à la lumière de données récentes sur l'acquisition. In *Congrès mondial de linguistique française, Paris 9–12 juillet 2008*, Jacques Durand, Benoît Habert & Bernard Laks (eds), 413–424. Paris: EDP Sciences. https://doi.org/10.1051/cmlf08105

Brody, Michael. 1995. *Lexico-Logical Form: A Radically Minimalist Theory*. Cambridge MA: The MIT Press.

Brody, Michael. 1997. Perfect chains. In *Elements of Grammar*, Liliane Haegeman (ed.), 139–167. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-011-5420-8_3

Bruno, James V. 2011. Absolute constructions: Telicity, abstract case, and micro-variation. In *Selected Proceedings of the 13th Hispanic Linguistics Symposium*, Luis A. Ortiz-López (ed.), 264–274. Somerville MA: Cascadilla Press.

Burzio, Luigi. 1981. Intransitive Verbs and Italian Auxiliaries. PhD dissertation, MIT.

Burzio, Luigi. 1986. *Italian Syntax: A Government-Binding Approach*. Dordrecht: Reidel. https://doi.org/10.1007/978-94-009-4522-7

Campbell, Lyle & Janda, Richard D. 2001. Introduction: Conceptions of grammaticalization and their problems. *Language Sciencies* 23(2–3): 93–112.

Cardinaletti, Anna & Starke, Michal. 1999. The typology of structural deficiency: A case study of the three grammatical classes of pronouns. In *Clitics in the Languages of Europe*, Henk van Riemsdijk (ed.), 145–233. Berlin: Mouton de Gruyter. https://doi.org/10.1515/9783110804010.145

Carmack, Stanford. 1996. Patterns of Object-Participle Agreement in Eastern Ibero-Romance. PhD dissertation, University of California.

Carstens, Vicki. 2016. Delayed valuation: A reanalysis of goal features, 'upwards' complementizer agreement, and the mechanics of case. *Syntax* 19(1): 1–42. https://doi.org/10.1111/synt.12116

de Cat, Cécile. 2005. French subject clitics are not agreement markers. *Lingua* 115(9): 1195–1219. https://doi.org/10.1016/j.lingua.2004.02.002

Chafe, Wallace L. 1976. Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In *Subject and Topic*, Charles N. Li (ed.), 25–55. New York NY: Academic Press.

Chomsky, Noam. 1981. *Lectures on Government and Binding: The Pisa Lectures*. Dordrecht: Foris.

Chomsky, Noam. 1986. *Barriers*. Cambridge MA: The MIT Press.

Chomsky, Noam. 1993. A minimalist program for linguistic theory. In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, Kenneth L. Hale & S. Jay Keyser (eds), 1–52. Cambridge MA: The MIT Press.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge: The MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries. In *Step by Step*, Roger Martin, David Michaels, Juan Uriagereka (eds), 89–155. Cambridge MA: The MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A Life in Language*, Michael Kenstowicz (ed.), 1–52. Cambridge MA: The MIT Press.

Chomsky, Noam. 2005. Three factors in language design. *Linguistic Inquiry* 36(1): 1–22. https://doi.org/10.1162/0024389052993655

Chomsky, Noam. 2007. Approaching UG from below. In *Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics*, Uli Sauerland & Hans-Martin Gärtner (eds), 1–29. Berlin: Mouton de Gruyter.

Chomsky, Noam. 2008. On phases. In *Foundational Issues in Linguistic Theory*, Robert Freidin, Carlos P. Otero & María-Luisa Zubizarreta (eds), 133–166. Cambridge MA: The MIT Press. https://doi.org/10.7551/mitpress/9780262062787.003.0007

Chomsky, Noam. 2013. Problems of projection. *Lingua* 130: 33–49. https://doi.org/10.1016/j.lingua.2012.12.003

Chomsky, Noam. 2015. Problems of projections: Extensions. In *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti* [Linguistik Aktuell/Linguistics Today 223], Elisa di Domenico, Cornelia Hamann & Simona Matteini (eds), 1–16. Amsterdam: John Benjamins. https://doi.org/10.1075/la.223.01cho

Cinque, Guglielmo. 1990. *Types of A'-Dependencies* [Linguistic Inquiry Monographs 17]. Cambridge MA: The MIT Press.

Cinque, Guglielmo. 1999. *Adverbs and Functional Heads. A Cross-Linguistic Perspective*. Oxford: OUP.

Citko, Barbara. 2014. *Phase Theory*. Cambridge: CUP. https://doi.org/10.1017/CBO9781139644037

Cole, Peter, Harbert, Wayne, Hermon Gabriella & Sridhar, Shikaripur N. 1980. The acquisition of subjecthood. *Language* 56(4): 719–743. https://doi.org/10.2307/413485

Company Company, Concepción. 2014. *Manual de gramática histórica*. México: Universidad Nacional Autónoma de México.

Corbett, Greville G. 2006. *Agreement*. Cambridge: CUP.

Cortés, Corinne. 1993. Catalan participle agreement. Auxiliary selection and the government transparency corollary. *Probus* 5: 193–240. https://doi.org/10.1515/prbs.1993.5.3.193

Cuervo, María Cristina. 2003. Structural asymmetries but same word order. The dative alternation in Spanish. In *Asymmetry in Grammar, Vol. 1: Syntax and Semantics* [Linguistik Aktuell/Linguistics Today 57], Anna Maria Di Sciullo (ed.), 117–144. Amsterdam: John Benjamins. https://doi.org/10.1075/la.57.07cue

D'Alessandro, Roberta. 2015. Null subject. In *Contemporary Linguistic Parameters*, Antonio Fábregas, Jaume Mateu & Michael Putnam (eds), 201–226. London: Bloomsbury.

D'Alessandro, Roberta. 2016. *When you have too many features: Auxiliaries, agreement and DOM in southern Italian varieties*. Ms. <https://ling.auf.net/lingbuzz/002908> (16 February 2018).

D'Alessandro, Roberta & Roberts, Ian. 2008. Movement and agreement in Italian past participles and defective phases. *Linguistic Inquiry* 39(3): 477–491. https://doi.org/10.1162/ling.2008.39.3.477

Danckaert, Lieven. 2017. The origins of the Romance analytic passive: Evidence from word order. In *Micro-change and Macro-change in Diachronic Syntax* [Oxford Studies in Diachronic & Historical Linguistics 23], Eric Mathieu & Robert Truswell (eds), 216–235. Oxford: OUP.

Daviau, Marie-Josée. 2013. Le participe passé employé avec l'auxiliaire *avoir* et précédé du pronom CD *en*: Accord ou non-accord? MA thesis, Université de Montréal.

Demonte, Violeta. 1995. Dative alternation in Spanish. *Probus* 7: 5–30. https://doi.org/10.1515/prbs.1995.7.1.5

Déprez, Viviane. 1998. Semantic effects of agreement: The case of French past participle agreement. *Probus* 10: 1–65. https://doi.org/10.1515/prbs.1998.10.1.1

Di Tullio, Ángela, Saab, Andrés & Zdrojewski, Pablo. 2019. Clitic doubling in a doubling world. The case of Argentinean Spanish reconsidered. In *The Syntactic Variation of Spanish Dialects*, Ángel Gallego (ed.), 215–244. Oxford: OUP. https://doi.org/10.1093/oso/9780190634797.003.0008

Diercks, Michael. 2012. Parameterizing case: Evidence from Bantu. *Syntax* 5(3): 253–286. https://doi.org/10.1111/j.1467-9612.2011.00165.x

Diesing, Molly. 1992. *Indefinites*. Cambridge MA: The MIT Press.

Dik, Simon C. 1985. Formal and semantic adjustment of derived constructions. In *Predicates and Terms in Functional Grammar*, A. Machtelt Bolkestein, Casper de Groot & J. Lachlan Mackenzie (eds), 1–28. Dordrecht: Foris. https://doi.org/10.1515/9783110250527-003

Doroga, Jason P. 2014. Late attestations of participle agreement in Spanish perfective constructions. In *Selected Proceedings of the 15th Hispanic Linguistics Symposium*, Chad Howe, Sarah E. Blackwell & Margaret Lubbers Quesada (eds), 17–28. Somerville MA: Cascadilla Press.

Dragomirescu, Adina. 2014. L'accord du participe passé en ancient roumain. *Linguistica Atlantica* 33(2): 38–51.

Drijkoningen, Frank. 1999. Past participle agreement in French. Object-agreement? Adjective agreement. In *Linguistics in the Netherlands*, Renée van Bezooijen & René Kager (eds), 41–52. Amsterdam: John Benjamins.

Eckardt, Regine. 2009. APO: Avoid pragmatic overload. In *Current Trends in Diachronic Semantics and Pragmatics*, Maj-Britt Mosegaard Hansen & Jacqueline Visconti (eds), 21–41. Bingley: Emerald. https://doi.org/10.1163/9789004253216_003

Eckardt, Regine. 2012. Grammaticalization and semantic reanalysis. In *Semantics: An International Handbook of Natural Language Meaning*, Vol. 3, Claudia Maienborn, Klaus von Heusinger & Paul Portner (eds), 2675–2702. Berlin: Mouton de Gruyter.

Enç, Mürvet. 1991. The semantics of specificity. *Linguistic Inquiry* 22: 1–25.

Epstein, Samuel & Seely, Daniel. 2006. *Derivations in Minimalism*. Cambridge: CUP. https://doi.org/10.1017/CBO9780511550607

Escandell Vidal, Victoria. 2009. Differential object marking and topicality. *Studies in Language* 33(4): 832–884. https://doi.org/10.1075/sl.33.4.02esc

Fabra, Pompeu. 1919. *Gramàtica catalana*. Barcelona: Institut d'Estudis Catalans.

Farreny Sistac, M. Dolors. 2004. *La llengua dels processos de crims a la Lleida del segle XVI*. Barcelona: Institut d'Estudis Catalans.

Fischer, Susann. 2002. *The Catalan Clitic System: A Diachronic Perspective on its Syntax and Phonology*. Berlin: Mouton de Gruyter.

Fischer, Susann. 2005. The interplay between aspect and reference. In *Proceedings of the Workshop 'Specificity and the Evolution/Emergence of Nominal Determination Systems in Romance'* [Arbeitspapier 119], Klaus von Heusinger, Georg Kaiser & Elisabeth Stark (eds), 1–18. Konstanz: Fachbereich Sprachwissenschaft, Universität Konstanz.

Fischer, Susann. 2007. Grammaticalisation within the IP-domain. In *The Paradox of Grammatical Change: Perspectives from Romance* [Current Issues in Linguistic Theory 293], Ulrich Detges & Richard Waltereit, 107–126. Amsterdam: John Benjamins.

Fischer, Susann. 2010. *Word Order Change as a Source of Grammaticalization* [Linguistik Aktuell/Linguistics Today 157]. Amsterdam: John Benjamins. https://doi.org/10.1075/la.157

Fischer, Susann & Gabriel, Christoph (eds). 2016. *Manual of Grammatical Interfaces in Romance*. Berlin: Mouton de Gruyter. https://doi.org/10.1515/9783110311860

Fischer, Susann, Gabriel, Christoph & Kireva, Elena. 2014. Towards a typological classification of Judeo-Spanish. In *Stability and Divergence in Language Contact. Factors and Mechanisms* [Studies in Language Variation 16], Kurt Braunmüller, Steffen Höder & Karoline Kühl (eds), 78–108. Amsterdam: John Benjamins.

Fischer, Susann, Kupisch, Tanja & Rinke, Esther (eds). 2016. *Definiteness Effects. Bilingual, Typological and Diachronic Variation*. Newcastle upon Tyne: Cambridge Scholars.

Fischer, Susann, Navarro, Mario & Vega Vilanova, Jorge. 2019. The clitic doubling parameter: Development and distribution of a cyclic change. In *Cycles in Language Change*, Anne Breitbarth, Miriam Bouzouita, Lieven Danckaert & Elisabeth Witzenhausen (eds), 52–70. Oxford: OUP. https://doi.org/10.1093/oso/9780198824961.003.0004

Fischer, Susann & Rinke, Esther. 2013. Explaining the variability in clitic doubling across Romance: A diachronic account. *Linguistische Berichte* 236: 455–472.

Fischer, Susann & Vega Vilanova, Jorge. 2018. Contact-induced change in Judeo-Spanish. In *Caminos de Leche y Miel: Jubilee Volume in Honor of Michael Studemund-Halévy*, Harm den Boer, Anna Lena Menny, Carsten Wilke, David M. Bunis, Ivana Vučina Simović, Corinna Deppner (eds), 135–153. Barcelona: Tirocinio.

Fischer, Susann, Vega Vilanova, Jorge & Navarro, Mario. forthcoming. Testing an optional phenomenon: The limitations of GJTs. In *Proceedings of the AICED 21*, Mihaela Tănase-Dogaru et al. (eds). Newcastle upon Tyne: Cambridge Scholars.

Fodor, Janet Dean & Sag, Ivan A. 1982. Referential and quantificational indefinites. *Linguistics and Philosophy* 5: 355–398. https://doi.org/10.1007/BF00351459

Fodor, Janet & Sakas, William. 2016. Learnability. In *The Oxford Handbook of Universal Grammar*, Ian Roberts (ed.), 249–269. Oxford: OUP.

Fontana, Josep M. 1993. Phrase Structure and the Syntax of Clitics in the History of Spanish. PhD dissertation, University of Pennsylvania.

Franco, Jon. 1994. On the absence of Spanish past participial object clitic agreement: The AGRo parameter in Romance. *Anuario del Seminario de Filología Vasca "Julio de Urquijo"* XXVIII-1: 247–262.

Friedemann, Marc-Ariel & Siloni, Tal. 1997. Agr_{object} is not $Agr_{participle}$. *The Linguistic Review* 14: 69–96. https://doi.org/10.1515/tlir.1997.14.1.69

Fukui, Naoki. 1993. Parameters and optionality. *Linguistic Inquiry* 24: 399–420.

Fuß, Eric. 2005. *The Rise of Agreement. A Formal Approach to the Syntax and Grammaticalization of Verbal Inflection* [Linguistik Aktuell/Linguistics Today 81]. Amsterdam: John Benjamins. https://doi.org/10.1075/la.81

Fuß, Eric. 2008. Word Order and Language Change. On the Interface between Syntax and Morphology. Habilitation dissertation, Goethe-Universität Frankfurt.

Fuß, Eric. 2012. Syntactic change and information structure. Paper presented at the University of Cambridge.

Fuß, Eric. 2017. Language change. In *The Oxford Handbook of Universal Grammar*, Ian Roberts (ed.), 459–485. Oxford: OUP.

von der Gabelentz, Georg. [1891] 1972. *Die Sprachwissenschaft. Ihre Aufgabe, Methoden und bisherigen Ergebnisse*. Tübingen: TBL.

Gabriel, Christoph. 2010. On focus, prosody, and word order in Argentinean Spanish. A minimalist OT account. *Revista Virtual de Estudos da Linguagem* 4: 183–222. Special issue on "Optimality-theoretic Syntax".

Gabriel, Christoph & Rinke, Esther. 2010. Information packaging and the rise of clitic-doubling in the history of Spanish. In *Diachronic Studies on Information Structure: Language Acquisition and Change*, Gisella Ferraresi & Rosemarie Luhr (eds), 63–86. Berlin: Mouton de Gruyter.

Gallego, Ángel. 2011. Parameters. In *Handbook of Linguistic Minimalism*, Cedric Boeckx (ed.), 523–550. Oxford: OUP.

García García, Marco. 2014. *Differentielle Objektmarkierung bei unbelebten Objekten im Spanischen*. Berlin: De Gruyter. https://doi.org/10.1515/9783110290974

Gaucher, Damien. 2013. L'accord du participe passé à l'oral comme variable sociolinguistique. In *Le Participe Passé, entre accords et désaccords*, Fabrice Marsac & Jean-Christophe Pellat (eds), 115–130. Strasbourg: Presses Universitaires de Strasbourg.

Gavarró, Anna & Massanell, Mar. 2013. An outline of past participle agreement in Catalan. Paper presented at the International Workshop 'The syntactic variation of Catalan and Spanish dialects', Universitat Autònoma de Barcelona, Bellaterra.

van Gelderen, Elly. 2004. *Grammaticalization as Economy* [Linguistik Aktuell/Linguistics Today 71]. Amsterdam: John Benjamins. https://doi.org/10.1075/la.71

van Gelderen, Elly. 2011. *The Linguistic Cycle*. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780199756056.001.0001

van Gelderen, Elly. 2015. Problems of projection: The role of language change in labeling paradoxes. *Studia Linguistica*. <doi: https://doi.org/10.1111/stul.12041> (28 May 2020).

Givón, Talmy. 1971. Historical syntax and synchronic morphology: An archaeologist's field trip. *Papers from the Seventh Regional Meeting of the Chicago Linguistic Society*, 394–415. Chicago IL: Chicago Linguistic Society.

Givón, Talmy. 1975. Serial verbs and syntactic change: Niger-Congo. In *Word Order and Word Order Change*, Charles Li (ed.), 47–112. Austin TX: University of Texas Press.

Givón, Talmy. 1976. Topic, pronoun, and grammatical agreement. In *Subject and Topic*, Charles Li (ed.), 151–188. New York NY: Academic Press.

Gonçalves, Rita, Duarte, Inês & Hagemeijer, Tjerk. 2016. Revisiting dative constructions – A VP-shell based approach. Paper presented at the 26th Colloquium on Generative Grammar, Cáceres.

Grevisse, Maurice. 1993. *Le bon usage. Grammaire française. Treizième édition revue*. Paris: Duculot.

Grohmann, Kleanthes K., Drury, John & Castillo, Juan Carlos. 2000. No more EPP. In *WCCFL 19: Proceedings of the 19th West Coast Conference on Formal Linguistics*, Roger Billerey & Brook Danielle Lillehaugen (eds), 153–166. Somerville MA: Cascadilla Press.

Guasti, Maria Teresa & Rizzi, Luigi. 2002. Agreement and tense as distinct syntactic positions: Evidence from acquisition. In *The Structure of DP and IP: The Cartography of Syntactic Structures*, Vol. 1, Guglielmo Cinque (ed.), 167–194. Oxford: OUP.

Harbert, Wayne & Bahloul, Maher. 2002. Postverbal subjects in Arabic and the theory of agreement. In *Themes in Arabic and Hebrew Syntax*, Jamal Ouhalla & Ur Schlonsky (eds), 45–70. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-010-0351-3_2

Harbour, Daniel. 2003. The Kiowa case for feature insertion. *Natural Language and Linguistic Theory* 21(3): 543–578. https://doi.org/10.1023/A:1024196621352

Hawkins, John A. 1982. Cross-category harmony, X-bar and the predictions of markedness. *Journal of Linguistics* 18: 1–35. https://doi.org/10.1017/S0022226700007210

Heim, Irene. 1982. The Semantics of Definite and Indefinite Noun Phrases. PhD dissertation, University of Massachussets.

Heine, Bernd & Kuteva, Tania. 2003. On contact-induced grammaticalization. *Studies in Language* 27(3): 529–572. https://doi.org/10.1075/sl.27.3.04hei

Heine, Bernd & Kuteva, Tania. 2005. *Language Contact and Grammatical Change*. Cambridge: CUP. https://doi.org/10.1017/CBO9780511614132

von Heusinger, Klaus. 2011. Specificity. In *Semantics: An International Handbook of Natural Language Meaning*, Vol. 2, Claudia Maienborn, Klaus von Heusinger & Paul Portner (eds), 1024–57. Berlin: Mouton de Gruyter.

von Heusinger, Klaus & Kaiser, Georg A. 2005. The evolution of differential object marking in Spanish. In *Proceedings of the Workshop "Specificity and the Evolution/Emergence of Nominal Determination Systems in Romance"* [Arbeitspapier 119], Klaus von Heusinger, Georg A. Kaiser & Elisabeth Stark (eds), 33–70. Konstanz: Fachbereich Sprachwissenschaft, Universität Konstanz.

Himmelreich, Anke. 2017. Case Matching Effects in Free Relatives and Parasitic Gaps – A Study on the Properties of Agree. PhD dissertation, Universität Leipzig.

Holmberg, Anders. 2005. Is there a little pro? Evidence from Finnish. *Linguistic Inquiry* 36(4): 533–564. https://doi.org/10.1162/002438905774464322

Holmberg, Anders & Roberts, Ian. 2014. Parameters and the three factors of language design. In *Linguistic Variation in the Minimalist Framework*, M. Carme Picallo (ed.), 61–81. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780198702894.003.0004

Hopper, Mike & Traugott, Elizabeth. 2003. *Grammaticalization*. Cambridge: CUP. https://doi.org/10.1017/CBO9781139165525

Hornstein, Norbert. 2009. *A Theory of Syntax: Basic Operations and the Minimalist Program*. Cambridge: CUP.

Hornstein, Norbert & Nunes, Jairo. 2008. Adjunction, labeling, and bare phrase structure. *Biolinguistics* 2(1): 57–86.

Hualde, José Ignacio. 1992. *Catalan*. New York NY: Routledge.

Huang, C.-T. James. 1994. More on Chinese word order and parametric theory. In *Syntactic Theory and First Language Acquisition: Cross-linguistic Perspectives*, Barbara Lust & Margarita Suñer (eds), 15–35. Hilldale NJ: Lawrence Erlbaum Associates.

von Humboldt, Wilhelm. [1822] 1972. *Über das Entstehen der grammatischen Formen und ihren Einfluß auf die Ideenentwicklung*. Berlin: Abhandlungen der Akademie der Wissenschaften zu Berlin.

Ihsane, Tabea & Puskás, Genoveva. 2001. Specific is not definite. *Generative Grammar in Geneva* 2: 39–54.

Jaeggli, Osvaldo. 1982. *Topics in Romance Syntax*. Dordrecht: Foris.

Jaeggli, Osvaldo. 1986. Three issues in the theory of clitics: Case, doubled NPs, and extraction. In *The Syntax of Pronominal Clitics*, Hagit Borer (ed.), 15–42. New York NY: Academic Press. https://doi.org/10.1163/9789004373150_003

Janda, Richard D. & Joseph, Brian D. 2003. On language, change, and language change – Or, of history, linguistics, and historical linguistics. In *The Handbook of Historical Linguistics*, Joseph, Brian D. & Richard D. Janda (eds), 1–180. Oxford: Blackwell. https://doi.org/10.1002/9780470756393.ch

Jespersen, Otto. [1917] 1966. *Negation in English and Other Languages*. Copenhagen: Munksgaard.

Karimi, Simin. 1990. Obliqueness, specificity, and discourse functions: *râ* in Persian. *Linguistic Analysis* 20(3–4): 139–191.

Kayne, Richard. 1985. L'accord du participe passé en français et en italien. *Modèles linguistiques* 7: 73–89.

Kayne, Richard. 1989a. Facets of Romance past participle agreement. In *Dialect Variation and the Theory of Grammar*, Paola Benincà (ed.), 85–104. Dordrecht: Foris. https://doi.org/10.1515/9783110869255-005

Kayne, Richard. 1989b. Null subjects and clitic climbing. In *The Null Subject Parameter*, Osvaldo Jaeggli & Kenneth Safir (eds), 239–261. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-009-2540-3_8

Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge MA: The MIT Press.

Keenan, Edward L. 1976. Towards a universal definition of subject. In *Subject and Topic*, Charles N. Li (ed.), 303–333. New York NY: Academic Press.

Keine, Stefan. 2017. Agreement and *v*P phases. In *A Schrift to Fest Kyle Johnson*, Nicholas LaCara, Keir Moulton & Anne-Michelle Tessier (eds), 177–185. Amherst MA: Linguistics Open Access Publications.

Kempchinsky, Paula. 2000. Aspect projections and predicate type. In *Hispanic Linguistics at the Turn of the Millennium*, Héctor Campos, Elena Herburger, Alfonso Morales-Front & Thomas J. Walsh (eds), 171–187. Somerville MA: Cascadilla Press.

Kiparsky, Paul. 1998. Partitive case and aspect. In *The Projection of Arguments: Lexical and Compositional Factors*, Miriam Butt & Wilhelm Geuder (eds), 265–307. Stanford CA: CSLI.

Klein, Wolf Peter. 2003. Sprachliche Zweifelsfälle als linguistischer Gegenstand. Zur Einführung in ein vergessenes Thema der Sprachwissenschaft. *Linguistik Online* 16(4): 5–33.

Koch, Harold. 1995. The creation of morphological zeroes. In *Yearbook of Morphology*, Geert Booij & Jaap van Marle (eds), 31–71. Dordrecht: Kluwer.

Koeneman, Olaf & Zeijlstra, Hedde. 2014. The rich agreement hypothesis rehabilited. *Linguistic Inquiry* 45: 571–615. https://doi.org/10.1162/LING_a_00167

Koopman, Hilda. 2006. Agreement configurations. In *Agreement Systems* [Linguistik Aktuell/Linguistics Today 92], Cedric Boeckx (ed.), 159–199. Amsterdam: John Benjamins. https://doi.org/10.1075/la.92.09koo

Koopman, Hilda & Sportiche, Dominique. 1991. The position of subjects. *Lingua* 85(2–3): 211–258. https://doi.org/10.1016/0024-3841(91)90022-W

Kratzer, Angelika. 1995. Stage-level and individual-level predicates. In *The Generic Book*, Gregory N. Carlson & Francis J. Pelletier (eds), 125–175. Chicago IL: Chicago University Press.

Krifka, Manfred. 1989. Nominal reference, temporal constitution and quantification in event semantics. In *Semantics and Contextual Expressions*, Renate Bartsch, Johan van Benthem & Peter van Emde Boas (eds), 75–115. Dordrecht: Foris. https://doi.org/10.1515/9783110877335-005

Kroch, Anthony. 2000. Syntactic change. In *Handbook of Contemporary Syntactic Theory*, Mark Baltin & Chris Collins (eds), 699–729. Oxford: Blackwell.

Kupisch, Tanja & Müller, Natascha. 2009. Relating Italian articles and clitic object pronouns in bilingual children acquiring German and Italian. In *Functional Categories in Learner Language*, Christine von Dimroth & Peter Jordens (eds), 307–342. Berlin: De Gruyter. https://doi.org/10.1515/9783110216172.307

Kupisch, Tanja & Rothman, Jason. 2016. Interfaces in the acquisition of syntax. In *Manual of Grammatical Interfaces in Romance*, Susann Fischer & Christoph Gabriel (eds), 551–586. Berlin: Mouton de Gruyter. https://doi.org/10.1515/9783110311860-021

Kuryłowicz, Jerzy. 1965. The evolution of grammatical categories. *Diogenes* 51: 55–71. https://doi.org/10.1177/039219216501305105

Langacker, Ronald. 1977. Syntactic reanalysis. In *Mechanisms of Syntactic Change*, Charles Li (ed.), 57–193. Austin TX: University of Texas Press.

Larson, Richard. 1988. On the double object construction. *Linguistic Inquiry* 19: 335–392.

Lasnik, Howard. 1999. On feature strength: Three minimalist approaches to overt movement. *Linguistic Inquiry* 30: 197–217. https://doi.org/10.1162/002438999554039

Lazard, Gilbert. 1994. *L'actance*. Paris: Presses Universitaires de France.

Le Bellec, Christel. 2009. L'accord du participe passé dans les langues romanes: Entre pragmatique et syntaxe. *Revue Romane* 44(1): 1–24. https://doi.org/10.1075/rro.44.1.01bel

Lefebvre, Claire. 1988. Past participle agreement in French: Agreement = case. In *Advances in Romance Linguistics*, David Birdsong & Jean-Pierre Montreuil (eds), 233–253. Dordrecht: Foris.

Lehmann, Christian. 1995. *Thoughts on Grammaticalization*. Munich: Lincom.

Leiss, Elisabeth. 2000. *Artikel und Aspekt. Die grammatischen Muster von Definitheit*. Berlin: De Gruyter. https://doi.org/10.1515/9783110825961

Leonetti, Manuel. 2004. Specificity and differential object marking in Spanish. *Catalan Journal of Linguistics* 3: 75–114. https://doi.org/10.5565/rev/catjl.106

Leonetti, Manuel. 2007. Clitics do not encode specificity. In *Proceedings of the Workshop "Definiteness, Specificity and Animacy in Ibero-Romance Languages* [Arbeitspapier 122], Georg A. Kaiser & Manuel Leonetti (eds), 111–139. Konstanz: Fachbereich Sprachwissenschaft, Universität Konstanz.

Levin, Beth & Rappaport-Hovav, Malka. 1995. *Unaccusativity: At the Syntax-Lexical Semantics Interface* [Linguistic Inquiry Monograph 26]. Cambridge MA: The MIT Press.

Li, Charles N. & Thompson, Sandra A. 1976. Subject and topic: A new typology of language. In *Subject and Topic*, Charles N. Li (ed.), 459–89. New York NY: Academic Press.

Lightfoot, David. 1979. *Principles of Diachronic Syntax*. Cambridge: CUP.

Lightfoot, David (ed.). 2002. *Syntactic Effects of Morphological Change*. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780199250691.001.0001

Lois, Ximena. 1990. Auxiliary selection and past participle agreement in Romance. *Probus* 2(2): 233–255. https://doi.org/10.1515/prbs.1990.2.2.233

López, Luis. 1994. The internal structure of absolute small clauses. *Catalan Working Papers in Linguistics* 4(1): 45–92.

López, Luis. 2012. *Indefinite Objects: Scrambling, Choice Functions, and Differential Marking*. Cambridge MA: The MIT Press. https://doi.org/10.7551/mitpress/9165.001.0001

Loporcaro, Michele. 2010. The logic of Romance past participle agreement. In *Syntactic Variation. The Dialects of Italy*, Roberta D'Alessandro, Adam Ledgeway & Ian Roberts (eds), 225–243. Cambridge: CUP.

Lyons, Christopher. 1999. *Definiteness*. Cambridge: CUP. https://doi.org/10.1017/CBO9780511605789

MacDonald, Jonathan E. 2008. *The Syntactic Nature of Inner Aspect. A Minimalist Perspective* [Linguistik Aktuell/Linguistics Today 133]. Amsterdam: John Benjamins. https://doi.org/10.1075/la.133

MacKenzie, Ian. 2013. Participle-object agreement in French and the theory of grammatical viruses. *Journal of Romance Studies* 13(1): 19–33. https://doi.org/10.3828/jrs.13.1.19

Macpherson, Ian. 1967. Past participle agreement in Old Spanish: Transitive verbs. *Bulletin of Hispanic Studies* 44(4): 241–254. https://doi.org/10.1080/14753826720000344241

Maddox, Matthew Leroy. 2019. Cycles of Agreement: Romance Clitics in Diachrony. PhD dissertation, University of Illinois.

Manzini, Rita & Savoia, Leonardo. 2005. *I dialetti italiani e romanci: Morfosintassi generativa*. Alexandria: Edizioni dell'Orso.

Marchis, Mihaela & Alexiadou, Artemis. 2013. The syntax of clitics revisited: Two types of clitics. *Lingua* 127: 1–13. https://doi.org/10.1016/j.lingua.2013.01.002

Martins, Ana M. 1994. Cliticos na História do Português. PhD dissertation, Universidade de Lisboa.

Marvà, Jeroni. 1968. *Curs Superior de Gramàtica Catalana*. Barcelona: Barcino.

Massanell, Mar & Mateu, Jaume. 2006. Sintaxi i semàntica en la selecció dels auxiliars de perfet *ésser* i *haver*. Paper presented at the IV Simposi Vers una sintaxi històrica del català: Metodologia i objectius, La Nucia.

McGinnis, Martha. 2008. Applicatives. *Language and Linguistics Compass* 2(6): 1225–1245. https://doi.org/10.1111/j.1749-818X.2008.00078.x

McGregor, William B. 2017. Grammaticalization of ergative case marking. In *The Oxford Handbook of Ergativity*, Jessica Coon, Diane Massam & Lisa Travis (eds), 447–464. Oxford: OUP.

Meillet, Antoine. [1912] 1965. L'évolution des formes grammaticales. In *Linguistique historique et linguistique générale*, Antoine Meillet (ed.), 130–148. Paris: Champion.

Meisel, Jürgen M. 2007. Mehrsprachigkeit in der frühen Kindheit. Zur Rolle des Alters bei Erwerbsbeginn. In *Mehrsprachigkeit bei Kindern und Erwachsenen. Erwerb, Formen, Förderung*, Tanja Anstatt (ed.), 93–113. Tübingen: Attempto.

Melis, Chantal & Flores, Marcela. 2009. On the interplay between forces of erosion and forces of repair in language change. A case study. *Folia Linguistica Historica* 43 (Issue Historica Vol. 30): 271–310. https://doi.org/10.1515/FLIH.2009.004

Merchant, Jason. 2001. *The Syntax of Silence: Sluicing, Islands and the Theory of Ellipsis*. Oxford: OUP.

Miyagawa, Shigeru. 2011. Optionality. In *The Oxford Handbook of Linguistic Minimalism*, Cedric Boeckx (ed.), 354–376. Oxford: OUP.

Moll, Francesc de Borja. 1952. *Gramàtica històrica catalana*. Madrid: Gredos.

Müller, Gereon. 2017. Structure removal: An argument for feature-driven Merge. *Glossa: A Journal of General Linguistics* 2(1), 28. https://doi.org/10.5334/gjgl.193

Müller, Natascha. 1999. Past Participle Agreement in Romance. Habilitation dissertation, Universität Hamburg.

Muxí, Isabel. 1996. Object participle agreement with direct object clitics in Catalan. *Catalan Working Papers in Linguistics* 5(1): 127–145.

Navarro, Mario, Fischer, Susann & Vega Vilanova, Jorge. 2017. Reconstruyendo un ciclo: Doblado de clíticos y gramaticalización en las lenguas romances. In *Investigaciones actuales en Lingüística, Vol. III: Sintaxis*, Silvia Gumiel-Molina, Manuel Leonetti & Isabel Pérez-Jiménez (eds), 111–126. Alcalá de Henares: Servicio de Publicaciones Universidad de Alcalá.

Nevins, Andrew. 2005. Derivations without the activity condition. *MIT Working Papers in Linguistics* 49: 283–306.

Newmeyer, Frederick. 2004. Against a parametric setting approach to language typology. *Linguistic Variation Yearbook*: 181–232. https://doi.org/10.1075/livy.4.06new

Nishida, Chiyo. 2012. A corpus study of Mexican Spanish three-participant constructions with and without clitic doubling. *Linguistic Discovery* 10(3): 208–240. https://doi.org/10.1349/PS1.1537-0852.A.422

Norde, Muriel. 2009. *Degrammaticalization*. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780199207923.001.0001

Obenauer, Hans-Georg. 1992. L'interprétation des structures *wh* et l'accord du participe passé. In *Structure de la phrase et théorie du liage*, Hans-Georg Obenauer & Anne Zribi-Hertz (eds), 169–193. Paris: Presses Universitaires de Vincennes.

Paoli, Sandra. 2006. On the relation of [gender] agreement. Evidence from Friulian. In *Studies on Agreement* [Linguistik Aktuell/Linguistics Today 86], João Costa & Maria Cristina Figueiredo Silva (eds), 223–242. Amsterdam: John Benjamins. https://doi.org/10.1075/la.86.11pao

Par, Anfós. 1928. *Curial e Güelfa: Notes lingüístiques y d'estil*. Barcelona: Biblioteca Balmes.

Parodi, Claudia. 1995. Participle agreement and object shift in Old Spanish: A minimalist theory approach. In *Evolution and Revolution in Linguistic Theory*, Héctor Campos & Paula Kempchinsky (eds), 276–301. Washington DC: Georgetown University Press.

Pérez Saldanya, Manuel. 1998. *Del llatí al català. Morfosintaxi verbal històrica*. València: Universitat de València.

Perlmutter, David. 1978. Impersonal passives and the unaccusative hypothesis. *Proceedings of the Annual Meeting of the Berkeley Linguistics Society* 38: 157–190. https://doi.org/10.3765/bls.v4io.2198

Pesetky, David & Torrego, Ester. 2004. Tense, case and the nature of syntactic categories. In *The Syntax of Time*, Jaqueline Guéron & Jaqueline Lecarme (eds), 495–538. Cambridge MA: The MIT Press.

Pesetsky, David & Torrego, Ester. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and Clausal Architecture: Syntactic Derivation and Interpretation*, Simin Karimi, Vida Samiian & Wendy K. Wilkins (eds), 262–294. Amsterdam: John Benjamins. https://doi.org/10.1075/la.101.14pes

Pineda, Anna. 2016. *Les fronteres de la (in)transitivitat. Estudi dels aplicatius en llengües romàniques i basc*. Barcelona: Institut d'Estudis Món Juïc.

Platzack, Christer. 2001. The vulnerable C-domain. *Brain and Language* 77(3): 364–377. https://doi.org/10.1006/brln.2000.2408

Poletto, Cecilia. 2014. *Word Order in Old Italian*. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780199660247.001.0001

Pollock, Jean-Yves. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20(3): 365–424.

Preminger, Omer. 2013. That's not how you agree: A reply to Zeijlstra. *The Linguistic Review* 30: 491–500. https://doi.org/10.1515/tlr-2013-0015

Preminger, Omer & Polinsky, Maria. 2015. *Agreement and semantic concord: A spurious unification*. Ms, University of Maryland and Harvard University. <http://ling.auf.net/lingbuzz/002363> (21 February 2018).

Primer Congrés Internacional de la Llengua Catalana. 1908. Barcelona: Estampa d'En Joaquim Horta.

Pylkkänen, Liina. 2002. Introducing Arguments. PhD dissertation, MIT.

Rebotier, Aude. 2014. French participle agreement with *avoir*: Current trends as an indication of grammaticalization. In *The Evolution of Verbal Systems*, Jacques Bres & Emmanuelle Labeau (eds), 115–144. Bern: Peter Lang.

Ritter, Elizabeth & Rosen, Sara Thomas. 2001. The interpretive value of object splits. *Language Sciencies* 23: 425–451. https://doi.org/10.1016/S0388-0001(00)00032-2

Rivas, Alberto Mario. 1977. A Theory of Clitics. PhD dissertation, MIT.

Rizzi, Luigi. 1982. *Issues in Italian Syntax*. Dordrecht: Foris. https://doi.org/10.1515/9783110883718

Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of Grammar: A Handbook of Generative Syntax*, Liliane Haegeman (ed.), 281–337. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-011-5420-8_7

Roberge, Yves. 1990. *The Syntactic Recoverability of Null Arguments*. Montréal: McGill-Queen's University Press.

Roberts, Ian. 1993. *Verbs and Diachronic Syntax: A Comparative History of English and French*. Dordrecht: Kluwer.

Roberts, Ian. 1997. Directionality and word order change in the history of English. In *Parameters of Morphosyntactic Change*, Ans van Kemenade & Nigel Vincent (eds), 397–426. Cambridge: CUP.

Roberts, Ian. 2007. *Diachronic Syntax*. Oxford: OUP.

Roberts, Ian. 2010. A deletion analysis of null subjects. In *Parametric Variation: Null Subjects in Minimalist Theory*, Theresa Biberauer, Anders Holmberg, Ian Roberts & Michelle Sheehan (eds), 58–87. Cambridge: CUP.

Roberts, Ian. 2012. Macroparameters and minimalism. A program of comparative research. In *Parameter Theory and Linguistic Change*, Charlotte Galves, Sonia Cyrino, Ruth Lopes, Filomena Sandalo & Juanito Avelar (eds), 320–35. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780199659203.003.0017

Roberts, Ian & Roussou, Anna. 2003. *Syntax Change. A Minimalist Approach to Grammaticalization*. Cambridge: CUP. https://doi.org/10.1017/CBO9780511486326

Rocquet, Amélie. 2010. Past participle agreement in French: A matter of phases and case-accessibility. In *Movement in Minimalism: Proceedings of the 12th Seoul International Conference in Generative Grammar*, Duk-Ho An & Soo-Yeon Kim (eds), 405–426. Seoul: Hankuk.

Rocquet, Amélie. 2013. Splitting Objects: A Nanosyntactic Account of Direct Object Marking. PhD dissertation, Ghent University.

Rosselló, Joana. 2002. El SV, I: El verb i els arguments verbals. In *Gramàtica del català contemporani*, Joan Solà, Maria-Rosa Lloret, Joan Mascaró & Manuel Pérez Saldanya (eds), 1853–1949. Barcelona: Empúries.

Rothman, Jason & Slabakova, Roumyana. 2011. The mind-context divide: On acquisition at the linguistic interfaces. *Lingua* 121(4): 568–576. https://doi.org/10.1016/j.lingua.2011.01.003

Russell-Gebett, Paul. 1965. *Mediaeval Catalan Linguistic Texts*. Oxford: Dolphin Book.

Salvà i Puig, Sebastià. 2017. Past participle agreement in Majorcan Catalan: The relevance of inner aspect. *Borealis* 6(1): 53–75. https://doi.org/10.7557/1.6.1.4101

Salvesen, Christine Meklenborg & Bech, Kristin. 2014. Postverbal subjects in Old English and Old French. *Oslo Studies in Language* 6: 201–228.

Sánchez, Liliana. 2010. La aparente opcionalidad del doblado de clíticos en el español limeño. *Cuadernos de la ALFAL* 1: 94–105.

Sánchez, Liliana & Zdrojewski, Pablo. 2013. Restricciones semánticas y pragmáticas al doblado de clíticos en el español actual. *Lingüística* 29(2): 271–320.

Sapir, Edward. [1921] 1970. *Language: An Introduction to the Study of Speech*. London: Hart-Davis.

Schütze, Carson. 2016. AGREE and Spec-Head: Each inadequate, both necessary? Ms., University of California, Los Angeles. <http://ling.auf.net/lingbuzz/003111> (21 February 2018).

Schwartz, Bonnie D. & Sprouse, Rex A. 1996. L2 cognitive states and the full transfer/full access model. *Second Language Research* 12: 40–72. https://doi.org/10.1177/026765839601200103

Schwenter, Scott A. 2014. Two kinds of differential object marking in Portuguese and Spanish. In *Portuguese-Spanish Interfaces: Diachrony, Synchrony, and Contact*, Patrícia Amaral & Ana Maria Carvalho (eds), 237–260. Amsterdam: John Benjamins.

Sheehan, Michelle. 2006. The EPP and Null Subjects in Romance. PhD dissertation, Newcastle University.

Sheehan, Michelle & van der Wal, Jenneke. 2016. Do we need abstract Case? In *Proceedings of the 33rd West Coast Conference on Formal Linguistics*, Kyeong-min Kim, Pocholo Umbal, Trevor Block, Queenie Chan, Tanie Cheng, Kelli Finney, Mara Katz, Sophie Nickel-Thompson & Lisa Shorten (eds), 351–360. Somerville MA: Cascadilla Press.

Smith, John Charles. 1995. Agreement between past participle and direct object in Catalan: The hypothesis of Castilian influence revisited. In *Linguistic Change under Contact Conditions*, Jacek Fisiak (ed.), 271–289. Berlin: Mouton de Gruyter. https://doi.org/10.1515/9783110885170.271

Smith, John Charles. 1996. Surfonctionnalité et hyperanalyse: L'accord du participe passé dans les langues romanes à la lumière de deux théories récentes. *Faits de Langue* 8: 113–120. https://doi.org/10.3406/flang.1996.1117

Sobin, Nicholas. 1997. Agreement, default rules, and grammatical viruses. *Linguistic Inquiry* 28: 318–43.

Solà, Joan. 1973. *Estudis de sintaxi catalana*, Vol. 2. Barcelona: Edicions 62.

Solà, Joan. 1987. *Qüestions controvertides de sintaxi catalana*. Barcelona: Edicions 62.

Solà, Joan, Lloret, Maria-Rosa, Mascaró, Joan & Pérez Saldanya, Manuel (eds). 2002. *Gramàtica del català contemporani*. Barcelona: Empúries.

Sorace, Antonella. 2000. Gradients in auxiliary selection with intransitive verbs. *Language* 76: 859–890. https://doi.org/10.2307/417202

Sorace, Antonella. 2006. Gradedness and optionality in mature and developing grammars. In *Gradience in Grammar*, Gisbert Fanselow, Caroline Féry, Matthias Schlesewsky & Ralf Vogel (eds), 106–123. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780199274796.003.0006

Sorrenti, Elisa. 2015. Opacity and the Definiteness Effect: A Contrastive Analysis in Language With and Without Articles. PhD dissertation, Hamburg University.

Sportiche, Dominique. 1990. *Movement, agreement, and case*. Ms, University of California, Los Angeles. <http://ling.auf.net/lingbuzz/000020> (21 February 2018).

Sportiche, Dominique. 1996. Clitic constructions. In *Phrase Structure and the Lexicon*, Johan Rooryck & Laurie Zaring (eds), 213–276. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-015-8617-7_9

Stark, Elisabeth. 2002. Indefiniteness and specificity in Old Italian texts. *Journal of Semantics* 19(3): 315–332. https://doi.org/10.1093/jos/19.3.315

Stark, Elisabeth. 2008. Typological correlations in nominal determination in Romance. In *Essays on Nominal Determination: from Morphology to Discourse Management* [Studies in Language Companion Series 99], Henrik Høeg Müller, Alex Klinge (eds), 45–61. Amsterdam: John Benjamins. https://doi.org/10.1075/slcs.89.05sta

Stark, Elisabeth. 2017. *L'accord du participe passé dans la langue standard et en français vernaculaire*. Ms. <doi: https://doi.org/10.5167/uzh-111526> (7 February 2018).

Steinkrüger, Patrick. 2004. *Das Katalanische in der Frühen Neuzeit. Untersuchungen zur Grammatikalisierung von Auxiliaren und Kopulae in Selbstzeugnissen der Epoche*. München: Lincom.

Strozer, Judith R. 1976. Clitics in Spanish. PhD dissertation. University of California, Los Angeles.

Suñer, Margarita. 1988. The role of agreement in clitic-doubled constructions. *Natural Language and Linguistic Theory* 6: 391–434. https://doi.org/10.1007/BF00133904

Thomason, Sarah & Kaufman, Terrence. 1988. *Language Contact, Creolization, and Genetic Linguistics*. Berkeley CA: University of California Press.

Thráinsson, Höskuldur. 2001. Object shift and scrambling. In *The Handbook of Syntactic Theory*, Mark Baltin & Chris Collins (eds), 148–202. Oxford: Blackwell. https://doi.org/10.1002/9780470756416.ch6

Torrego, Ester. 1999. El complemento directo preposicional. In *Gramática descriptiva de la lengua española*, Vol. 2, Ignacio Bosque & Violeta Demonte (eds), 1779–1806. Madrid: Espasa Calpe/Real Academia Española de la Lengua.

Traugott, Elizabeth. 2010. Grammaticalization. In *Continuum Companion to Historical Linguistics*, Silvia Luraghi & Vit Bubenik (eds), 269–283. London: Continuum.

Traugott, Elizabeth & Heine, Bernd (eds). 1991. *Approaches to Grammaticalization* [Typological Studies in Language 19]. Amsterdam: John Benjamins.

Travis, Lisa de Mena. 1991. Derived objects, inner aspect, and the structure of VP. Paper presented at the 22nd Annual Meeting of the North East Linguistics Society (NELS 22), University of Delaware.

Travis, Lisa de Mena. 2000. Event structure in syntax. In *Events as Grammatical Objects*, Carol L. Tenny & James Pustejovsky (eds), 145–185. Stanford CA: CSLI.

Tsakali, Vina. 2006. The Syntax and Acquisition of Pronominal Clitics: A Crosslinguistic Study with Special Reference to Modern Greek. PhD dissertation, University College London.

Tsakali, Vina. 2014. Acquisition of clitics: The state of the art. In *Developments in the Acquisition of Clitics*, Kleanthes K. Grohmann & Theoni Neokleous (eds), 161–187. Newcastle upon Tyne: Cambridge Scholars.

Tsakali, Vina & Anagnostopoulou, Elena. 2008. Rethinking the clitic doubling parameter: The inverse correlation between clitic doubling and participle agreement. In *Clitic Doubling in the Balkan Languages* [Linguistik Aktuell/Linguistics Today 130], Dalina Kallulli & Liliane Tasmowski (eds), 321–357. Amsterdam: John Benjamins. https://doi.org/10.1075/la.130.17tsa

Tsakali, Vina & Wexler, Kenneth. 2004. Why children omit clitics in some languages but not in others: New evidence from Greek. In *Proceedings of Generative Approaches to Language Acquisition 2003*, Vol. II, Jacqueline van Kampen & Sergio Baauw (eds), 493–504. Utrecht: LOT.

Uriagereka, Juan. 1995. Aspects of the Syntax of Clitic Placement in Western Romance. *Linguistic Inquiry* 26: 79–124.

Vallduví, Enric. 1994. Catalan detachment and information packaging. *Journal of Pragmatics* 22: 573–601. https://doi.org/10.1016/0378-2166(94)90031-0

Vázquez Rozas, Marcos & García Salido, Victoria. 2012. A discourse-based analysis of object clitic doubling in Spanish. In *Grammaticalization and Language Change. New Reflections* [Studies in Language Companion Series 130], Kristin Davidse, Tine Breban, Lieselotte Brems & Tanja Mortelmans (eds), 271–297. Amsterdam: John Benjamins. https://doi.org/10.1075/slcs.130.11vaz

Vega Vilanova, Jorge. 2016. Verbal aspect and definiteness effects in Catalan absolute small clauses. In *Definiteness Effects: Bilingual, Typological and Diachronic Variation*, Susann Fischer, Tanja Kupisch & Esther Rinke (eds), 333–373. Newcastle upon Tyne: Cambridge Scholars.

Vega Vilanova, Jorge. 2019. Language policies and language change: On the optionality and loss of the past participle agreement in Catalan. In *Zweifelsfälle: Definition, Erforschung, Implementierung*, Eleonore Schmitt, Renata Szczepaniak & Annika Vieregge (eds), 273–295. Hildesheim: Olms.

Vega Vilanova, Jorge, Navarro, Mario & Fischer, Susann. 2018. The clitic doubling cycle. A diachronic reconstruction. In *Romance Syntax. Comparative and Diachronic Perspectives*, Gabriela Pană Dindelegan & Irina Nicula (eds), 117–134. Newcastle upon Tyne: Cambridge Scholars.

Veny, Joan. 1982. *Els parlars catalans: Síntesi de dialectologia*. Palma de Mallorca: Moll.

Veny, Joan & Pons i Griera, Lídia. 2006. *Atles lingüístic del domini català*. Barcelona: Institut d'Estudis Catalans.

Vikner, Sten. 2005. Object shift. In *The Blackwell Companion to Syntax*, Henk van Riemsdijk & Martin Everaert (eds), 392–436. Oxford: Blackwell.

Vincent, Nigel. 1980. Iconic and symbolic aspects of syntax: Prospects for reconstruction. In *Linguistic Reconstruction and Indo-European Syntax* [Current Issues in Linguistic Theory 19], Paolo Ramat (ed.), 47–68. Amsterdam: John Benjamins. https://doi.org/10.1075/cilt.19.06vin

van der Wal, Jenneke. 2015. Evidence for abstract Case in Bantu. *Lingua* 165(A): 109–132. https://doi.org/10.1016/j.lingua.2015.07.004

Ward, Gregory & Birner, Betty. 1995. Definiteness and the English existential. *Language* 71(4): 722–742. https://doi.org/10.2307/415742

White, Lydia. 2011. Second language acquisition at the interfaces. *Lingua* 121(4): 577–590. https://doi.org/10.1016/j.lingua.2010.05.005

Wurmbrand, Susi. 2017. Formal and semantic agreement in syntax: A dual feature approach. In *Language Use and Linguistic Structure. Proceedings of Olomouc Linguistic Colloquium 2016*, Joseph Emonds & Markéta Janebová (eds), 19–36. Olomouc: Palacký University.

Yang, Charles. 2010. Three factors in language variation. *Lingua* 120(5): 1160–1177. https://doi.org/10.1016/j.lingua.2008.09.015

Zdrojewski, Pablo. 2013. Spanish DOM: A case of lacking case. Paper presented at the Tromsø Workshop on Differential object marking, University of Tromsø.

Zdrojewski, Pablo & Sánchez, Liliana. 2014. Variation in accusative clitic doubling across three Spanish dialects. *Lingua* 151(B): 162–176. https://doi.org/10.1016/j.lingua.2014.08.003

Zeijlstra, Hedde. 2012. There is only one way to agree. *The Linguistic Review* 29: 491–539. https://doi.org/10.1515/tlr-2012-0017

Zeijlstra, Hedde. 2014. On the uninterpretability of interpretable features. In *Minimalism and Beyond. Radicalizing the Interfaces* [Language Faculty and Beyond 11], Peter Kosta, Steven L. Franks, Teodora Radeva-Bork & Lilia Schürcks (eds), 109–129. Amsterdam: John Benjamins.

Zeijlstra, Hedde. 2016. (Preliminary) principles of projection. Paper presented at Hamburg University.

Zwart, Jan-Wouter. 2017. An argument against the syntactic nature of verb movement. In *Order and Structure in Syntax, I: Word Order and Syntactic Structure*, Laura R. Bailey & Michelle Sheehan (eds), 29–47. Berlin: Language Science Press.

Zwicky, Arnold. 1977. *On Clitics*. Bloomington IN: Indiana University Linguistics Club.

Online resources

Corpus de Català Contemporani de la Universitat de Barcelona CCCUB. <http://www.ub.edu/cccub/> (1 October 2019).

Corpus Informatitzat del Català Antic, CICA. <http://www.cica.cat> (1 October 2019).

Corpus Textual Informatitzat de la Llengua Catalana CTILC. <http://ctilc.iec.cat> (1 October 2019).

El Punt Avui. <http://www.elpuntavui.cat/article/5-cultura/19-cultura/614077-la-nefasta-influencia-del-castella-en-el-catala-culte-ii.html> (1 October 2019).

El Racó Català. <https://www.racocatala.cat/forums/fil/20460/participis-genere-nombre-llengua-catalana> (1 October 2019).

APPENDIX I

List of texts used in the Old Catalan corpus

11th–13th century

Desclot, Bernat. [1299] 1949. *Crònica*. Vol. I. Barcelona: Barcino.

Llull, Ramon. [1287–89] 1931. *Llibre de meravelles*. Vol. I. Barcelona: Barcino.

Russell-Gebett, Paul. 1965. *Mediaeval Catalan linguistic texts*. Oxford: Dolphin Book. (miscellaneous short texts from the 11th to the 13th century).

14th century

Eiximenis, Francesc. [1392] 1925. *Contes i faules*. Barcelona: Barcino.

Metge, Bernat. [1399] 2006. *Lo somni*. Barcelona: Barcino.

Net, Françoi et al. Ca. 1350–1400. *Cinc lletres privades catalanes del segle XIV*.

Corpus Informatitzat del Català Antic, CICA. <http://www.cica.cat> (15 December 2017).

Tous, Sereneta de. Ca. 1350–1400. *Cartes d'una catalana del segle XIV al seu marit*. Corpus Informatitzat del Català Antic, CICA. <http://www.cica.cat> (15 December 2017).

15th century

Anonymous. 2007. *Curial e Güelfa*. Toulouse: Anacharsis.

Anonymous. [1462–72] 1931. *La fi del comte d'Urgell*. Barcelona: Barcino.

Cardona, Acart de. 15th century. *Cartes privades del segle XV a l'arxiu de Santa Maria del Mar*. Corpus Informatitzat del Català Antic, CICA. <http://www.cica.cat> (15 December 2017).

Gorigos, Aitó de. 1400? *La flor de les històries d'Orient*. Corpus Informatitzat del Català Antic, CICA. <http://www.cica.cat> (15 December 2017).

16th century

Despuig, Cristòfor. [1557?] 1996. *Col·loquis de la insigne ciutat de Tortosa*. Barcelona: Curial Edicions Catalanes.

Requesens, Estefania de. 16th century. *Epistolaris*. Corpus Informatitzat del Català Antic, CICA. <http://www.cica.cat> (15 December 2017).

Roís de Liori, Hipòlita. 16th century. *Epistolaris*. Corpus Informatitzat del Català Antic, CICA. <http://www.cica.cat> (15 December 2017).

17th–19th century

Steinkrüger, Patrick. 2004. *Das Katalanische in der Frühen Neuzeit. Untersuchungen zur Grammatikalisierung von Auxiliaren und Kopulae in Selbstzeugnissen der Epoche*. München: Lincom. (Miscellaneous short and long texts from the 17th to the 19th century).

APPENDIX II

Acceptability judgment task for Modern Catalan

Experimental items:

Item #1 Condition: 1st/2nd person clitic (ungrammatical)

Context:

El meu marit, no vull que sàpiga que sóc aquí, ha de ser una sorpresa.
'I don't want my husband to know I am here. It should be a surprise.'

Test sentence:

Creus que ja m'haurà **vista?**
'Do you think he has already seen me?'

Item #2 Condition: 1st/2nd person clitic (ungrammatical)

Context:

El teu fill és una mica descarat.
'Your son is quite shameless.'

Test sentence:

Has vist que t'ha **dibuixada** amb un nas de pallasso?
'Have you seen that he drew you with a clown nose?'

Item #3 Condition: Embedded object (grammatical)

Context:

Com que és una mica sorda i no va entendre les instruccions que li donava,…
'Since she is a little bit deaf and couldn't understand the instructions I gave her…'

Test sentence:

… me les ha **fetes** repetir tres vegades!
'… I had to repeat them three times!'

Item #4 Condition: Embedded object (grammatical)

Context:

La història que contes segur que és mentida!
'I'm sure the story you're telling is false!'

Test sentence:

No l'havia **sentida** dir mai, aquesta animalada!
'I hadn't ever heard anyone telling such a stupid thing!'

Item #5 Condition: Embedded derived subject (grammatical)

Context:

L'Elena i la Montse s'avorrien. Al final, la seva mare…
'Elena and Montse were bored. In the end, their mother…'

Test sentence:

…les ha **fetes** anar al pis de dalt per veure si la filla de la veïna volia jugar amb elles.
'… made them go upstairs and ask the neighbor's daughter to play with them.'

Item #6 Condition: Embedded subject (grammatical)

Context:

Al carrer:
'On the street:'

Test sentence:

Aquestes noies, ja les he **vistes** demanar almoina moltes vegades!
'These girls, I've already seen them begging many times!'

Item #7 Condition: Interpolation (grammatical)

Test sentence:

Aquestes paraules, jo no les he pas **dites**!
'Such words, I didn't say them at all!'

Item #8 Condition: Interpolation (grammatical)

Context:

De debò que t'han dit això, de l'Eloi?
'Is this really what you've heard about Eloi?'

Test sentence:

Ell no l'hauria mai **feta**, aquesta mala passada.
'He wouldn't ever have played such a dirty trick.'

Item #9 Condition: Specific partitive (grammatical)

Context:

- Avui ens han tornat els exàmens i no he tingut ni una sola errada.
'- Today we got the exams back and I didn't have any mistakes.'

Test sentence:

- Doncs jo n'he **tinguda** una de molt idiota.
'- Me, I had a very stupid one.'

Item #10 Condition: Specific partitive (grammatical)

Context:

Necessito una faldilla nova. Avui he anat de compres…
'I need a new skirt. Today I went shopping…'

Test sentence:

… i n'he **vistes** dues que m'han agradat molt.
'… and I saw two which I liked quite a lot.'

Item #11 Condition: Non-specific partitive (grammatical)

Context:

El fill de la Roser és molt mal estudiant.
'Roser's son is a bad student.'

Test sentence:

N'ha **repetides** quatre.
'He has failed four (subjects).'

Item #12 Condition: Non-specific partitive (grammatical)

Context:

El meu escriptor preferit és Mercè Rodoreda.
'Mercè Rodoreda is my favorite writer.'

Test sentence:

De les seves obres, ja n'he **llegides** moltes.
'I have already read much of her work.'

Distractors:

Item #13 Condition: CLD with quantifier (grammatical)

Context:

- Els teus amics tenen molta feina, no? Teniu temps per quedar amb ells?
'- Your friends are very busy, aren't they? Do you have time to meet them?'

Test sentence:

- Normalment no, però aquest cap de setmana tenim sort i **els** veurem **a tots**.
'- Normally we don't, but this weekend we are lucky and we are going to see them all.'

Item #14 Condition: CLD with quantifier + number mismatch (ungrammatical)

Context:

És l'aniversari de la Gemma i de la seva germana bessona, la Neus. Entre els amics esteu pensant possibles regals.
-Jo, a la Neus, li regalarè un llibre, a la Gemma no ho sé.
'It's Gemma's and her twin sister Neus's birthday. You and some friends are thinking about possible presents.
- I will give Neus a book, but Gemma I don't know.'

Test sentence:

- Doncs jo **li** regalaré llibres **a totes dues**, que a la Gemma també li agrada llegir.
'- I will give books to both of them, because Gemma also likes reading.'

Item #15 Condition: CLD with quantified full DP (ungrammatical)

Context:

- La setmana passada vaig anar al cine amb el meu noi, a una pel·lícula de zombis.
- Que guai, et va agradar?
'- Last week I saw a movie about zombies with my boyfriend.
- Great, did you like it?'

Test sentence:

- Va ser molt avorrida. Els zombis no paraven de mossegar-**los tots els humans**. De la resta, no me'n recordo.
'- It was very boring. The zombies didn't stop biting all the humans. I cannot remember the rest.'

Item #16 Condition: Dative CLD (ungrammatical)

Context:

L'Eva estava molt enfadada. Quan va saber que el seu noi l'enganyava, va sortir corrents…
'Eva was very angry. When she knew that her boyfriend cheated on her, she ran out…'

Test sentence:

… i **li** va donar un cop **a la porta**.
'… and hit the door.'

Item #17 Condition: Dative CLD (grammatical)

Test sentence:

Al final de l'acte **li** van regalar flors **a l'Ada Colau**.
'At the end of the celebration Ada Colau was given flowers.'

Item #18 Condition: Dative CLD (grammatical)

Context:

Ets a classe i algú arriba tard. Què passa?
'You are at school and someone arrives too late. What happens?'

Test sentence:

La professora **li** dóna el full dels deures **a l'estudiant que ha arribat tard**.
'The teacher gives the homework sheet back to the pupil that has arrived late.'

Item #19 Condition: Participle agreement with non-nominative subject (ungrammatical)

Context:

Al meu temps lliure, sempre que puc, vaig a presentacions de llibres en català.
'In my free time, when I can, I go to presentations of Catalan books.'

Test sentence:

A mi sempre m'ha **agradada** molt, la literatura catalana.
'I've always liked Catalan literature.'

Item #20 Condition: GerSC (grammatical)

Context:

Devant la greu crisi migratòria, els ministres europeus van convocar una reunió d'emergència.
'Faced with the serious migratory crisis, the European ministers called an emergency meeting.'

Test sentence:

Havent deliberat llargament, van decidir prendre mesures per protegir els refugiats.
'Having deliberated for a long time, they decided to take measures in order to protect the refugees.'

Item #21 Condition: Existential/Definiteness effect (grammatical)

Context:

Podrien parlar en veu baixa?
'Could you please speak quietly?'

Test sentence:

Ara mateix **hi ha el metge** amb un pacient molt greu a la consulta del costat.
'The doctor is with a seriously ill patient in the next room right now.'

Item #22 Condition: Existential/Definiteness effect (ungrammatical)

Context:

El consolat ha tancat avui per a la resta del dia.
'The consulate is closed today for the rest of the day.'

Test sentence:

En aquests moments **hi ha el cònsol francès** de visita.
'At this very moment the French consul is on a visit.'

Index

In this book, the traditional definition of 'grammaticalization' is challenged in the light of current developments in grammar theory. The main innovation of this approach is the focus on the feature composition of lexical items. From this perspective, the loss of past participle agreement in Catalan is analyzed on the basis of newly collected data as a consequence of the grammaticalization of formal features. The emergence of syntactic formal features through grammaticalization is understood as a last-resort repair mechanism for pragmatically costly derivations. Further far-reaching implications of this proposal under discussion are: the interplay between (re-) parametrization, economy, cyclicity, and grammaticalization; the characterization of free variation under a modified version of the Interface Hypothesis; and the precedence of syntactic over morphological change. This book is not only of interest to specialists in Romance languages but also to anyone working on diachronic linguistics.

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