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PASSIVES AND MIDDLES IN MAINLAND SCANDINAVIAN

MICROVARIATION THROUGH EXPONENCY

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Acknowledgments

A common quote touted by formal linguists – that has become a bit of a badge of honor validating the importance of their work – is that their research seeks to better understand empirical issues and structural phenomena that most others did not know were 'problems' in the first place. An additional confound that can stand in the way of formal analyses is the amount of detail and rigor required to arrive at a better understanding of what was initially perceived to be a 'simple' problem or 'isolated' phenomenon at first. These two descriptions most certainly apply to the book that you are currently reading – what began as a conference presentation and eventual write-up for the proceedings (*Penn Linguistics Colloquium* (PLC) 36, 2013) became an article in *The Linguistic Review* a year later ('The emergence of middle voice structures with and without agents', (2014), 31(2): 193–240) and has evolved into a monograph-length treatment of passives and middles in Mainland Scandinavian. We thank Mouton de Gruyter, and Harry van der Hulst, editor of *The Linguistic Review*, for permission to cite and build upon the initial aspects of this earlier work. Along each step of the way, mostly thanks to editors and reviewers' comments as well as helpful and critical comments from colleagues, we realized that we had much more to say about this topic and that we just couldn't call it quits. The empirical data and the microvariation that exists in the fascinating linguistic continuum of Mainland Scandinavian represent a challenge that formal analyses must come to terms with. It is our humble hope that the theoretical analyses put forward here provide a platform from which multiple strands of linguistic research can be carried out in future endeavors.

There are a host of individuals we would like to recognize for their assistance and encouragement throughout this process. We would like to thank the editors of this series, Volker Gast and Chiara Gianollo, for vetting this work with two excellent anonymous reviewers. These reviewers went far beyond the expected call of duty and their comments and suggestions vastly improved and sharpened this manuscript. We are moreover overwhelmed by their generosity in pointing us to data and observations in a constructive way that –and we are not overstating anything here– the resulting version is better than what we could have achieved just by ourselves. We also wish to thank the following individuals for invigorating discussions about topics connected with this book and/or for assistance with data collection: Tor Åfarli, Artemis Alexiadou, Marcus Axelsson, Angela Hoffman, Eva Klingvall, Björn Lundqvist, Janne Bondi Johannessen, Tore Nesset, Florian Schäfer, Åshild Søfteland, Peter Svenonius, Tarald Taraldsen, Ida Toivonen, Øystein Vangsnes, and Jim Wood. We would like to recognize Ignacio Bosque, Terje Lohndal, Rafael Marín, and Tom Stroik for being a constant source

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Table of Contents

1 Introduction – Prospects of an exponency-based syntax

The purpose of this book is to deliver a detailed analysis of passives and middle voice constructions in Norwegian and Swedish, according to which we derive passives and actives from the same set of syntactic heads, that is, without the use of distinct flavors of Voice-projections. Less attention is paid to anticausative constructions, although we will also address them in this monograph (cf. chapter 6), pointing the way to a more detailed analysis of these constructions in future work.

Agreeing with Solstad & Lyngfelt (2006: 2), "as has become increasingly evident the last few decades, agent demotion and voice concern more than just passivization." This is a survey of passives and middle voice constructions in Norwegian and Swedish. We hereafter, and throughout the remainder of this book, will refer to these structures as AGENT-DEMOTION CONSTRUCTIONS, or ADCs, including under this term also the anticausative structures which will receive much less attention –see chapter 6–. In this monograph, we explore the challenges of analyzing these individual, yet obviously closely related, constructions as a unified set. Although previous research from a specific theoretical perspective has made allusions to the connections across ADCs in a given language family (see e.g. Schäfer 2008: Chapter 6 for his suggestion that middle voice constructions in German with a generic interpretation can be treated as "voiced anticausatives"), to date, to the best of our knowledge, a detailed comparative treatment of ADCs in closely related languages is surprisingly lacking. This work bridges this gap, providing a detailed examination of two closely related Mainland Scandinavian languages, while exposing the impact that these empirical findings will have on any unified treatment of ADCs cross-linguistically irrespective of the theoretical framework employed.

Although they share many other morphosyntactic and semantic similarities, our previous work (Fábregas & Putnam 2013) has shown that Norwegian and Swedish employ both shared, and at the same time, unique strategies in lexicalizing ADCs that on many occasion differ quite starkly from one another. One of the key challenges in front us is to gain a more enhanced understanding of the differences in these lexicalization strategies, and of equal importance, how these differences in a unified treatment of ADCs affect not only our analysis of Norwegian and Swedish, but how they can also be extended to studies involving other typologically-similar and -diverse languages.

Our focus on ADCs in Norwegian and Swedish has much to bear on the treatment of grammatical voice in recent theoretical work (Kratzer 1996, Kural 1998,

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Collins 2005, Ahn & Sailor 2010), and subsequently on the cognitive architecture underlying the language faculty. In this work we adopt a generative grammar where the syntax consists of a series of functional heads (**fseq**) without a pre-syntactic lexicon (Borer, 2005, 2013; Starke, 2009, 2011; Baunaz et al., 2018). The universal structure of this spine of functional heads (see related proposals by Ramchand & Svenonius, 2014 and Wiltschko, 2014, 2016, 2017) results in a highly unspecified syntax when compared with previous instantiations of generative theorizing (see Boeckx, 2014). The principled goal of syntactic derivations under this view is to produce exponents, which function as an intermediary to make derivational units produced in the syntax legible for interpretation at the Sensori-Motor and Conceptual-Intentional interfaces. We review the properties of these theoretical revisions in Chapter 2.

1.1 The main empirical facts

Both Norwegian and Swedish exhibit passive voice constructions that are morphological (i.e. only involving the bound lexical *s*-exponent at the end of the verb, cf. 1) and syntactic (i.e. those consisting of an auxiliary verb + a past participle/ supine verb, cf. 2) forms:

(1) a. *Dette må kaste-s bort.* Norwegian
b. *Detta måste kasta-s bort.* Swedish
this must throw.PASS away
'This must be thrown away'

(2) a. *Hund-en ble jag-et bort.* Norwegian
dog.DEF was[bli] chase.PART away
b. *Hund-en blev bort-jaga-d.* =Swedish
dog.DEF was[bli] away-chase.PART
'The dog was chased away'

In our analysis, we are primarily concerned with the morphological passive forms, mainly due to the problem that the *s*-exponent poses for a full explanatory analysis of the language: the *s*-exponent, as we shall see, can be used in both languages to express passives, and additionally, in Norwegian, for middle statements.[1]

1 See Engdahl (1999) for a detailed analysis of the semantic and pragmatic differences between simple and complex passives in Swedish.

Nonetheless, an important factor in order to understand the boundaries and properties of the morphological passive –from now on, *s*-passive– is its alternation with the syntactic passive –from now on, *bli*-passive–. For this reason, a second goal of this book will be the analysis of the syntactic *bli*-passive, where the participle combines with an auxiliary. As we shall see, while both languages have *s*-passives, their range of uses is very different; this means, of course, that the contexts where the *s*-passive can be substituted by the *bli*-passive involving an auxiliary are very different in both languages.

Middle voice constructions pose an interesting problem when we contrast Swedish and Norwegian (Fábregas & Putnam, 2014):

(3) *Denne bandasjen fjerne-s lett fra huden.* Norwegian
this bandage.DEF removes.PASS easily from skin.DEF.

(4) #*Detta förband avlägsnas lätt från huden.* Swedish
this bandage removes.PASS easy from skin.DEF
'This bandage is habitually removed easily from the skin.'

As the contrast between (3) and (4) shows, while Norwegian is able to 'recycle' the morphological *s*-passive to express middle statements (3), standard Swedish has a very strong tendency to reject the interpretation of the *s*-passive as a middle in (4); i.e., the interpretation of (4) is very strongly a (habitual) passive, where the event must have taken place, and the bandage must exist. There is, however, some variation among varieties of Swedish, which we will have a chance to discuss in some detail in chapter 3.

In contrast, a second strategy is to express a middle statement that can be used by both languages: a participial construction with a preverbal modifier (3b, 4b).

(5) *Denne bandasjen er lett-fjernet fra huden.* Norwegian
this bandage is easy-removed from skin.DEF
'This bandage is easy to remove from the skin'

(6) *Detta förband är lätt-avlägsn-at från huden.* Swedish
this bandage is easy-removed from skin.DEF
'This bandage is easy to remove from the skin'

One of the primary goals of this book is to determine why such a contrast exists, what it tells us about the different status of the *s*-passive in the two languages, and what other properties follow from this distinction.

To complicate matters more, an additional problem is that one of the strategies that both languages have available to express a third type of ADC, anticausatives, is also the *s*-exponent.

(7) *lukke ~ lukke-s* Norwegian
close ~close-S
'close'~ 'become closed'

(8) *stänga ~ stänga-s* Swedish
close ~ close-S
'close'~'become closed'

The use of the *s*-exponent in anticausative contexts is much less systematic than the same morpheme in passive (and middle) uses. In this monograph we will not provide a complete analysis of anticausative structures, but we will rather focus on the difference between *s*-marked anticausatives and *s*-marked passives and middles as a way to see how far our proposal can be extended to all ACDs in Scandinavian. We will undertake this task in Chapter 6.

In order to see the complication of offering a unified account of middle and passive structures –leaving aside for the time being anticausatives–, consider the following observation: the three constructions can use different, specific forms of marking, while at the same time some of the marking forms are shared by two or more constructions.

(9) **Norwegian**

s-exponent		*bli-+participle*	*participle*
Passive	**Middle**	**Passive**	**Middle**
vaske-s	*fjerne-s*	*bli vasket*	*lett-vasket*

(10) **Swedish**

s-exponent	*bli + participle*	*participle*
Passive	**Passive**	**Middle**
tvätta-s	*bli tvättad*	*lätt-tvättad*

Note that the construction involving the verb *bli* 'become' and a participle is specialized for passive in both languages; the modified participle construction is specialized for middle statements. However, the *s*-marked construction can be passive in Swedish or middle and passive in Norwegian.

The preliminary observation that follows from this pattern is that something must underlie the passives and middles in Norwegian so that the same marking can be used in them. There is always the possibility that the *s*-exponent used in each construction is different, but this is unlikely given that cross-linguistically it is not unusual that the same marking is used for passives, middles, and even anticausatives (Haspelmath 1990, Koontz-Garboden 2009, Alexiadou, Anagnostopoulou & Schäfer 2015). Consider, for instance, Spanish (and see Mendikoetxea 1999 for a full description): a reflexive-looking *se* form is used in the three cases.

(11) a. Passive
Se venden pisos.
SE sell apartments
'Apartments are sold.'
b. Middle
Estas camisas se lavan fácilmente.
these shirts SE wash easily
'These shirts are easy to wash.'
c. Anticausative
La televisión se ha roto.
the TV-set SE has broken
'The TV-set has broken.'

Treating the *s*-exponent as a set of homophonous, morpho-syntactically distinct exponents, would miss the generalization that is likely to underlie these cross-linguistic patterns.

Before finishing these introductory comments, a few words are in order to make explicit our assumptions about how the two ADCs that constitute the empirical core of this book, middles and passives, are distinguished. Middles are differentiated from passives because they do not entail actual participation in the event described by the verb. If we say (12), for instance, we are not claiming that the book has actually been read by anyone. (12) can be used as a sentence inside a book proposal that a prospective author sends to a publishing house.

(12) This book reads well because of the extensive use of images and diagrams.

For this reason, middle statements are non-episodic and non-dynamic, and share properties with descriptive statements that simply ascribe to a subject a set of qualities (cf. Lekakou 2005). What is crucial in (12) is that we claim that, given the internal properties of the non-agentive subject, if facilitating conditions are

in place (the book is written and distributed, bought by people that have the necessary skills, etc.) the book would participate in a reading-event and that reading-event will take place smoothly. Middle constructions have a dispositional interpretation, in the sense of Manley (2012).

(13) Necessarily x is disposed to P in w if, given facilitating circumstances, x would P in w
An entity (*this book*) is disposed to P (*read easily*) in a particular world if, given facilitating circumstances, the entity would participate in P in that world.

Even though this is not a universal property (see Fábregas & Putnam, 2014), middles can express external arguments in the form of PPs introduced by lexical prepositions (14).

(14) a. *Este libro se lee bien por cualquiera con conocimientos básicos.* Spanish
this book SE reads well by anyone with knowledge basic
'This book reads well for anyone with basic knowledge.'
b. *Denne strukturen gjenoppbygges lett av eksperter.* Norwegian
this structure re-builds.PASS easy by experts
'This structure is easy to rebuild for experts.'

In these languages –where Norwegian is included–, middles share properties with passives, which also allow the expression of an external agent or causer, sometimes even with the same preposition introducing them in both constructions (15).

(15) a. The TV-set was broken (by Mary).
b. *La televisión fue destruida (por María).* Spanish
the TV-set was broken by María
c. *TV-en ble ødelag-t av Maria.* Norwegian
TV.DEF was destroyed of María

The table in (16) summarizes the initial contrasts between middles and passives.

(16)

	Passive	**Middle**
Agent expressed syntactically	Yes	Yes / No (depending on language)
Entailment of actual participation in the event	Yes	No

1.2 Grammatical voice and transitivity alternations cross-linguistically

Although the primary empirical focus of our treatment of ADCs is mainland Scandinavian languages, here we divulge into a brief discussion on the typology of grammatical voice and the central role that in various stages of generative theorizing. The active-passive alternation (in English) was touted as a cornerstone alternation in support of a derivational, proof-theoretical treatment of grammar. In decades that followed, typological-diverse examples of passive voice (and related) constructions issued a serious challenge to earlier theoretical proposals, thus leading to important revisions in the desiderata involved in the analysis of voice. Below in Section 1.2.1 we explore a sample of the typologically-diverse data commonly discussed under the umbrella of "passive voice," while highlighting how such examples challenge, and in some instances, stymie contemporary analyses of passives. Staying true to the core objective of this book –namely, to provide a unified analysis of passives and middles in Norwegian and Swedish (while remaining aware of the typologically diversity of the morphosyntactic means by which languages and language families create ADCs)–, we once again explore the diversity of strategies found cross-linguistically in the formation of passives (section 1.2.1) and middle voice constructions (Section 1.2.2).

1.2.1 The active-passive alternation

To state that the active-passive alternation has played a central role in the development of generative linguistic theory is a vast understatement. The properties of the passive voice are among the main factors that encouraged a move from individual transformations into the view of constructions as epiphenomena caused by the conspiracy of independent factors that has characterized Generative Grammar (GG) since Government and Binding (GB; Chomsky 1981).

In the earliest stages of GG (Chomsky 1957), passive voice was interpreted as an optional transformation (1957: 42–44, 122) that introduced auxiliaries, participial morphology and reordered the constituents generated by the phrase structure rules:

(17) NP – Aux- V - NP
$X_1 - X_2 - X_3 - X_4$ -> $X_4 - X_2$ + *be* + *en* [Participial morpheme] $-X_3$ – by + X_1

Chomsky hastened to add, however, that this rule was not enough and showed one of the limits of the transformational account: be + en (the set of the auxiliary

be and the participial affix) cannot be selected unless the following V is transitive; conversely, NP cannot follow V if be + en are selected; finally, if (17) must correspond to a full grammatical description, many restrictions have to be placed with respect to V in order to exclude sentences of the form *Sincerity admires John*, and thus *John is admired by sincerity*. As it is well-known, a step forward in refining the analysis was the attention paid in Chomsky (1965) to the feature endowment underlying each one of the constituents in (17), plus the introduction of generalized selectional restrictions and subcategorization frames.

Note that (17) treats grammatical functions as primitive objects that have to be defined by the phrase structure rules; similarly other accounts, like Lexical Functional Grammar (Bresnan 1982) also treated as primitive all grammatical relations, so in these systems the passive was stated just as a rule that would substitute, if certain conditions are met, the role of object by the role of subject.

There were, however, problematic cases: empirically, it was known that sometimes an indirect object could be passivized even in the presence of what could be interpreted as a direct object (double object construction); thus, the rule in (17) could not be stated in this simple way. Rather than making reference to the initial grammatical function of the NP that becomes a subject, the operation could be described more informatively by focusing on the properties of the verbal domain inside the passive, and trying to derive as an outcome of that situation the redefinition of grammatical roles inside the sentence; that is, grammatical roles stop being primitive objects one can refer to directly and become collections of properties influenced by their context.

The standard analysis of passives in Government and Binding (Chomsky 1981: 48–50, Burzio 1981, Rizzi 1982) derived from an interaction between two independent principles: the case filter (Lasnik & Chomsky 1977) that stated that any (explicit) argument had to receive case from a governor, and the availability of A-movement, which allowed a DP to locally move inside the sentence to find a governor able to assign case to it. Chomsky's account was initially based on the proposal that what triggers the passive construction is that the addition of the participial morphology to the verb cancelled its capacity to assign accusative case to the object (but perhaps not other cases, co-assigned with help from Ps); consequently, the object DP, lacking a case assigner, moves to Spec, InflP (TP), where it gets nominative and becomes the subject of the clause. In short, this analysis necessarily requires heads to carry different sets of features (or, alternatively, different heads to be present) in passive and active constructions.

Several counterexamples to this intuitive approach were quickly noted, generally involving languages where the passive construction was still compatible with

a direct object (Sobin 1985, Åfarli 1989, 1992, Kubo 1992). Of particular interest for the investigation carried out in this book are cases noted by Åfarli (1989: 17, 20) for Norwegian:

(18) *Jon ble gitt ei fele.*
Jon was[bli] given a violin
'Jon was given a violin.'

The important aspect in (18) is that the passive structure does not seem to preclude that a direct object is present in the structure –*ei fele* 'a violin'–. Assuming that direct objects in Norwegian must receive (accusative) case even if their morphology does not reflect it, the grammaticality of (18) strongly suggests that passive in Norwegian does not preclude case assignment to the direct object.

Data like these prompted an alternative analysis that was mentioned but not explored in Chomsky (1981: 48–50): that the particular property of passives is that the subject position becomes dethematized and is thus available for the internal argument as a landing site. Dethematization was interpreted, generally, as meaning that the verb's external argument is missing or demoted, letting the internal argument occupy the subject position. From this perspective, the main property of the participial morphology is not that it blocks case assignment to the object, but that it externalizes the internal argument (alternatively, that it demotes the external argument) (Levin & Rappaport 1986). Case being irrelevant, sentences like (18) cease being problematic.

However, there was another set of problems that stem for this approach. Crucially, the problem was to restrict the set of verbs that are able to participate in a passive construal; if the role of the participial morphology is to cancel the external argument in some way, we can expect that only verbs with at least two arguments will be subject to the passive, because if there is only one argument, this will become the subject, and as a consequence a strategy that externalizes an internal argument would be redundant (at best), and thus unavailable. However, the so-called impersonal passive, available in languages like German, provided a case that seemingly illustrated precisely this unexpected situation:

(19) *Es wird geschlafen.*
it is slept
'Someone is sleeping'

Other problems were noted, that to some extent apply to all previous analyses of passives but are perhaps more acute on the interpretation that passives are dethematized structures. If the object is supposed to be able to access Spec,

Infl/TP, then the external argument –which normally c-commands it in the active voice– should not intervene between them, risking otherwise a minimality violation. Thus, we expect –at a minimum– to have the external argument of a transitive verb projected at a different site in actives and passives. Proposals are varied here: the external argument becomes a PP adjunct, the projection introducing the external argument is missing or defective, etc. (cf. among others Chomsky 1995). This, however, has generally been seen as a shortcoming of the theory: why should theta-assignment (or theta-interpretation) take place differently in two related constructions whose difference seems not to refer to their thematic structure?

1.2.2 Voice-projections

One alternative account involved the separation of external arguments as specifiers of a designated projection dominating *v*P: VoiceP (Kratzer 1996). In this account, external arguments are systematically introduced in this position, but VoiceP comes in two flavors: active and passive. While active VoiceP selects a DP to which it assigns an agent, its passive version selects a PP.

(20) a. [VoiceP [DP] Voice^{act} ...]
b. [VoiceP [PP] Voice^{pass} ...]

A recent variation on this theme is Collins (2005), who tries to further unify the external argument in passives and actives by proposing that in both cases they are DPs. In his account, the preposition *by* is the spell-out of the head Voice, and the external argument is always introduced as Spec, *v*P.

(21) [Voice P Voice <by> [*v*P [DP] *v* [VP...]]]

VoiceP attracts VP, containing the internal argument, to its specifier. At that point, the internal argument is hierarchically higher than the external argument. The internal argument will be able to move further to Spec TP, while the external argument will remain in situ, that is, directly adjacent to the preposition:

(22) [[VP ... IA]$_i$ Voice <by> [*v*P [DP] *v* t$_i$]]

However, the intuition that passives involve some head distinct from active remains: the value of Voice that gets spelled out as *by* must be restricted to passive constructions; therefore, Voice has to be defined as passive in this context.

There is a second line of approach to passive constructions, where passives – and specifically, syntactic passives, which are the only ones that English has– is treated as construction with an aspectual meaning. An example from this other tradition is Beedham (1987). In his analysis, the meaning of (23) is not identical to the meaning of (24) in terms of what is claimed:

(23) Mary was hit by John.

(24) John hit Mary.

Beedham argues that (23) states that Mary entered a new state, namely the state of having been hit by John. He makes the claim that this has further implications that we do not share in this monograph, but we do agree with him –as many others– that there is some additional aspectual meaning in the syntactic passive with respect to the active. First, transitive verbs might be unable to appear in the syntactic passive if they are stative. This is predicted if there is an aspectual component in the syntactic passive, because then we expect the predicate's *Aktionsart* to influence whether the passive construal is possible.

(25) a. John deserves a punishment.
b. ??A punishment is deserved by John.

(26) a. Mary likes John.
b. ?John is liked by Mary.

The observation that syntactic passives might not be available with stative verbs, or some classes of monotransitives, is made for Norwegian by Lødrup (2000), who points out a fact that is crucial in this monograph: statives are very marked, or plainly reject the *bli*-passive, but they do license the s-passive.

Second, Beedham (1987: 8) notes, in the same way that some types of subject (plural vs. singular) can modify the aspect of a verb, the acceptability of syntactic passives can be affected by the nature of the agent by-phrase; contrast (26b) with (27).

(27) Mary is liked by everyone.

Third, there is a result-state interpretation inherent to syntactic passives, a fact that can be seen in several ways. Beedham (1987) notes that the same verbs that are odd in the syntactic passive are equally odd in the result state interpretation of the perfect.

(28) a. *The book has cost fifteen pounds.
b. *Fifteen pounds is cost by the book.

(29) a. *Rupert has known the prime minister.
b. *The prime minister is known by Rupert.

We agree that these facts should be an integral part of the analysis of syntactic passives, but they do not follow from a traditional approach in terms of feature deficiency. More interestingly for our purposes is the fact that *s*-passives in Scandinavian are free from these aspectual restrictions. In our analysis, as we will see, *bli*-passives involve the profiling of the VP constituent as the figure in the event, which explains why there is a resultative meaning involved in every *bli*-passive.

Let us leave the historical overview here. The main conclusion is that passive structures present problems that refer to at least the following criteria:

a) What is it that makes passives special? What triggers the passive?
b) Is it possible to analyze passives in a way that does not force us to postulate that the external argument has a different structural status in both cases?
c) How can the aspectual restrictions that constrain some kinds of passives be integrated into a general analysis?

As we have seen thus far, most analyses propose that passives are about dethematization and / or the impoverishment of the case-licensing possibilities at the *v*P-level. This implies that either the *v*P-layer or the VoiceP layer have distinct properties in passive and active. However, in this monograph we put forward the idea that there is no need to propose that, as lexical items, *v* or Voice are different in passive and active construals. Passives and actives do not contrast in terms of dethematization or case; their difference is about how they profile the event, and whether the highlighted element is an agent, an internal argument or a subevent. In order to see one immediate advantage of this view, let us consider some of the strategies of generating passives across languages.

In the early, formative analyses of the active-passive voice alternations, English data served as the principal examples in support of earlier versions of Transformational Grammar (but see data from Bresnan 1978, 1982 for data from English that challenge these assumptions). Seminal work in linguistic typology by scholars such as Perlmutter & Postal (1977), Siewierska (1984), Shibatani (1985), Jaeggli (1986) and Klaiman (1991) explicate that there are at least four principal classes of "passive" constructions.[2] In what follows, we adopt

2 For an exhaustive treatment of grammatical voice, see e.g. Zúñiga & Kittilä (2019).

Klaiman's (1991) four-class distinction of these constructions below, which consist of: (i) basic, (ii) derived, (iii) inverse, and (iv) information-salience voice systems. Basic voice systems are classified as those that do not involve mappings or the formal correspondences of any (additional) structural configurations. According to Klaiman (1991: 161), "these systems encode alternations in the participant role of the argument which the verb assigns as subject. In particular, they encode affectedness, or correspondence vs. non-correspondence of the subject with the locus of the action's principal effects." Fula, a member of the Niger-Congo language family, has three voices; i.e., active, middle, and passive, each associated with a distinct inflectional affix (data from Klaiman 1991: 26, citing Arnott 1970: 255):

(30) a. *'o ɓorn -ii mo ŋgapalewol.*
he dress-past.ACTIVE him gown
'He dressed him in a gown.'
b. *'o ɓorn -ake ŋgapalewol.*
he dress-past.MIDDLE gown
'He put on a gown.' (= He dressed himself in a gown)
c. *'o ɓorn -aama ŋgapalewol.*
he dress-past.PASSIVE gown
'He was dressed in a gown.'

Here we see a canonical example of a basic voice system in Fula; each voice distinction is associated with a distinct inflectional affix, requiring no further marking on the verb.

In contrast to basic systems, derived voiced systems are based on structural configurations. Again, following Klaiman (1991: 161), "derived voice encodes a mapping from one class of configurations, which are basic, to a second class of configurations, which are non-basic, and which can be accounted for by derivation." The active-passive alternation in German below represents an example of a derived voice system, in that the first (31a) active sentence demotes the agent in the passive construction (31b) which is further accompanied by the auxiliary verb *werden* 'to become' and a past participle form of the predicate:

(31) a. *Peter trinkt gern deutsches Bier.*
Peter drinks gladly German beer
'Peter likes to drink German beer.'
b. *Deutsches Bier wird (von Peter) getrunken.*
German beer becomes (by Peter) drank
'German beer is being consumed (by Peter).'

Inverse voice systems encapsulate a form of pragmatic voice in which, "alternations of verbal shape encode alternating assignments to nominal positions of a somewhat different salience, ontological salience. The ontological salience of a nominal reflects its referent's relative importance to the concerns of the speaker, either in relation to the discourse situation, or in relation to the universe of objects in general" (Klaiman 1991: 162). The following data from Plains Cree (from Klaiman 1991: 162, from Wolfart 1973: 25) illustrate the function of inverse voice systems:

(32) a. *Ni- sēkih -ā -nān atim.*
1 scare-theme.DIRECT.1PL dog
'We scare the dog.'
b. *Ni- sēkih -iko -nān atim.*
1 scare-theme.INVERSE.1PL dog
'The dog scares us.'

Klaiman (1991: 162–3) explains "the alternating assignments of verbal voice elements (theme signs) *-ā* and *-iko* in (34a) and (34b) encode alternations in the logical subject's and logical object's assignments to statuses of ontological salience and non-salience. That is, the logical subject and object are assigned to the corresponding ontological statuses of subject and object either directly (as in 32a) or inversely (32b)."

Finally, information-salience voice systems contrast with inverse voice systems immediately outlined above to the extent that their "alternations of verbal morphology encode nominals' relative centrality or non-centrality to the discourse's informational objectives [...]. [T]his sort arises in or is determined at the level of discourse information structure" (Klaiman 1991: 228). Thus, in such languages voice is conflated with specific pragmatic effects and tends to be accompanied by focus marking, as in Cebuano. Note how the argument carrying focus marking in (33) covaries with the morphology of voice in the initial position.

(33) a. *Ni- hatag si Juan sa libro sa bata.*
VOICE give focus Juan goal book directional child
'It was Juan who gave the book to the child'
b. *Gi- hatag ni Juan ang libro sa bata.*
VOICE give agent Juan focus book directional child
'It was the book that Juan gave to the child'

The above-discussed typological classifications of "passive voice constructions" and their subsequent theoretical consequences are not the only puzzles that

complicate the situation. Ergative languages – as well as nominative-accusative languages that license verbal agreement for both subjects and objects – exhibit antipassive constructions. Antipassives are similar to passive voice in that they reduces the valency of the verb; however, the key distinction is that in antipassives the object is deleted and the ergative agent becomes a subject marked in absolutive case. Kwak (1994: 272) shows that Korean exhibits both an object-deleting (34a) as well as an object-incorporating (34b) anticausitive construction:

(34) a. *kịnę-nịn kęịy mękci-an-nịn-ta.*
3SG.FEM-TOP almost eat-NEG-PART-DECL
'She almost doesn't eat.' (OBJ = food)
b. *Sanwoo-ka t'ang-phan-ta.*
(name)-SUBJ land-sell.DECL
'Sanwoo is a land-seller.'

Lastly, the existence of so-called double-passive constructions in Turkish (Özkaragöz 1986; Knecht 1985, cited in Müller 2013: 107) presents a particular challenge for analyses based on derivational rewrite rules and their predecessors:[3]

(35) a. *Bu şato-da boğ-ul-un-ur.*
this castle.LOC strangled.PASS-PASS-AOR
'In this castle someone is strangled (by another person).'
b. *Bu oda-da döv-ül-ün-ür.*
this room.LOC hit.PASS-PASS-AOR
'In this room someone is hit (by another person).'
c. *Harp-te vur-ul-un-ur.*
war.LOC shot dead.PASS-PASS-AOR
'In the war some is shot and killed (by another person).'

According to Özkaragöz (1986), the bound morphemes *-In*, *-n*, and *-Il* are allomorphs of a passive morpheme that allows a transitive verbal root to be "repassivized", creating an impersonal passive. See also Bosque & Gallego (2012) for Spanish double passive constructions.

The typological distinctions for passives and related constructions in this section have significant theoretical consequences. We propose that this set of typological facts casts serious doubt on analyses of voice systems that are based

3 Similar structures are also attested in Lithuanian (Timberlake 1982) and Irish (Noonan 1994) (originally noted by Müller 2013: 107).

on alleged flavors –that is, feature endowments– of the same functional head. Cross-linguistically, what is called an passive is a construction where the element that gets profiled within the description of the eventuality is different from the one that gets assigned more salience in the active form, which somehow is assumed to be unmarked. There are different ways of making this profiling, but in all cases the voice distinction seems to be a matter of determining which one of the components of the event receives a higher degree of salience.

In this monograph we follow a line of approach to passives that is similar to the one that goes back to Halliday (1967: 215–218), who claims that the difference is based on the different information structure of the two construals according to a *theme-rheme* standard division. In contrast to this tradition, however, in our approach the thematization of the internal argument or the agent is a derived, indirect effect of Voice, and not directly defined as such – on the assumption, that Halliday makes, that themes are subjects–. When an internal or external argument moves to the specifier of VoiceP, it enters into a figure-ground configuration mediated by Voice, as a relational head. The figure-ground relation that Voice defines profiles the eventuality, that is, determines which one of the elements of the eventuality description, if any, is assigned more salience. Profiling, which we will use frequently in this book, is the effect of the relational structure created by Voice, which determines that the constituent in its specifier will be a figure against the background of the rest of the event description placed in its complement. Thus, there is a difference between active and passive in terms of what constituent is given salience within the verbal complex, and that salience can be associated to different effects –such as information structure, the definition of aspect or case assignment–, following language-particular rules.

Languages vary with respect to how (and whether) this change in the profiling of the verbal complex is marked, and even with respect to which argument is the one that is suppressed in the marked strategy. We believe that these facts should reorient the understanding of Voice as a head that is used to define a profiling of the verbal complex, by defining one of the constituents inside it as the figure. The task of showing how such a system would look like is the one that we undertake in this book.

1.2.3 Middles and agent-demotion

Following initial suggestions by Klingvall (2007), Lekakou (2005, 2008), and Lekakou and Pitteroff (2018), and explicated further in our research on this topic to date (Fábregas & Putnam, 2012, 2014), we agree with the position that languages lack a specifically designated morphological marking or syntactic construction

for middle voice semantics. To address this matter, language-specific grammars deploy diverse strategies in expressing middle semantics; for example, see (36)–(38) below from English and Spanish.

(36) This book reads easily. [Unmarked form of the verb] English

(37) This book is easy to read. [Tough-construction]

(38) *Este libro se lee fácilmente.* [Reflexive form] Spanish
this book SE reads easily
'This book reads easily.'

Even if different languages instantiate middle statements through different syntactic constructions (as noted among others in Condoravdi 1989, Lekakou 2005 and Klingvall 2007), their meaning is relatively clear. Following Lekakou (2005: 90 and references therein), we will consider a middle statement as a generic dispositional ascription which predicates a set of properties from the grammatical subject without entailing that they are instantiated in any event.[4] In a statement like *Such books read easily*, it is said that, for a whole class of books, it is true that they have the properties necessary to be read easily, even – and this is crucial – if the reading event has never been instantiated with these kinds of books. Syntactically, these statements share with passives the property that the grammatical subject is semantically an internal argument, but they contrast with them in that in passives it is entailed that the event takes or has taken place (Such books were read easily). Even though they also involve genericity, habitual statements are different from middles in that, again, the existence of events is entailed (e.g., *Such books are (generally) read easily*.)

4 Of course, situations where very similar interpretations can be assigned to different syntactic structures raises long-standing issues about the relation between the computational system and LF: to what extent can a strict isomorphism be maintained when the same meaning can be conveyed with different combinations of heads? Although this problem lies beyond the limits of the present article and we will not discuss it, the general approach that we present here is compatible with Fanselow (2007), where it is proposed that syntactic operations are triggered by purely formal principles that, later on, will be used at LF to communicate specific meanings. In order to obtain a middle interpretation, several conditions on the syntactic structure must be met, but these conditions (a) firstly have to meet the internal syntactic requisites, allowing all arguments to get their case licensed and fulfilling other formal operations and (b) involve not letting an event variable be bound by tense and forcing the internal argument to rise to the subject position; these two conditions can be met in a variety of ways.

The main properties of middles – non-agentive subject, generic character, absence of the entailment that there exists an event and stating a dispositional ascription depending on internal properties of the subject – have been extensively discussed in the literature (see Condoravdi, 1989; Fagan, 1992; Hoekstra & Roberts, 1993; Fujita, 1994; Ackema & Schoorlemmer, 1995; Zwart, 1998; Mendikoetxea, 1999; Stroik, 1999, 2006; Steinbach, 2002; Marelj, 2004; Lekakou, 2005; Klingvall, 2007; Schäfer, 2008). It is generally agreed that middles are interpreted at a conceptual level as involving an agent, so that in (36) the statement is interpreted still as describing the propensity of participating in a causative event of reading, as opposed to an anticausative reading like the one that *The window broke* receives. The question is whether or not at the syntactic level the middle statement involves the presence of an agent. In this book, we argue that this varies cross-linguistically, and even within the same language different structures can be used for the middle, one with and one without agent (Norwegian being the case in point). Contrast Spanish (39a) with English (39b) below. Spanish speakers do not reject agents with middles, provided they are interpreted as generic,[5] but this possibility does not exist in English, where an agentive *by*-phrase is not licensed. Given this variation, whether a language introduces agents in a middle statement has to be determined by the properties of the sentence in each language, and inter-linguistic comparison does not seem to provide with any definitive argument.

(39) a. *Este libro se lee con gusto por niños y mayores.*
this book SE reads with pleasure by children and grown-ups
"This book reads with pleasure for children and grown-ups."
b. This book reads with pleasure (*by children and grown-ups).

It should be noted, finally, that the set of constructions that can be classified as middles is still subject to some discussion; this is, again, expected if 'middle' is the name we give to a dispositional interpretation of a predicate whose grammatical subject is an internal argument.[6]

5 In general, Spanish only allows agents with the passive form of stative verbs to the extent that they are generic. For the relation between stativity and genericity, see Kratzer (1995) and Chierchia (1995).

(i) *Juan es conocido por {todos / *Pedro}*
Juan is known by everybody / Pedro
'Juan is known by everyone.'

6 Some authors have actually argued that it is not necessary that the subject of a middle statement is an internal argument otherwise projected as a direct object. See Ahn & Sailor (2011)

1.3 Scope and content of this book

Our main claim in connection with the review of the data presented in the previous section is that Voice is about establishing a figure-ground structure for the event that, normally, assigns salience to one of the members of the event – 'profiling', then, should be interpreted in this book as 'defining which element, if any, is the figure within the event description'. In other words, there are no feature-based differences between heads involved in the active vs. the passive voice. We argue that this system can successfully advance our understanding of passive, middles, and (to a more limited extent) anticausatives provided that the notion of 'exponent' is taken seriously as an active ingredient of grammar. Chapter 2 is devoted to presenting our claims about what 'exponents' are and how they behave. Exponents are, in short, the morphophonological representation of syntactic constituents. Some exponents correspond to trivial constituents –heads–, but others spell out complex constituents, such as whole phrases with or without specifiers (*Phrasal Spell Out*, Caha, 2009; 2018). On the assumption that the architecture of grammar is built in such a way that every feature in the syntactic derivation must be identified by an exponent, exponents not only become the central working units in morphophonology –as opposed to features and heads, which are the essential units in morphosyntax–, but become a mechanism that is able to explain why languages differ in the kinds of constituents they allow or not. Given the same syntactic set of constituents, a language might have right away, in its lexical repertoire, a set of exponents that spell it out fully, while another language might lack such elements in its repertoire. We claim that in the second case the derivation, while being syntactically well-formed, is unreadable at the interfaces, and thus cannot emerge. This is what makes Swedish unable to use the *s*-passive to express a middle statement: the syntactic configuration required for a middle statement involving a *v*P-layer simply cannot be lexicalized by Swedish using the *s*-exponent.

This nuanced view of syntax will allow us to define a novel approach to language variation and the relation between syntax and morphology that –we will argue– extends beyond the traditional lexicalist / neo-constructionist debate in generative approaches to morphology-syntax-semantics relations: features and heads underlying morphological information are put together by syntax, following

for arguments that structures such as *My car seats four people* and *Clowns make good fathers* have the basic properties of middles. To the best of our knowledge, however, agents are never subjects of statements interpreted as middles.

strictly syntactic principles, but they become fossilized as soon as they are identified with an exponent, which by definition can spell out phrasal constituents.

Chapter 3, 4 and 5 constitute the empirical core of our study. Chapter 3 deals with the empirical description of passives, comparing Swedish with Norwegian. We will there highlight two kinds of contrasts:

a) differences that are common to Swedish and Norwegian with respect to the use of *bli*-passives vs. *s*-passives
b) situations where the distribution and properties of *s*-passives in Norwegian and Swedish are sharply different.

We show that Norwegian *s*-passives can be used only in a subset of the cases where Swedish allows them. This will lead us to propose that despite their surface similarity, the *s*-exponent lexicalizes a very different set of elements in Norwegian and Swedish. While in Swedish the s-exponent is a pronoun projected as a specifier –in this case, of VoiceP–, in Norwegian it corresponds to the spell out of part of the verb's extended projection, involving Mood, Aspect, and Voice. Chapter 4 highlights the key components of this analysis, and here we present our approach to actives and passives in detail, where Voice is always the same head in both constructions and differences emerge from the nature of the constituent that moves to its specifier to be profiled as the figure in the event, provided that the set of exponents that each language has allows that language to spell out the structure.

In Chapter 5 we will analyze the case of middle constructions in Mainland Scandinavian. We will crucially argue that the different availability of the *s*-marking in Norwegian and Swedish is ultimately a result of the *s*-exponent encoding as part of the constituent that it lexicalizes in Norwegian a modal operator that breaks the relation between the event's variable and T. Swedish is unable to use the *s*-passive in a context where a particular value of Mood is present because, its *s*-exponent corresponding to a specifier of Voice, it cannot form a syntactic constituent with Mood in the absence of Aspect and Voice.

In Chapter 6 we extend our analysis of middles and passives to anticausatives and reciprocal statements in Norwegian and Swedish. Although our treatment of these data is not intended to be exhaustive, we demonstrate here how an exponency-based approach can account for a similar problem noted in the previous chapters; namely, why *s*-exponents are compatible with an episodic reading when they are expressed in the Norwegian anticausative or the reciprocal construction, but crucially not in other environments. The second half of the chapter provides commentary on some natural theoretical extensions of our proposed architecture in this book, such as the elimination of head movement and additional clarification on the word-affix distinction.

2 The necessity of exponents and the nature of Σ-structure

In this chapter we make the case for the most novel components of our analysis; namely, we make the case for (1) the atomic unit known as the EXPONENT being the foundational building blocks of syntactic computation and (2) an additional level of syntactic representation (**Σ-structure**), where these units are compiled and stored. As we establish in this chapter and show throughout the remainder of this book, we outline the advantages that our model has over other contemporary theories. Of prime importance, although our analysis of ADCs in Norwegian and Swedish shares some similarities with Distributed Morphology (DM), in this chapter we highlight fundamental ways where we part ways with this approach.

2.1 Overview of our proposal

Within this general framework, in this book we develop a theoretical approach where the interplay between the lexicon and syntax is made more explicit, and is employed in a principled way to account for language variation. Our approach can be summarized as follows:

a) One central component in the process of learning a language is the notion of EXPONENT (Σ).[1] An exponent, as we will see, is a unit that intermediates between the computational system, i.e. where structure is built, and the interfaces where those structures are mapped to meaning and external signals (sound or hand gestures).
b) However, exponents are not lexical items in the traditional sense. In opposition to projectionist models of grammar (e.g., Chomsky, 1965; Wasow, 1977), the range of exponents that are possible in a language is restricted by the syntactic structures that a given grammar generates. This important distinction requires attention since, in our model exponents are used to spell out syntactic constituents and are introduced only after the computational system has

1 As will become clear during this chapter, our proposal amounts to considering spell-out a complex procedure that is deconstructed into two distinct operations that take place in two different levels: Σ-structure selects an exponent, which substitutes a constituent inside the syntactic tree by a morphological object; after that, the structure is transferred to the interfaces, and at the PF level the phonological shape of the exponent is determined. In this sense, we belong to the same family of proposals as Bye and Svenonius (2012), who divide the operation that selects the set of allomorphs from the choice of allomorphs itself, or Newell and Piggott (2014), where the insertion of the exponent does not determine in itself the phonological shape of the structure.

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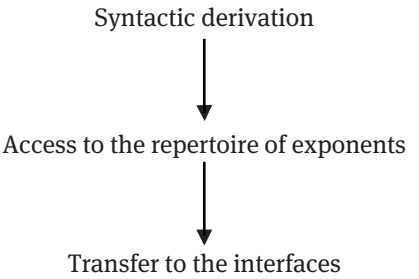
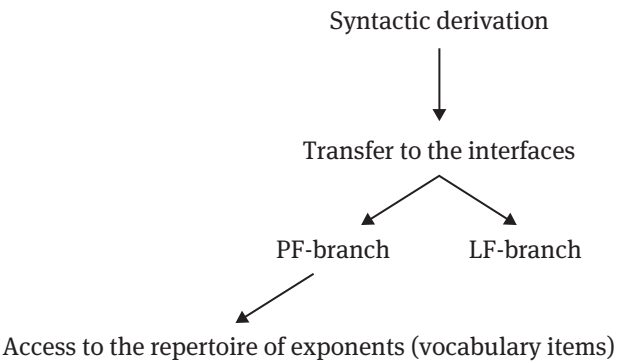
generated a structure. In this sense, our system presupposes a form of late insertion (Halle & Marantz 1993), following the schema of (1).

(1)



It is already necessary to draw attention to a key difference between the approach we develop here and that commonly found in many variants of Distributed Morphology (DM) with respect to the operation LATE INSERTION: in our proposal, the exponents are accessed before transfer to the PF and LF branches, while in DM this access takes place exclusively at the PF-branch (Embick & Noyer, 2001).

(2)



As a result of the architecture outlined in (2), not only are Vocabulary Items accessed and mapped onto syntactic structure, but there is also the need to adjust and manipulate the remaining syntactic structure at PF via operations such as fusion, fission, and impoverishment (cf. Noyer, 1997).

c) The elimination of LAST RESORT and other operations that exclusively apply at the PF-branch requires exponents to act as an intermediary between the syntactic computation and externalization. Their content is restricted by syntactic constituency, and as we will demonstrate in this chapter, exponents residing in Σ-structure still have access to syntactic labels generated in the course derivations. In practice, what the exponent does is to package

the syntactic constituents into units that can be manipulated further by PF and LF.

d) Our approach will provide us with the tools to sketch a principled account of the fine-grained differences between Norwegian and Swedish in the domains of passive and middle constructions, and specifically, of the following two apparently unrelated differences:
   i) In Swedish, the use of the *s*-passive is less restricted than in Norwegian, where the *s*-passive is restricted to modalized contexts and non-episodic situations.
   ii) In Swedish, the *s*-exponent of the verb is not used to express middle statements,[2] while in Norwegian this is possible.

Our account advances the claim that both differences are accounted for if the exponent becomes the atomic unit of analysis. More concretely, we claim that the *s*-exponent in Swedish lexicalizes an argument, while in Norwegian it is the Spell-Out of part of the sequence of heads inside the extended projection of the verb. The principle that exponents can only contain material that forms a syntactic constituent in the syntax makes it impossible for the *s*-exponent to spell out modal and aspectual heads in addition to the pronominal features, while in Norwegian this is a possibility. A cascade of consequences will follow from this small initial difference, as we lay out in great deal in the following chapters.

2.2 A continuum of lexicalist theories

Although not the primary intention of our proposal here, this work also addresses the question of whether the morphological form of a word, and even the content that a single morpheme can codify, is restricted by syntactic principles or not. As such, it falls neatly within the debate between lexicalist and non-lexicalist theories. *Grosso modo*, one can characterize a lexicalist approach (Halle, 1973; Scalise, 1983; DiSciullo & Williams, 1987; Anderson, 1992; Stump, 2001) as an approach that argues that words are not built in the syntax, while non-lexicalist approaches (also known as transformational approaches, exoskeletal approaches, or neo-constructionist approaches) make the claim that words are built in essentially the same way as phrases, pace phonological differences (Baker, 1988; Halle & Marantz, 1993; Embick, 2000; Caha, 2009; Borer, 2005a, 2005b, 2013).

2 As we will see, this statement has to be nuanced, because some varieties of Swedish allow middle *s*-structures under restricted circumstances.

However, this rough distinction is too coarse-grained to properly characterize the family of lexicalist and non-lexicalist approaches on the market. Works such as Hale and Keyser (2002) or Ackema and Neeleman (2004) do not easily align themselves with either of these two opposing classifications, and in practice combine properties that are viewed as more characteristic of one or the other approach. We also consider our approach to combine properties of both approaches and, in a sense, to dissolve the tension between them.

In fact, there is no strict consensus with respect to what should be considered a *lexicalist* theory, and it seems more useful to talk about a continuum of lexicalist positions. On one side of the spectrum we have works such as Boeckx (2011), who purports that any theory that allows the syntactic derivation to be driven by formal features should be considered lexicalist. This blunt claim is partially justified by the fact that lexicalist theories are typically characterized by (some degree of) projectionism: the properties of the syntactic derivation are deterministically motivated by the properties of the atoms combined in the structure (for instance, a *wh*-feature in one position would force the derivation to establish some kind of relation between that feature and a C-head). A slightly less extreme position is the one proposed by Starke (2009), who considers any model to be lexicalist that allow the atoms of syntax to contain bundles of features. In his view, any theory where a head can contain more than one feature is lexicalist to the extent that those features contained in the head must have been combined by a procedure that is not strictly bound to those attributed to syntactic computation. For a theory to be characterized as properly non-lexicalist, in Starke's view, the only way to combine features should be the syntactic computation, and therefore all heads should contain one and only one feature. The model that we develop here would likely be considered 'lexicalist' by both Boeckx and Starke's standards, because we not only recognize formal features as the atoms of syntax (Fábregas & Putnam, 2013), but we also allow these atoms to contain (possibly structured) matrixes of features.

Beyond these extreme positions, it is useful to consider the classification of lexicalist claims made by Ackerman et al. (2011: 236). Theories can be considered lexicalist if they adhere to at least one of the premises stated below.

- **Principle of morphological integrity:** Operations in the syntactic component of grammar are unable to make reference to sub-components of words or to create new word forms
- **Principle of lexical modification:** Lexical properties associated with a lexeme (e.g. meaning, argument structure, case patterns, etc.) are fully determined by lexical stipulation and cannot be altered in the syntactic component of grammar

- **Principle of morpholexical inflection:** Morphosyntactic content associated with a lexeme's allomorphic realizations are determined by lexical stipulation prior to inclusion in the syntactic component of grammar (and cannot be altered in the syntax)
- **Principle of unary expression:** In syntax, a lexeme is uniformly expressed as a single morphophonologically integrated and syntactically atomic word form.

According to the *Principle of Morpholexical Integrity*, syntax does not have direct access to the elements that make up words (possibly morphemes, at least in Item-and-Arrangement approaches to grammar, cf. Hockett, 1947). This has received different names in the literature, with the *Lexical Integrity Hypothesis* possibly being the most wide-spread term (see Lieber & Scalise 2006). In contrast, the *Principle of Lexical Modification* makes a slightly different claim, namely that the atoms that syntax manipulates, whatever they are (lexemes, whole inflected words, morphemes, abstract bundles of features, etc.), impose their properties to the syntactic derivation, and not the opposite. This is the hallmark trait of a projectionist theory, as opposed to an exo-skeletal approach where the syntax determines the properties that a single unit might have (cf., for instance, Borer's 2005a analysis of the count / mass distinction, where no noun is inherently mass or count). As we have seen this claim is logically compatible with the negation of the first claim: Boeckx (2011) would consider a DM-approach to morphology as lexicalist even if syntax has direct access to the elements that compose the word, because these elements contain features that ultimately determine the course of the syntactic derivation. The *Principle of Morpholexical Inflection* argues that all inflectional properties are predetermined in a word before it is introduced in the syntactic derivation, and as such it would identify so-called *Strong Lexicalist Theories* (Halle, 1973; Lapointe, 1980) in contrast to *Weak Lexicalist Theories* (Aronoff, 1976; Booij, 1977) where the inflectional morphemes can be introduced in the derivation as separate elements that later on combine with the word that will receive inflection through some procedure (e.g., head movement). Finally, the *Principle of Unary Expression* makes the claim that whether a particular expression receives an analytic or a synthetic spell out cannot be determined by syntax at any level (contra Hale & Keyser, 2002), but is determined on the basis of whether that expression is a lexeme or not. As we can see, the four principles are largely independent of each other. One could easily imagine theories which follow the *Principle of Lexical Integrity* but not the *Principle of Morpholexical Inflection* if the morphosyntactic/semantic units introduced in the syntactic derivation carried with them unvalued inflectional features and whose valuation triggered

paradigmatic changes in the form. The opposite of these proposals is also easy to conceive if the value for inflection was already determined inside the items that express them –single morphemes– but a syntactic operation of movement was necessary to put them together inside one single word.

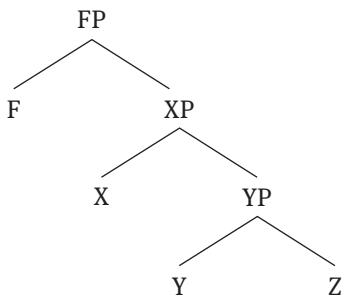
If we consider the core proposals made in this book, and sketched in §2.1, under the guise of these four principles we will immediately see that our model could be considered lexicalist in some senses, but not others. With respect to the *Principle of Lexical Integrity*, our approach in principle is non-lexicalist because the exponents that we will use as the exchange currency between syntax and the interfaces correspond to units smaller than words, not to wholly inflected elements. This will prove crucial in our argumentation, because the syntactic constituency necessary to properly restrict the content associated to an exponent (as we will see) is properly defined inside the 'morpheme', and not inside the whole word that is composed by a number of exponents. That said, however, our approach incorporates elements of lexicalism in the sense covered by the *Principle of Lexical Integrity*, specifically because we will argue that the exponent-level is the one responsible for determining which exponents will combine together inside one single word-unit. The alternative, as we will argue through the book, would be to let syntactic movement place together the syntactic constituents that compose each exponent in a way that corresponds to the attested words. We will show that this alternative view has problems with respect to any operations that require some sort of *look ahead*-function, morpheme ordering, and extractability of exponents from the word, and, even more seriously, that it becomes redundant because the notion of *wordhood* can be properly derived from properties that are independently needed to define an exponent corresponding to an affix, in contrast to a clitic. In the final chapter of this book, we advance a radical proposal of how to capture these distinctions within an exponency-based model of (morpho)syntactic computation that crucially makes use of Σ-structure.

The *Principle of Lexical Modification* is denied in our approach, so in this respect the approach adopted and developed in this book is non-lexicalist. One central claim in our approach is that the information that a single exponent contains is not defined arbitrarily in its lexical entry but has to meet the requirement that the features assembled inside an exponent form a syntactic constituent. In this sense, syntax determines what are the possible and impossible lexical entries in the exponent repertoire, not vice versa. However, as we will see through the book, our claim is that exponents can impose requirements with respect to the syntactic label of their adjacent exponents when they combine inside a word, and it is difficult (we will argue) to reduce this requisite to a clearly defined property of the syntactic environment where they are introduced. In this sense, marginally,

the exponents can lexically define part of the conditions to be a well-formed word-like expression, which is a lexicalist trait.

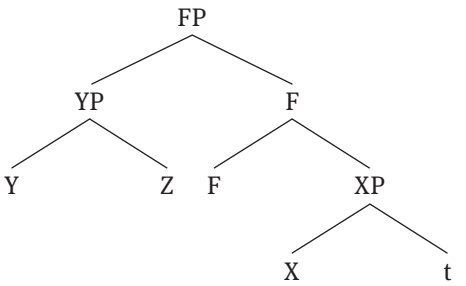
With respect to the remaining two principles, given the central claim that the information contained within an exponent is determined by syntactic constituency but that exponents correspond, roughly, to morphemes and not complete words, our model cannot be classified lexicalist in this respect. A crucial ingredient in our analysis will be that the *s*-form is not a single unit in the syntax, rather it must be further decomposed at least into two elements in order to properly account for their properties, and this makes us non-lexicalist with respect to the *Principle of Morpholexical Inflection*. Similarly, and although we have not explored the synthetic / analytic distinction in this work, we believe that it follows logically from our approach to exponency that movement can affect whether a set of features will have to be lexicalized as one, two or more exponents, because movement operations alter the constituency of the clause. For instance, in (3) X-Y-Z form one constituent to the exclusion of the rest of the structure, and in our theory a language could have an exponent that spells them out together; in (4), after movement of YP to Spec, FP, X-Y-Z do not form a single constituent anymore, so no exponent could spell them excluding F. We predict that in (4) we would need at least 2 exponents even if in (3) one could have used one.[3]

(3)



3 In this monograph, we adapt our trees to the representations of Bare Phrase Structure (Chomsky 1993, 1995), and therefore will only differentiate between X and XP –that is, there is no X' level–. However, note that to the extent that each node in the tree represents a set, the node X as a head and the subsequent non-maximal X levels will be differentiated by the members of the set that they contain.

(4)



Returning to the empirical focus of our investigation, the choice of passive and middle constructions to illustrate our proposal is not casual. These structures crucially sit at the intersection of the ***lexicalist vs. (neo)constructionist*** debate. As Levin & Rappaport Havov (2005: 71) clarify, "early discussions of event structures focused on the primary predicates that define the space of possible event structures, but event structure representations typically involve a second type of basic building block which represents the "idiosyncratic" element of a verb's meaning." The key question in this debate can be reduced to the questions of determining: i.) the locus of this idiosyncratic information, and ii.) how do distinguish this idiosyncratic information from primitive predicates. Arriving at an accurate description of the attributes of this idiosyncratic element has proven to be quite elusive (see especially e.g. discussions and debates in Alexiadou, Borer, & Schäfer 2015), which is commonly referred to as a √ROOT since Pesetsky (1995) (although it has also been labeled as "constant" in Levin & Rappaport Havov, 1995; Hale & Keyser 1997: 35; Rappaport Havov & Levin 1998a, 1998b). Proposals calling for the radical underspecification of the semantic and phonological of √ROOTS lie at the heart of current neo-constructionist approaches to the morphosyntax-semantics interface (most notably in the works of Borer 2005, 2013). The strongest thesis contends that even the ontological and categorial types of √ROOTS require a light functional head (e.g., *n, v, p*), which can assign the proper status to the √ROOT.

As one might expect, there exists the possibility of approaches that adopt a more hybrid position in this debate, where certain traits and operations are attributed to the morphological module and others to the syntactic component; however, the choice of adopting a (primarily) lexicalist vs. a (primarily) neo-constructionist model has wider ramifications beyond the morphology-syntax divide. Perhaps most notable is the effect that this debate has on the nature of the projection and composition of syntactic structure itself. The purported elimination of multiple levels of representation (i.e., D- and S-structure) in the Minimalist Program (MP; Chomsky, 1993, 1995 et seq.) challenged the conceptual necessity of bar-level projections, leading to the return to Bare Phrase

Structure (BPS) (although, as pointed out by Carnie 2010: Chapter 7, most generalizations from X-bar theory have been incorporated into the MP). Osborne et al. (2011) explicate in detail the radical departure BPS represents from traditional PSGs -- for better and for worse. Most versions of the MP support bottom-up derivational computation, where scholars such as Hinzen (2006) and others embrace the somewhat controversial view that syntax/the computational system sets the upper-bound constraints on determining the semantics contribution of an utterance to well-formed structure-meaning pairs. These paradigmatic shifts have radical consequences – not only in the way we interpret the relationship between Lexicon and Grammar, but also in how we determine the well-formedness of form-meaning mapping strategies. What is more, the ramifications of determining the structure of the ***Narrow Syntax*** extend far beyond theoretical inquiries from a Minimalist-perspective; rather, they will likely have an impact on the relationship between Lexicon and Grammar in a host of formal models. The current theoretical landscape therefore consists of a mixture of *avant garde* proposals on the mapping strategies of the complex morphosyntax-semantics interface shackled at times by operations and structural configurations that are no longer compatible with them. The structures resulting from the application of structural building and projecting principles (for now, let's simply refer to this as Merge) in some key ways resemble the ***Projection Principle*** where "representations at each syntactic level (i.e., LF, and D- and S-structure) are projected from the lexicon" (Chomsky, 1981: 29). As we explicate in greater detail in this chapter and throughout the remainder of the book in our detailed treatment of passive and middle structures in Norwegian and Swedish, other contemporary approaches encounter significant difficulties in modeling the micro-variation present in these constructions, which we seek to remedy with our model.

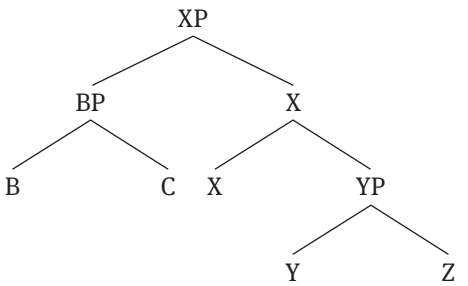
2.3 Exponency and Σ-structure

Returning to the core distinction between the Lexicon and Grammar, we shift our attention to the question of the storage of the lexical units once the computational system recursively combines and manipulates abstract symbols. The defining characteristic of our approach is that we postulate that exponents represent the fundamental blocks used to communicate the computational system with the interfaces. We adopt the following definition of an exponent in (4):

(4) ***Exponent*** – A collection/bundle of interpretable features that form a syntactic constituent are realized as a unit

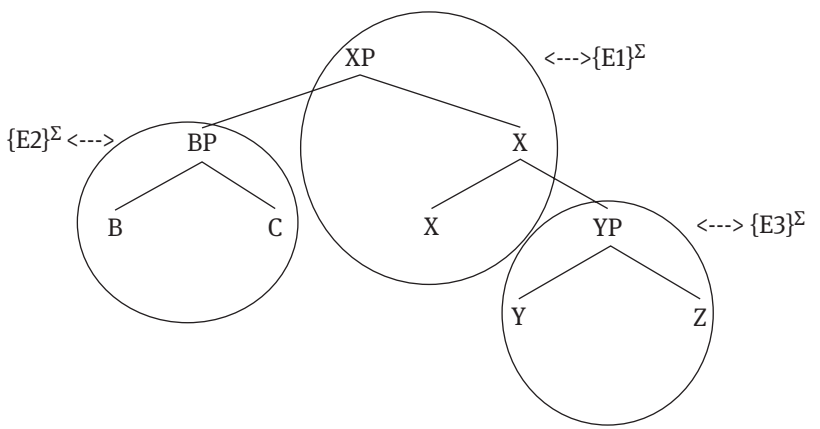
Our starting assumption is that the computational system manipulates abstract heads (containing formal features and allowing for a head to contain a bundle of features). Merge produces the usual structures, as in (5).

(5)



This structure contains a number of constituents, and at some point in the course of a derivation it will be transferred to the PF and LF interfaces. Our main claim, that separates us from other Late Insertion-approaches such as Distributed Morphology, is that before transfer can take place, these abstract syntactic structures need to be packaged for the interfaces to interpret them. This is the primary task of exponents. Exponents must exhaustively package the syntactic structure in (5), following the rule that each package must correspond to a licit syntactic constituent.

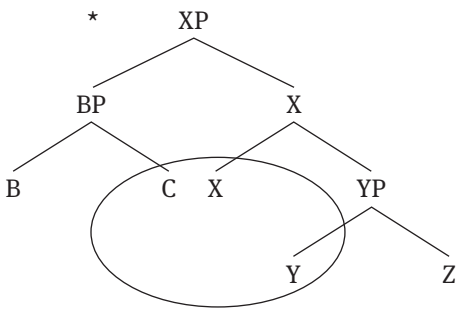
(6)



One exponent could be introduced in YP, packaging together the features contained in the heads Y and Z; another one can be introduced in BP, packaging B and C. We assume with Caha (2009) that once the complement of a head is identified by an exponent, the complement is no longer computed for purposes of constituency, so once YP has been packaged inside an exponent, XP can be identified with a third exponent which corresponds to the feature contained in X.[4]

The choice of which syntactic constituents are packaged together inside an exponent (let's label this Σ) is largely dependent on language-particular choices, namely, on which exponents are stored in the repertoire that the specific language, or one variety of that language, has. However, the general architecture proposed submits these exponents to one formal constraint: the material packaged inside them must correspond to a syntactic constituent in the diagram generated by the computational system. Consequently, no language would be able to use an exponent corresponding to (7).

(7)



In contrast to our proposal, DM argues that access to the lexical repertoire – in their terminology, the list of Vocabulary Items – occurs *after* transfer as taken place, i.e., once the PF and the LF branches of grammar have been separated from one another. The list of Vocabulary Items is stored in the PF branch, which is particularly problematic in some respects (e.g., in Embick, 2000, 2010). Part of the

4 As will become clear in the course of this chapter and the following ones, our approach is reminiscent to Nanosyntax (Starke 2002, 2009; Caha 2009; Baunaz, De Clercq, Haegeman & Lander 2018) in two senses: we adopt the procedure of Phrasal Spell Out, characteristic of part of the nanosyntactic model, and we also endorse the claim that grammar should not contain post-syntactic morphological operations able to ignore or alter the constituency relations between syntactic elements. We part ways with standard Nanosyntax in other respects, such as for instance w.r.t. the claim that languages share a highly detailed Functional Sequence and the proposal that each individual feature projects as a different head in syntax.

semantic content of an expression depends on the conceptual semantics associated to the vocabulary item inserted (Mateu, 2002). This conceptual meaning has to be computed in the LF branch of the grammar, where a combination of vocabulary items might be treated as idiomatic (e.g., *kick the bucket*) in an LF-list called *Encyclopedia* (Harley & Noyer, 1998). However, if the insertion of Vocabulary Items takes place at the PF-branch (i.e., post-syntactically), and the only way to connect PF with LF is through the computational system, it is not immediately obvious how the information stored at PF can be read by LF. This has triggered different responses, among them the claim that root elements (which contain the most conceptual semantic information) are not late inserted, but present in the derivation from the beginning (Embick, 2000), which allows LF to access them without making reference to PF. However, this would not work, given that the domain of idiomatic meaning sometimes involves one root and one affix, as in the famous example (8) (Chomsky, 1970).

(8) recit-al

This kind of problem does not apply to our proposal, because crucially we are claiming that exponents package syntactic constituents before the two branches PF and LF are split. This proposal has a number of consequences. The first one is that in our system there is no place for post-syntactic morphological operations modifying constituents and their feature endowment (*contra* Bonet, 1991; Noyer, 1992). In DM, before Vocabulary Insertion, a number of operations can be applied, involving – but not restricted to – fission, fusion, and feature impoverishment or even obliteration of whole heads. None of these operations can be used in our system, given that the exponents package the information before the structure has been transferred to PF.

Second, in our model the exponent is treated as the currency used by the computational system to communicate with PF and LF. Given their interface nature, exponents combine phonological, syntactic, and (conceptual) semantic information, that is, they are not pure PF-elements.

(9) -al

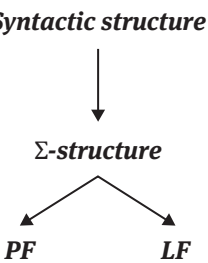
To illustrate this point, consider the structure in (9); this is an exponent that packages together a set of features (let us say, X, Y, and Z). This packager contains a set of phonological features that will be treated by PF and conceptual information that will be treated by LF, but given its interface nature, it still has access to the units and labels of the computational system. Specifically, this has the effect

that the exponent (9) will be able to have a constraint that forces it to have to their left an element of category V.

As we will see in Chapter 6, this provides us with a principled account of the distinction between clitics and affixes. Approaches to affixes in DM (e.g., Embick & Noyer, 2007) have argued that affixes are to be subsumed under the class of clitics, but this position has been criticized among others by Williams (2007), who notes (see also Zwicky & Pullum, 1983) that prototypical clitics are not picky with respect to the syntactic label of the element they attach to, while affixes generally are. This difference in DM comes as a surprise, because –as the affix is accessed as PF – making it directly sensitive to the syntactic label of its host has to be stated as a stipulation. In contrast, in our approach the exponent is expected to be sensitive to the syntactic label of its host, because it is introduced as a unit that communicates the computational system with the interfaces. This direct access to syntactic labels is central in how words are composed in natural language. We return to this important difference and present its consequences in detail in Chapter 6.

We call this interface level Σ-structure. At this level, syntactic constituents get translated as exponents, which keep the syntactic label of the constituent they package and add their own information.

(10)



As an interface unit, the exponent contains different levels of information, useful for the two interfaces (see Trommer 2012 for a list of properties of exponents). In our proposal, the exponent is not just a phonological unit, but, critically, a unit at the interface between syntax and the interfaces. For this reason, it retains the syntactic label of the constituent packaged by it – not just substitutes the syntactic features with a phonological signature, contra Halle (1990) – and can impose conditions on the syntactic label of the adjacent exponents with which it combines. This is no different from the subcategorization frame of a traditional morpheme in some lexicalist accounts (such as Scalise 1983), where *-al* was represented as follows, with a category label and a category-condition on its host:

(11) -al_N --> subcategorises for $]_V$

At this juncture, we can assume that elements that we refer to as EXPONENTS are rough equivalents to morphemes in literature that spans the morphology-syntax and morphology-phonology interfaces. The next logical question concerns the compositional nature of exponents, which we explore in more detail here. An exponent Σ consists of (i) a subcategorization frame (SUBCAT: X,Y) and (ii) an index to a particular vocabulary item. Similar to what is argued for in (strongly) lexicalist models, we assume that SUBCAT-information is not altered by syntactic operations, essentially because the exponent is introduced after the syntactic derivation has been completed; however, the syntactic derivation determines – via what constituents have been built – the internal make-up of the possible exponents in a language.

With this background in mind, we now move to a more explicit presentation of the way in which exponents are introduced and the conditions that they have to meet for Spell-Out. A premature objection to the architecture proposed in (10) may criticize the addition of **Σ*-structure***. Let us digress for moment to provide an analog from natural science to appease these concerns. As is commonplace in literature in the domain of biolinguistics, linguists and scholars in related fields seek to establish connections between cognitive and biological domains to better understand both the narrow and broad language faculties (Hauser et al. 2002). For the sake of argument, let's propose that the invariant genetic message (DNA) of language is found in our computational system. How is this message encoded in DNA carried and conveyed throughout the rest of the system? Firstly, the gene is carried to the cytoplasm of a cell prior to being decoded. Next, RNA comes into play, which is similar to DNA in that "it too consists of a string nucleotides" but "RNA molecules [...] differ from DNA in being basically single-stranded, and relatively short" (Jablonka & Lamb 2011:50). The process of *transcription* involves a single strand of DNA and is the modified further by a variant of RNA known as *messenger RNA* (mRNA). There exist even smaller, decomposed types of RNA known as *transfer RNA* (tRNA) whose "small molecules act as adaptors, carrying amino acids to the ribosome and adding them to the growing polypeptide chain in the order dictated by the sequence of codons in the mRNA. Each type of tRNA has an attachment site for a specific amino acid at one end, and at the other end it has a recognition site – a triplet that recognizes the mRNA codons for that amino acid because they are more or less complementary" (Jablonka & Lamb 2011: 50). Again, for the simple sake of analogy, RNA is condensed and reduced form is necessary to connect DNA with a polypeptide chain of folded proteins (i.e., the output at the 'interfaces'). In their discussion the link between genes and characters, Jablonka & Lamb (2011: 65) state that "the relation between

genes and proteins is usually not simple." Basically, although all of the DNA is translated into RNA, prior to arriving at the ribosomes, splicing occurs, where "large protein-RNA complexes – "spliceosomes" – excise the introns (i.e., non-translated regions of RNA) from the primary RNA transcript, and join together the remaining exons (i.e., translated regions)." DNA requires translation in order to make its important message intelligible to ribosomes. RNA performs the important function of condensing and splicing the important sequences and making this vital code legible in other domains. In what follows, it may be useful to view Σ-***structure*** playing a similar role to that of RNA, with its principle aim of organizing and splicing condensed units of meaningful information to connect with interface systems. The call for the information found in (traditional) lexical items and larger syntactic constructions (such as long-distance dependencies) to be recast as reprojection systems (Uriagereka 1998, 2008; Gallego 2016) represents another analog with our system.[5] Gallego (2016: 157) proposes that both chains (phrase-level) and lexical items that simultaneously exhibit atomic and complex behavior. To capture these effects, he argues for structure-tampering processes (such as reprojection) "that shield their internal components" from further computational operations. Although this brief digression certainly does not 'prove' our proposed architecture to be correct, it does show two things: First, our suggestion to shift the focus to an exponency-based model with the addition of another level of representation (i.e., Σ-***structure***) has a potential analog with other natural systems. This at the very least establishes evolutionary and biolinguistic plausibility for our model. Second and of equal importance, the operations and architectures we use here are largely congruent with other recent generative accounts, in particular Gallego's (2016) call for reprojectionist operations.

2.4 Levels of grammar: a toy example

As an illustration of the architecture of grammar presented here, and also as a way to advance the notation we will use to present the different levels of this architecture, can be best illustrated in a toy example, where we highlight what we share with other models of grammar and where we part ways. We assume, with Minimalism and Distributed Morphology, that syntax builds structures from a finite set of abstract morphosyntactic items which are stored in the so-called narrow lexicon. With Distributed Morphology (*pace* Embick 2000), we assume

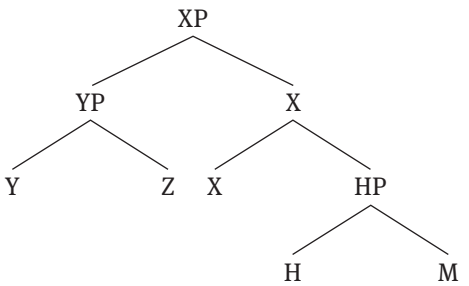
5 Importantly, as noted by Uriagereka (1998, 2008), this does not mean that the operations responsible for generating 'sub-lexical syntax and phrasal-level structures are one and the same.

that the items in the narrow lexicon are abstract matrixes of features deprived of phonological or conceptual semantic information.

(12) [X], [Y], [Z], [H], [M]

Syntax, through the operation of Merge, combines these syntactic atoms, and builds syntactic constituents with them.

(13)



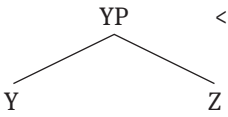
We postulate that syntax is the only level able to generate hierarchical structures such as (13); thus, any tree structure in this book should be interpreted as a syntactic representation. In order to refer to syntactic objects, if the tree representation is not used, we will employ square brackets '[' and ']' to mark syntactic constituents. Thus, from a tree structure such as (13) we can represent some of its constituents as (14):

(14) a. [X]
b. [$_{HP}$ H [M]]
c. [$_{YP}$ Y [Z]]

Once the syntactic derivation – or a larger unit of this generated structure (i.e., *chunks*), assuming phase theory (Chomsky 2000) – is complete for the purposes of syntax, the structure is transferred to the interfaces. However, the syntactic structure has to be translated to a language that the interfaces understand. This translation is performed at Σ-structure. Σ-structure can thus be seen as transfer itself; at this level, the syntactic objects are replaced by exponents. An exponent is able to substitute any syntactic constituent; it will not substitute elements that do not form a single constituent to the exclusion of other elements.

Assume that in our language we have an exponent that corresponds to the specifier of XP. We will represent the exponent using curly brackets –'{' and '}'–.

If our language has an entry like (15) in Σ-structure, this means that at the point of transfer, the syntactic constituent [$_{YP}$ Y [Z]] is translated as {exponent^{34}}.[6]

(15) 

This has several consequences: First, the structure becomes flat, that is, the hierarchical relation between Y and Z that was crucial in syntax is lost. Second, the internal constituents of YP, that in principle could be subject to distinct operation in syntax, cannot be distinguished anymore in subsequent levels, because they have been bundled together inside the same unit. Third, the information carried by the exponent is added to the representation, which keeps the label of the whole syntactic constituent substituted for. One example of the information that the exponent can bring with it is which label the exponent to its left or to its right must carry.

Assume that the syntactic representation in (13) is translated at Σ-structure as (16) in the specific language we are analyzing.

(16) {$_{YP}$ exponent^{34}} {$_{XP}$ exponent^{21}} {$_{HP}$ exponent^{132}}

This representation is now flat and linear, having obliterated both the internal structure of the original and the independence of its constituents. Only syntactic constituents can be translated as an exponent; however, note that not every syntactic constituent is translated as a different exponent; each language will determine this through the repertoire of exponents it has available.

Σ-structure is a translation level: the exponents contain both a syntactic label and an index that differentiates exponents with identical labels. This index is the one that becomes relevant at the interfaces, where specific vocabulary items

6 The numeral index of the exponent is arbitrary, of course. It should be understood as an identifier of the address of the exponent, which will be used to access the morphophonological properties of that specific exponent in the list of items that the language contains. Numerical indexes will direct towards a unique address where the specific morphophonological representation of the exponent will be specified; in some cases that morphophonological representation, legible by phonology, will contain only one member, while in other cases it will contain a set of allomorphs among which phonology will select the appropriate element. See Bye and Svenonius (2012) for a similar proposal about spell out.

with phonological and conceptual semantic information replace the exponents. We represent specific lexical items carrying phonological information between lines, '/'.

(17) a. $\{_{YP}$ exponent$^{34}\}$ <---> $/_{34}$John/
b. $\{_{XP}$ exponent$^{21}\}$ <---> $/_{21}$eat/
c. $\{_{HP}$ exponent$^{132}\}$<---> $/_{132}$apple/

As can be seen in (17), the specific vocabulary items –where we only represent items related to traditional lexical categories[7]– do not contain information about the grammatical label anymore; just the phonological (and we assume, conceptual semantic) information is present. The exponents are therefore replaced by the specific vocabulary items as bundles of exclusively non-syntactic information which PF and the conceptual semantic level will process.

Of particular importance in this context is one property of our proposed model: Σ-structure, which can be loosely interpreted as the level where morphemes are defined, directly translated syntactic structures, without intermediate operations. In this sense, we part ways with Distributed Morphology, which assumes that a level of operations that has the power –among other things– of removing features from the syntactic representation intermediates between syntax and the morphological representation. It is true that, like DM, we assume that there is a 'morphological' level which is distinct from syntax and from the purely phonological representation, but for us this level is purely non-generative in the sense that it simply translates what syntax feeds to it, without the capacity to remove features, split one terminal in two (fission) or alter the position of a head and a complement.

7 Additionally, Σ-structure will contain also exponents for grammatical properties, such as the 3rd person present inflection (/5s/, in English) and plural (also /6s/). Just like the so-called lexical items in (17), these will replace configurations of morphosyntactic features –presumably, Number Phrase and Plural Phrase in the case of the plural marker, and a head in the T domain for the subject inflection–. Like the exponents presented here, these items will be conditioned mainly by the configurations that they substitute, and the domain in which those configurations are placed. With respect to the ordering of exponents, as we will discuss in chapters 4 and 6, the position is initially conditioned by the hierarchical relations between the head(s) that the exponent substitutes and the head(s) that the other exponents substitute, but with the possibility that the morphophonological information contained in some exponents imposes specific linearity conditions. In English, the exponent /21eat/ is ordered to the left of the exponent /5s/ presumably not by syntactic hierarchy –on the assumption that lexical verbs in English do not rise to T (Pollock 1989)–, but by the requisite of /5s/ that it must be to the left of an exponent substituting a verb. Thus, we assume in this theory a certain degree of reordering at PF.

Another way in which we differentiate our theory from standard DM is that in our model Σ-structure is identical to 'transfer'; that is, transfer is translating syntactic constituents as exponents. Defining morphemes, then, is not part of the PF branch of grammar, but the precondition before a structure can be sent to PF (and the conceptual component).

2.5 Well-formedness at Σ-structure: the rules of exponent translation

We assume, therefore, a system with Late Insertion where syntax only works with abstract morphosyntactic features. This system of lexicalization aligns itself what has been known as the *Separation Hypothesis* (cf. Beard 1995; Ackema & Neelemann 2004), as it keeps the information managed by syntax as separate from that contained inside the morphophonological exponents. In contrast with Beard (1995) – where the two sets are completely autonomous of each other –, DM treats these two sides as interconnected and ordered: morphophonological exponents are inserted in specific syntactic contexts because they are sensitive to the syntactic features present in the tree representation. This treats exponents as pairs of information that relate a set of morphosyntactic features with a phonological representation (and, depending on the specific implementations of the system, other sets of non-syntactic features, such as declension class).

(18) Morphophonological exponent:

[set of syntactic features]	←→/set of phonological features/
[pl.]	←→ /-z/

Although we assume this general system of lexicalization, with Late Insertion, we part ways with DM in the crucial respect that the exponent is an interface object without phonological information. We have, thus, three objects, not two:

(19) a. Syntactic constituents: [X]
b. Exponents: $\{_{X}$ exponent$^{32}\}$
c. Vocabulary items: $/_{32}$ blah/

In what follows, we present well-formedness at Σ-structure, which in other words are the rules that we assume determine whether and when a syntactic object can be substituted by an exponent. We will refer to this substitution as ***lexicalization***, in order to distinguish it from spell-out, which we will use only for

the substitution of an exponent with a vocabulary item containing phonological information.

The lexicalization algorithm used in this work is distinct from the one assumed in DM approaches and is inspired by the nanosyntactic view of Spell-Out (Caha 2009; Pantcheva 2011; Dékány 2009). We assume the following two principles that dictate well-formedness at Σ-structure:

- The Exhaustive Lexicalization Principle (Fábregas 2007): All syntactic features present in the derivation must be matched exhaustively with lexical items
- The Superset Principle: In case a set of syntactic features does not have an identical match in the lexical repertoire, use a lexical form, which contains a superset of the features present in the syntax.

In the immediate sections that follow, we discuss in some detail how *The Exhaustive Lexicalization Principle* and *The Superset Principle* define the conditions of insertion of one exponent and the contexts where it can be used.

2.5.1 The *Exhaustive Lexicalization Principle*

Here we bring notice to the important fact that DM does not assume the *Exhaustive Lexicalization Principle*, since it adheres to the desiderata that syntactic features may be erased from the representation prior to spell-out. This DM operation is known as Impoverishment (Bonet 1991; Noyer 1992; Halle 1997; among others). The *Exhaustive Lexicalization Principle* is an explicit rejection of this sort of operation. Impoverishment indirectly allows features present in the syntax not to receive any lexical representation, because they do not form part of the representation when Vocabulary Insertion takes place.

To the extent that impoverishment is an operation that removes information that had been computed in the syntax, it violates the *Principle of Full Interpretation*: there would be bits of information contained in the computational system that are ignored by the lexicon. In contrast to this arguably negative consequence for a minimalist program of invariant computation, the *Exhaustive Lexicalization Principle* is an explicit statement that lexical insertion at PF must interpret all bits defined in the computational system and cannot ignore any part of it. Once that the *Exhaustive Lexicalization Principle* is assumed, one source of ungrammaticality for a representation would be the situation in which the syntactic representation cannot be fully lexicalized by the items available in a language. Fábregas (2007) argues that this is precisely what is behind the ungrammaticality of the directional interpretation of (20) in Spanish:

(20) **Juan bailó a la esquina.*
Juan danced A the corner
Intended: 'Juan danced to the corner'

The analysis is that Spanish *a*, although usually translated as 'to' in English, is not able to lexicalize a Path Phrase, necessary in the syntax to obtain the directional reading. In other words, Spanish *a* is a locative preposition, not a directional one. The syntactic structure underlying (20) corresponds to (21a). The exponent *a* cannot lexicalize PathP, and as this feature is left without a lexical representation, the sentence is ungrammatical (21b).

(21)	a.	$[_{VP}$	V^0	$[_{PathP}$	$Path^0$	$[_{LocP}$	Loc_0	[DP]]]]
	b.	baila-					a	la esquina
		dance					A	the corner

In order for a directional interpretation to be possible with a verb like *dance*, Spanish must use a different preposition that lexicalizes PathP. Such prepositions are *hasta* 'to' or *hacia* 'towards', which syncretically express Path and Loc.

(22)	a.	$[_{VP}$	V^0	$[_{PathP}$	$Path^0$+Loc^0	$[_{LocP}$	~~Loc~~$^{\theta}$	[DP]]]]
	b.	baila-			hasta			la esquina
		dance			to			the corner

A general consequence of this approach is that two sequences can be equally well-formed in two different languages, but they might not be equally 'lexicalizable'. If one of the languages lacks an exponent to lexicalize a particular set of syntactic features, the construction will not meet the *Exhaustive Lexicalization Principle* in that language and, therefore, the result will be ungrammatical. The adoption of this principle, thus, opens the door to a very specific treatment of language variation based on lexical differences of the idiosyncratic exponents available in different languages: even if syntactic representations are identical, results will vary in grammaticality depending on the exponents of each language. This will be precisely the strategy that we will follow to explain the absence of verbal construals for middle sentences in Swedish.

2.5.2 The *Superset Principle*

Adopting the *Exhaustive Lexicalization Principle* has one immediate consequence: whenever a set of syntactic features does not have a perfect match in the lexical

repertoire, an exponent corresponding to a proper superset, not to a proper subset, must be used. Imagine that (23) is the set of morphosyntactic features and imagine that language A does not have an exponent corresponding exactly to that set of features, but has two other exponents, one matching a subset of those features (24a) and another one matching a superset (24b). The impossibility of letting any syntactic feature be unmatched by a lexical item forces insertion of (24b) and precludes insertion of (24a).

(23) [X, Y]

(24) a. [X] ←→ /phonology 1/
b. [X, Y, Z] ←→ /phonology 2/

Intuitively, the idea is that whenever there is no perfect match between syntactic representations and exponents, lexical items that have extra features will be inserted. This again is in sharp contrast with the assumptions of DM, where the absence of a perfect lexical match for a syntactic representation are solved by using a form specified for a subset of the syntactic features, possibly preceded by impoverishment of the syntactic terminal (the *Subset Principle*). Thus, in DM the form (24a) would be used, and it would be either underspecified for Y or Y would have been erased from the syntactic terminal in (23) previous to lexical insertion.

Previous studies on morphological syncretism – where lack of a specific exponent to lexicalize a cell in a paradigm is solved by letting another form in the paradigm spell it out – have addressed these two competing theories. Caha (2009) has shown that in cases where the morphological decomposition is explicit, languages tend to use forms associated to a superset of the syntactic features. Caha's (2009) argument is two-fold: First, he suggests that the syntactic representation of instrumental case contains more features than accusative case. This can be shown in the morphological make-up of these two forms in a paradigm without syncretism: instrumental is obtained by adding extra morphemes to dative, and dative is obtained by adding extra exponents to accusative. If exponents reflect syntactic features, this shows that instrumental is obtained adding a set of features to those that correspond to accusative. The paradigm in (25) shows this proposal holds for case distinctions in Czech (Caha 2009: 246, ex. 24):[8]

8 See also Caha (2010), where additional evidence that cases are in a containment relationship is provided.

(25) Paradigm of *dobrý* 'good'

a. Accusative:	*dobrý*		
b. Dative:	*dobrý*	*-m*	
c. Instrumental:	*dobrý*	*-m*	*-i*

Once we have empirical support for the idea that instrumental case is represented syntactically by adding additional features to cases like dative, we can pose the question of whether whenever a specific exponent for dative is not available the form that has a subset of features (accusative) or that which has a superset of features (instrumental) is used. The syncretism data in (26) show that the form selected to lexicalize dative is instrumental (materialized as /m/ and a vowel).

(26) Paradigm of *dva* 'two, masculine' (Caha 2009: 266)

Syntactic representation	Exponent used
Accusative [X]	dva
Dative [X, Y]	dvě-m-a
Instrumental [X, Y, Z]	dvě-m-a

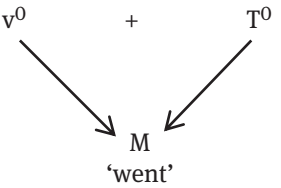
The *Superset Principle* used in DM would have falsely predicted that the morpho-syntactic features for dative would have been impoverished, erasing the feature [Y], with the consequence that accusative, matching [X], would have been used. However, it is the instrumental form, shown in (26) that involves more features than dative and therefore is more lexically specified, and is the form used to resolve the syncretism.

2.5.3 Cumulative exponence

A final aspect of our proposal concerning the lexicon that we must explicate in a bit more details involves what happens when the features expressed by a single exponent are distributed between two or more syntactic terminals. A clear instance of this situation is the undecomposable suppletive exponent *went*, which spells out simultaneously a particular verb (*go*) and a particular tense information ('past tense').

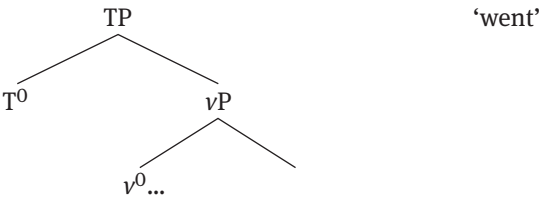
In systems that employ some version of Late Insertion, two main proposals have been presented to account for these cases. The first one, found in DM, is to propose that, in the same level where impoverishment is allowed to apply, there are specific rules that can merge together several distinct heads and map them into the same position of exponence (27):

(27) Merge + fusion
a. [$_{TP}$ T^0 [$_{vP}$ v^0...]]
b. Merge the two heads together:
[$_{TP}$ v^0+T^0 [$_{vP}$ v^0...]]
c. Fuse the two heads into a single position of exponence:



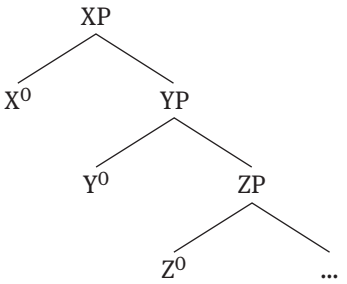
The alternative proposed in some Late Insertion accounts where the lexicon is directly related to the syntactic structure without intermediate levels is 'phrasal spell-out' (Weerman & Evers-Vermeul 2002; Neelemann & Szendroi 2007; Abels & Muriungi 2008; Caha 2009, 2010). This procedure allows (lexical) exponents to be inserted in non-terminal nodes, thus lexicalizing all the (not previously lexicalized) features dominated by that node. Therefore:

(28) Phrasal Spell-Out



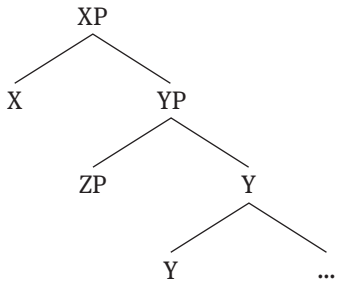
There are some predictions that apply to both approaches. For example, they both predict that in a sequence of heads as illustrated in (29), it is impossible to lexicalize with the same exponent X and Z without lexicalizing Y. In the fusion account, Y will prevent X and Z to be fused together; in the phrasal spell-out account, there is no non-terminal node that dominates X and Z without dominating Y. This intervention effect is, therefore, equally expected in both accounts. It will play a crucial role in our analysis in the chapters that follow.

(29)



The merge + fusion account makes a different prediction than phrasal spell-out, though, when it comes to intervening specifiers. As merge + fusion operates on syntactic heads, the specifier of the lower head does not block the operation in a configuration like (30). In contrast, phrasal spell-out lexicalizes with one lexical item all the material contained under a node. In a configuration like (30), it would be impossible to lexicalize with phrasal spell-out the two heads without lexicalizing at the same time the specifier of the lower head, because every node that dominates both heads also dominates that specifier.

(30)



We will see that given our analysis, unless additional assumptions are made, the merge + fusion procedure seems to be the only option available, because the relevant configuration that *-s* spells out in Norwegian can be interrupted by the specifier of the lower head.

To recap the main points of our discussion thus far, we have made it clear that we assume a system where exponents are allowed to lexicalize only a part of the features they are associated with and we account for cumulative exponence by allowing exponents to lexicalize features distributed in several syntactic terminals, provided they form a single constituent. At this point, the natural question is whether there are restrictions with respect to the conditions under which a exponent can lexicalize only a subset of its features. The answer that has been given in some of these studies is that in such situations, exponents must

lexicalize features that include the lower head they are associated with. This principle is known as the *Anchor Condition* (see Abels & Muriungi 2008). Its empirical impact is as follows: given a lexical item corresponding to features [X, Y], if the terminal containing X c-commands the terminal containing Y, this item can be used to lexicalize both terminals or a chunk containing the lowest one, but not the highest one on the exclusion of the lowest.

(31) The Anchor Condition
A lexical item with features [X...Y], where Y is the hierarchically lowest head in syntax, can only be used in contexts where Y is lexicalized by it.

[W, X, Y] can be associated to:

	a.	[WP	W	[XP	X	[YP	Y]]]
	b.			[XP	X	[YP	Y]]
or	c.					[YP	Y]
but not	d.	*[WP	W	[XP	X]]		
or	e.	*[WP	W]				

At this point, we have made explicit our assumptions about how the lexicon spells out sets of syntactic features. This will be the background of our analysis. In the next section, we will add another empirical piece to the puzzle: given that the surface difference between Norwegian and Swedish has to do with the (un) availability of *-s* to express a middle statement, are there any other differences between the structures lexicalized by *-s* in the two languages?

2.6 Morpheme-based and word-based approaches

We wish to conclude this chapter discussing how our proposal bridges the gap between two in principle opposed views regarding how morphophonological and morphosemantic units are stored in the lexicon.

We have shown in the previous pages that our approach to some extent bridges the gap between neo-constructionist and lexicalist approaches. In our view, syntactic structure determines the shape of potential exponents through constituency, but at the level of Σ-structure where the exponent is introduced each unit imposes its own restrictions, including subcategorization, and eventually a word is defined. The core of this book, in chapters 3, 4 and 5, will be to show that this exponency approach gives a principled account of passives and middles in Mainland Scandinavian which makes it unnecessary to make reference at any

level to a notion of 'passive voice' or 'middle voice'. Our treatment of these ADCs touches on yet a second debate with respect to the morphological make-up of words, and that is the controversy between morpheme-based and word-based approaches to morphology. To illustrate our point, consider the word in (32):

(32) classification

In morpheme-based accounts, the word in (32) should be viewed as an internally complex object at the morphological level, itself formed by three units: *class-*, *ific-* and *-ation*. In word-based accounts (32) is a single unit for the purposes of morphology, even if at some other level it could be treated as complex (e.g., for the purposes of its lexical semantics).

Morpheme-based accounts (sometimes called Item-and-Arrangement accounts) can be lexicalist or neo-constructionist. Hockett (1947), Halle (1973), Aronoff (1976), Booij (1977), Baker (1988), and Halle and Marantz (1993), to name just a few, argue that words should be decomposed in morphemes in one sense or the other (e.g., Aronoff 1976 famously argues that semantic criteria should not be used for the segmentation of morphemes). Word-based accounts (Item-and-Process or Word-and-Paradigm accounts) tend to be lexicalist (Nida 1948; Matthews 1972; Anderson 1992; Stump 2001; to name just a few), but we know at least of one case where the approach is made compatible with a neo-constructionist view of morphosyntax (Adger 2013).

There are several sides to this debate. Proponents of word-based approaches note that it is difficult to provide a unified view of 'morphemes' across modules. For authors like Nida (1948), the fact that the morphological marking of morphosyntactic processes does not always add an isolatable segment to the base makes the notion of morpheme as a unit untreatable. Suppletion (33a), Umlaut processes (33b), zero marking (33c) and truncation (33d) are among the most common processes mentioned in this context.

(33) a. go - went
b. woman - women
c. sheep - sheep
d. alligator - gator

Matthews (1972) and Stump (1998) note that in other cases elements/structures that should be analyzed as one single morpheme from a morphosyntactic perspective map into what seems two distinct segments within the same word (as in the famous case of the German participle, 34a); sometimes, what should correspond to two distinct pieces of morphosyntactic information, such as subject agreement and tense/aspect in the verb, map into one single morpheme (as in the Spanish indefinite past tense, 34b).

(34) a. *kauf-en – ge-kauf-t*
Buy.INF GE-buy-T, 'bought'
b. *cant-a-ste*
sing-ThV-PAST.PFCV.2.PL 'you bought (perfective)'

Anderson (1992) further notes that the *Lexical Integrity Hypothesis*, which states that syntactic processes do not have access to the internal structure of words, makes sense if words in fact lack any internal structure that syntax can refer to. The existence of the *Lexical Integrity Hypothesis* forces a morpheme-based approach to stipulate that syntactic processes only have access to the outer layer of a word's morpheme structure, or that internal boundaries have to be erased at some point. None of this is necessary in a word-based approach, because those morpheme layers and those boundaries were never there to begin with.

In contrast, from the morpheme-based side, it has been pointed out that it is difficult to extend the claim that no word has internal structure to the case of compounds. Compounds such as those in (35) follow the *Lexical Integrity Hypothesis* in the same way as derived or inflected words, and still it is not intuitive to argue that (35a) is not composed of the word for *truck* and the word for *driver*, particularly as one of its members can itself have the shape of a whole phrase (35e, Lieber 1992).

(35) a. truck driver
b. apple pie
c. pale face
d. high school musical
e. God-is-dead theology

This in fact forces authors like Anderson (1992) to argue that compounding should not be considered a pure morphological operation, but rather an impoverished syntactic operation. However, this makes it impossible to have a unified account of *Lexical Integrity*, whose effects would apply equally to words and some (reduced) syntactic objects.

Another commonly-made observation inside morpheme-based approaches has to do with phonotactic restrictions. Across languages, these theories argue, some sequences of sounds are illegitimate unless the offending sequence is separated by a morpheme boundary. For instance, in English, no simple word can have a syllable like (36), with a long vowel and a complex coda.

(36) *proogs

However, if the /s/ marks the plural form, the same sequence is perfect:

(37) spoon-s

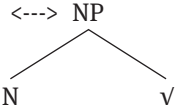
In Spanish /ts/ cannot be a complex coda, but again, if the /s/ comes from a plural form, such forms are attested.

(38) complot-s
conspiracy-pl

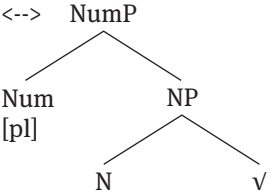
These exceptions stop being exceptions if we assume that these phonotactic restrictions apply to stored items, and the plural forms are not stored because they are built by combining two units, that is, two morphemes. As we can see, each side of the debate has strong arguments in their favor. This suggests to us that a theory that combines the insights of both approaches is needed, and we believe that our exponency-based account meets these requirements.

Our exponency-based account has properties of morpheme-based approaches because we claim that the relevant level of syntactic constituency has to be defined not for whole word forms (*contra* Adger 2013) but for individual morphemes. Therefore, in our view a word like *classification* corresponds to three segmentable units (exponents), each one of them consisting of the material of three distinct syntactic constituents. However, just like word-based approaches, we are not committed to the claim that each exponent reflects one head (therefore, one morphosyntactic unit) in a syntactic/computational structure. Our approach allows the exponent to package together *any* syntactic constituent and is importantly not only restricted to heads (as is the case in DM). Consequently, we do not make any prediction that an increment in the morphosyntactic marking of a form should blindly map into an increment in the morphophonological side. Via Phrasal Spell-Out, we can have entries like those in (39), which in actuality claim that the plural form of *woman* is the exponent *women* just as a word-based theory of morphology would treat that form.

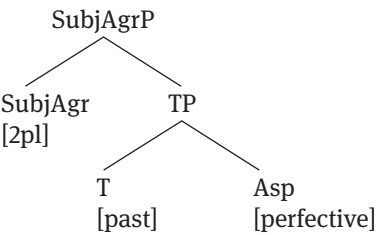
(39) a. {woman}$^{\Sigma}$ <---> NP



b. {women}$^{\Sigma}$ <--> NumP



Similarly, in our system we predict that if subject agreement and tense / aspect form a syntactic constituent at a relevant stage of syntactic computation, Spanish can license one single exponent that packages them together as a single, unified element in (40):[9]

(40) {ste}$^{\Sigma}$ <---> 

As illustrated above in (40), the exponent [ste] is the bundled combination of three featural components: {[2pl] + [past] + [perfective]}. With respect to the *Lexical Integrity Hypothesis*, we will return to this issue in chapter 6, where we argue that its effects should be seen as an effect of Σ-structure. Exponency theory, we argue, establishes the base for unifying morpheme-based and word-based approaches to word formation. With this we finish this theoretical introduction and we move directly to the empirical part of the book, where we will apply exponents to the analysis of Mainland Scandinavian passive and middle sentences. Extending our proposal to its logical conclusion, the focus on exponents draws attention to interesting ways to address the 'labeling' issues that beset some version of mainstream generative grammar (Chomsky 2013, 2015). The possibility to bundle multiple features under one unified functional project – a possibility alluded in the works of Pylkkänen (2008) and Mikkelsen (2005) – is an open prospect worth exploring in an exponency-based syntax. If the primary objective of the computational system is to generate exponents for interpretability by interface systems, this should shape and take precedence over cartographic labels put forward in earlier models. As alluded to by Boeckx (2014, 2016), realization models, such as DM and our Exponency-based one, do not preclude the possibility of an invariant computational system. The challenge, however, is to find a

9 *Extended exponence* –situations where two affixes mark what seems to be one single morphosyntactic head– are more difficult to address. DM uses fission (Noyer 1992) for such cases, but this operation is not available in our system, where no exponent can break one head (trivially one constituent) into two elements. For such cases, we follow Caha's (2009) proposal that natural languages never marks one single morphosyntactic head with two distinct morphemes (pace discontinuous morphemes), and that apparent cases of extended exponence must be reanalyzed as involving complex syntactic structures.

way to retain some degree of austerity in a narrow syntax no longer constrained by lexical features and economy operations. Bundling and its impact on labeling and phrase structure proper will play an important role in our analysis of middles and passives in Norwegian and Swedish in the chapters that follow, and we will provide a more expansive discussion of the impact this shift in focus will have on syntactic theory proper in the final chapter.

2.7 Taking stock

Let us take stock here of the operations and objects that we will use in our analysis. Our main claim is that microvariation is reduced to the role that Σ-structure plays in lexicalizing the objects that have been created in the syntax. Σ-structure mediates between syntax proper and the operations at the interfaces, including PF and LF, which behave in the standard way as the loci of phonological and semantic operations.

In syntax, we assume the operations of Merge –both external and internal, a.k.a. 'movement'–, has the power to create and destroy constituents. We also assume that there is a principled distinction between specifiers and heads, defined geometrically within a configuration. The constituents defined by syntax are preconditions for the insertion of exponents, because Σ-structure cannot operate on objects that are not syntactic constituents. The syntactic heads that we will assume in our analysis of lexical middles and passives in Norwegian and Swedish are the following:

a) V, as the part of the verbal constituent responsible for establishing a relation between a predicate and the internal argument
b) *v*, as the part of the verbal constituent that introduces the external argument and defines a verb as dynamic / eventive
c) Voice, as a relational head that establishes a figure-ground relation that profiles one constituent within the eventuality defined by the verb
d) Aspect, as the head that introduces viewpoint aspect
e) Mood, as the head that introduces modal meanings
f) K, as the head corresponding to case, whose role is to relate an argument with a predicate, and P as the head that provides lexical content to that argument relation
g) D and N, viewed in the standard syntactic way as heads that define different types of nominal and pronominal objects

Using these heads, syntax defines through Merge different constituents. Σ-structure operates on these constituents, substituting them for exponents. These exponents

are abstract morphological objects that are interpretable at PF. This substitution takes constituency as a precondition and is subject to the following principles, following nanosyntactic assumptions:

a) The Exhaustive Lexicalization Principle
b) The Superset Condition
c) The Anchor Condition

Exponents can be seen as vocabulary indexes that are interpreted as phonological sequences at PF, but they themselves lack phonological information. The other properties of exponents, such as how they differentiate between pronouns and clitics, and how they determine linear ordering in a structure, will be dealt with in chapter 6, as these properties are not central for the analysis of passives and middles that we carry out in the next three chapters. The different variation points, we will argue, are fully explained by the conditions on how exponents substitute syntactic constituents.

3 Norwegian and Swedish passives: empirical facts

This chapter presents the empirical facts involving passive sentences in Norwegian and Swedish, with particular attention to the availability of lexical *s*-passives in these two languages in §3.1 introduces the three main kinds of passive structures that we will analyze here: (i) *bli*-passives, (ii) *s*-passives, (iii) and stative passives. §3.2 discusses the shared properties of passive sentences in Norwegian and Swedish, including the existence of double object passives, impersonal passives, and pseudo-passives; these properties do not differentiate within the two languages, but are an important background for the following discussion. §3.3 concentrates on the different availability of *s*-passives in Norwegian and Swedish, focusing on five differences that, globally, make *s*-passives much more restricted in Norwegian than in Swedish. In contrast, §3.4 highlights the similarities that exist between these two languages. The final subsection here, §3.3.6, discusses two properties of *s*-passives that are shared by these two languages. The empirical generalization is that, while *s*-passives sharply differ from *bli*-passives in Norwegian, contexts where an *bli*-passive is available in Swedish are also contexts where an *s*-passive can be accepted: the *s*-passive is unmarked in this language, and the *bli*-passive has some additional conditions that make its use be non-felicitous in some contexts. It is however also not true that *s*-passives and *bli*-passives are identical in Swedish; §3.5 concentrates on the marginal differences between these two constructions internal to Swedish. Lastly, §3.6 presents data on stative passives.

3.1 Three types of passive

Both (standard) Swedish and (standard) *bokmål* Norwegian license three different passive constructions. However, as will become clear in the following pages, the distribution of these three constructions differs in each of these two languages.

3.1.1 *Bli*

Both languages license passive constructions with the auxiliary *bli* 'become'. Both languages can express eventive passives in any tense and aspect with this auxiliary (Åfarli 1992; Engdahl 1999, 2006; Lødrup 2000; Julien 2007).

https://doi.org/10.1515/9783110670912-003

(1) a. *Dette blir skrevet.* Norwegian
this becomes written
'This is being written.'
b. *Dette ble skrevet.*
this became written
'This was written.'
c. *Dette har blitt skrevet.*
this has become written
'This has been written.'

(2) a. ?*Detta blir skrivet.* Swedish
this becomes written
'This is being written'
b. ?*Detta blev skrivet.*
this became written
'This was written.'
c. ?*Detta har blivit skrivet.*
this has become written
'This has been written.'

Note that in Swedish (2) is not as natural as it would be in Norwegian. The reason, as we will see as the chapter proceeds, is that the most used passive construction in Swedish involves a lexical *s*-exponent, particularly in the present tense. However, (2a) is accepted by native speakers, and its marked value can be claimed to be a result of the fact that there is a more common, less marked structure that competes with it. In Chapter 4 when we present a detailed analysis of lexical passives, we propose an explanation for this preference: the syntactic derivation of (2) is dispreferred in Swedish because the *s*-alternative gives rise to the same semantics minimising operations.

3.1.2 *Være*

Swedish and Norwegian can use also *være* (N.) / *vara* (S.) 'be' in passive constructions. Both languages use the copular for a stative passive where a result state that follows from a previous event is expressed (Åfarli 1992, Lødrup 2000).

(3) *Dette er skrevet.* Norwegian
this is written
'This has been written.' (= 'This is now written')

(4) *Detta är skrivet*. Swedish
this is written
'This has been written.' (='This is now written')

The difference between this type of passive construction and the previous lexical variety above is related to the distinction found in other languages between eventive and stative passives. For instance, (5) example shows the eventive passive in Spanish, with the copulative verb *ser*, one reports a dynamic event, involving a change, where the subject is the logical object.

(5) *El libro fue escrito*. Spanish
the book was[ser] written
'The book was written.' (='The book underwent a process of writing')

As we shall see, the *bli*-passive acts as the Spanishh example in (5) in that it licenses a wide array of event-related modifiers. In contrast, example (6) with the auxiliary *estar*, is an instance of a stative passive where what the speaker reports is that there is a (result) state following the change, but without directly denoting the dynamic process that involves the change itself.

(6) *El libro está escrito*. Spanish
the book is[estar] written
'The book is (now) written.'

The *være*-passive, in both Norwegian and Swedish, has the same stative properties as (6), which we discuss in more detail in §3.5.

3.1.3 Morphological passives: *-s*

Finally, there is an affixal, lexical passive which involves combining the exponent *-s* with the verbal stem. Both languages license this option, albeit in very different contexts. In Swedish, the s-passive is clearly preferred, constituting 97% of passives in written texts, and 85% in oral texts (Laanements 2012: 92) –in Norwegian, the numbers go down to 48,2% (written) and 20,4% (spoken).

(7) *Dette kan skrive-s*. Norwegian
this can write.PASS

(8) *Detta kan skriva-s*. Swedish
this can write.PASS
'This can be written.'

Despite the surface similarity, and in contrast to the other two kinds of passive constructions mentioned in the previous two sections, we will see that the *s*-passive in Norwegian is much more restricted in its use and distribution than in Swedish: it can combine with fewer forms of the verbal paradigm, it is used in fewer contexts, and it involves a very specific semantics that is absent from its Swedish equivalent. In order to begin a more detailed overview of the differences between these two languages with respect to their passive constructions, in the next section we begin with an overview of the main shared properties of passive constructions in Swedish and Norwegian.

3.2 General properties of passives in Norwegian and Swedish

Here we review the specific properties of passives in Mainland Scandinavian. Unless stated otherwise, the description comes from Åfarli (1992) and Faarlund et al. (1997: §8.8) for Norwegian, which are the two works that contain the most detailed available descriptions, and from Teleman et al. (1994) for Swedish. We will also include (when necessary) the statistical data from Laanemets' (2012) detailed corpus study, where several contrasts between Norwegian and Swedish are quantified.[1]

3.2.1 Expletive subjects and impersonal passives

Direct objects of eventive verbs directly affected by an agent become, unsurprisingly, subjects in passive constructions.

1 Laanemets (2012) examined Danish, Norwegian, and Swedish passives –here we will not report on the Danish observations– in both the written and the oral language. For Norwegian, Laanemets examined the Oslo-corpus (18.3 million words) of texts from the 20th Century. For Swedish, she examined the corpus Parole, from Göteborgs Universitet (19.4 million words), with texts from 1976 to 1997. Starting from here, she produced subcorpora of written and spoken texts for each language, differentiating types of text. All passive sentence found in the spoken corpora were tagged, and 1000 for each language and type of passive were tagged for the written language.

(9) a. *Søknaden blir sendt straks.* Norwegian
application.DEF is sent immediately
'The application is being sent immediately.'
b. *Søknaden bør sendes via e-post.*
application.DEF should send.PASS through e-mail
'The application should be sent via e-mail.'

(10) a. *Scener skjuts försiktigt in i varandra.* Swedish
secenes pushed.PASS gently in into each other
'The scenes gently merged into each other'
b. *Huset har ritats av en dansk arkitektfirma.*
house.DEF has designed.PASS by a Danish architect-firm
'The house has been designed by a Danish architect firm'

An interesting statistical observation made by Laanemets (2012: 115) is that in the case of Swedish, *bli*-passives statistically prefer animate subjects (84% of animate subjects, vs. 15,6% of inanimate subjects, against a 28,6% of animate subjects in the *bli*-passive). This is not a fact that we will capture in the structural analysis to be developed in Chapter 4; we postulate that it should be derived from the marked nature of the *bli*-passive in Swedish.[2]

One-place predicates, provided that they contain an agent, can also be converted to passive verbs with an expletive subject.[3]

(11) a. *Det ble danset.* Norwegian
it was danced
'Dancing happened.'

2 Specifically, our proposal is that because the *bli*-passive is the more marked passive of the two in Swedish, it also takes as subject the more marked type of object. It is a well-known fact that agents are prototypically animate and patients are prototypically non-animate (Dahl 2008), so we would already expect a predominance of non-animate passive subjects. Animate patients are marked in this respect, and Swedish just associates this absence of prototypicality also to the non-prototypical passive. We do not think that this markedness should be represented by structural means, or by the information carried by the exponents, among other things because Swedish does not reject non-animate subjects in *bli*-passives, which is what we would expect if the primary reason for this distributional different was syntactic in nature.

3 See Larsson (2014a) for the variation in the choice of expletive pronoun used across constructions and varieties in Mainland Scandinavian –*der* 'there', *her* 'here', *det* 'it' in Norwegian; *där* 'there' and *det* in Swedish–. We will not elaborate further on these distinctions here.

b. *Det skal danses*.
it will dance.PASS
'Dancing will happen.'
c. *Det var arbeidet i hagen*.
it was worked in garden.DEF
'Working happened in the garden.'

(12) a. *Det talades. mycket om ett nyval*. Swedish
it speak-PAST-PASS much about a new-election
'A new election is being talked about.'
b. *Det snubblades och fumlades till publikens*
it stumbled-PAST-PASS and fumbled-PAST-PASS to audience.GEN
hörbara förtjusning.
audible delight
'There was much stumbling and fumbling, to the audience's audible delight.'

The impersonal passive with an expletive subject is also possible with transitive verbs, which brings up the issue of what assigns case to the internal argument (Åfarli 1992).

(13) a. *Det ble fanget en fin fisk*. Norwegian
it was catch.PAST a nice fish
'A nice fish was caught.'
b. *Det ble sendt klage på Oslo universitetssykehus*.
it was send.PAST complaint on Oslo university-hospital
'A complaint about Oslo's University Hospital was sent.'
c. *Det skal opprettes et mottak i nærmiljøet*.
it will create.PASS a reception in near-area.DEF
'A reception will be opened in the surrounding area.'

(14) *Det hördes* ljud i bakgrunden. Swedish
it hear.PAST noise in background.DEF
'Noises were heard in the background.'

In total (Laanemets 2012: 119), 2,3% of the Norwegian passives have an expletive subject, vs. a 1,1% in the case of Swedish. The frequencies, then, are very low in this respect. However, there is one interesting difference with respect to the expletives in the *bli*-passive: while Norwegian allows expletive subjects in the context of the *bli*-passive, Swedish facts suggest that they are strongly disfavored. In her

research, Laanemets (2012) finds only three sentences in the entire corpus where a *bli*-passive co-occurs with an expletive subject. However, other sources document such sentences, as in (15), from Holmberg (2002: 117).

(15) *Det blev fyra studenter arrestera-de.*
it became four students arrest.PART
'Four students were arrested.'

What is impossible in Swedish, however, is a *bli*-passive where the expletive subject is obligatorily present because the verb lacks an internal argument. It is tempting to relate this difference between Swedish and Norwegian to the independent fact that in Swedish *bli*-passives the participle agrees with the subject in gender and number; we will briefly return to this issue in the next chapter.

In this type of passive, Swedish and Norwegian contrast with respect to the available positions for the object. In Swedish, under certain conditions[4] the object can precede the participle (Larsson 2014b), while in Norwegian this word order is normally judged as ungrammatical.

(16) a. *Det har blivit skrivet tre böcker om detta.* Swedish
it has been written.NEUT three books about this
b. *Det har blivit tre böcker skrivna om detta.*
it has been three books written.PL about this
'Three books have been written about this.'

(17) a. *Det har blitt skrevet tre bøker om dette.* Norwegian
it has been written three books about this
b. **Det har blitt tre bøker skrevet om dette.*
it has been three books written about this
'Three books have been written about this.'

Note that, furthermore, in Swedish the participle agrees with the object when it precedes it (16b), while it remains neuter if the object follows it (16a) (Holmberg 2002). In fact, participle agreement is another related difference between Swedish

4 The conditions for the ordering object-participle in Scandinavian include whether there is agreement in the participle and information structure-related effects, among other parameters. See in this respect Christensen & Taraldsen (1988), Hedlund (1992), Sigurdsson (1993), Holmberg (2002), Holmberg & Nikanne (2002), and Engdahl (2017). Specifically, Engdahl (2017) conducts a corpus study where she finds that the order is generally found only when the object contains negation, suggesting that there are additional factors beyond agreement with the participle.

and Norwegian (Danish aligns with Norwegian in this respect). In the *bli*-passive structure, Swedish participles agree with the logical object in gender and number, as illustrated in (18); data from Laanemets (2012: 35).

(18) a. *Fabrik-en* *blev* *nerlag-d*.
factory-DEF.M.SG became close.down-PART.M.SG
'The factory was closed down.'
b. *Företag-et* *blev* *nerlag-t*.
company-DEF.N.SG became close.down-PART.N.SG
'The company was closed down.'
c. *Filialer-na* *blev* *nerlag-da*.
branch-DEF.PL became close.down-PART.PL

It is therefore plausible that this difference in participle agreement between Norwegian and Swedish correlates with the availability of expletive subjects in *bli*-passives.

Impersonal passives can also include an indirect object in addition to the direct object.

(19) a. *Det ble nektet oss adgang*. Norwegian
it was denied us entrance
'We got entrance denied.'
b. *Det ble fortalt eventyr til barna*.
it was told tale to children.def
'A tale was told to the children'.

(20) a. *Det har erbjudits oss vissa expansionsmöjligheter*. Swedish
it has offered.PASS us certain expansion-opportunities
'Some expansion opportunities have been given to us.'
b. *Det måste nog beredas dem plats i utbildningskommittén*.
it must probably give.PASS them place in education-committee
'A place in the education committee must probably be given to them.'

3.2.2 Passive from double object constructions

Indirect objects can also become subjects in the passive.

(21) a. *Jeg ble anbefalt denne turen på reisebyrået*. Norwegian
I was recommended this trip on travel-agency.DEF
'I was recommended this trip on the travel agency.'

b. *Nordmennene ble fratatt sine radioapparater.*
Norwegians were removed their radio-set.DEF
'Norwegians had their radio sets removed.'
c. *Han må sendes en mail med beskjeden.*
he must send-PAST-PASS a mail with message.DEF
'He must be sent a mail with the message'.

(22) a. *Totalt har Stockholms stad tilldelats* Swedish
in.total has Stockholm.GEN city allocate-PAST-PASS
125 intagningsklasser.
125 enrollment-classes
'In total, the city of Stockholm has been assigned 125 enrollment classes.'
b. *Flera direktörer har delgivits misstanke om*
many directors have serve-PAST-PASS suspicions about
smugglingsbrott.
smuggling-offenses
'Many directors have received suspicions of smuggling offenses.'

Incompatibility with the preposition *til* 'to' shows that the origin of this passive is a double object construction:

(23) **Jeg ble gitt en bok til.* Norwegian
I was given a book to
(cf. English '*I was given a book to')

Therefore, the generalization is that in a double object construction both internal arguments can be promoted to the subject position of the passive.[5]

5 It is reported that in Swedish the promotion of the goal argument to the subject position is degraded –but not completely ungrammatical– in monomorphemic verbs such as *ge* 'give' (Holmberg & Platzack 1995, Lundquist 2014, Haddican & Holmberg 2019), in contrast to bimorphemic verbs where a prefix is incorporated to the verb, such as *till-dela* 'award, lit. to-share'. Haddican and Platzack (2019) relate this generalization with case assignment: in their view, the prefix represents an additional structural layer where case can be assigned. In our proposal, we share the basic intuition, only that for us this means that the case layer (KP) related to the goal argument is not spelled out by the verbal head, but by another exponent that surfaces as a prefix that combines with the verb.

3.2.3 Pseudopassives

Prepositional objects can also become subjects in the Norwegian passive construction (Norwegian examples taken from Dyvik 1991 and Faarlund et al. 1997; see Engdahl & Laanemets 2015 for a systematic overview of pseudo-passives in Norwegian, Swedish and Danish). This is independent of whether or not the preposition is selected by the verb.

(24) a. *Det må bli passet bedre på.* Norwegian
this must be cared better for
'This must be cared for better.'
b. *Du må alltid ventes. på.*
you must always wait.PASS on
'You must always be waited for.'

(25) a. *Begåvningar skal tas hand om.* Swedish
endowments will take-s hand on
'Endowments will be taken care of.'
b. *Det rådande importstoppet skulle ruckas på.*
the current import-ban would manipulate-s on
'The current import ban would be modified.'

Engdahl & Laanemets (2015: 299) document in a corpus of 1200 passive sentences in each language that Norwegian has pseudopassives in a 4% of *s*-passives and 8% of *bli*-passives. In Swedish, the percentages are very similar: 4% of *s*-passives and 13% of *bli*-passives.

As evinced in the following series of examples, the pseudopassive is not only possible when the prepositional phrase is an argument (24a, 24a), but also in cases that are arguably adjuncts, such as commitatives, locatives, and beneficiaries.

(26) a. *Per ble tenkt på.* Norwegian
Per was thought of
'Per was thought of.'
b. *Sengen ble sovet i.*
bed.DEF was slept in
'The bed was slept in.'
c. *Gaffelen er aldri blitt spist med.*
fork.DEF is never been eaten with
'The fork has never been eaten with.'

d. *Barna ble skiftet bleier på.*
children.DEF were changed nappies on
'The children had the nappies changed.'

(27) a. *Han gjordes ideligen narr av.* Swedish
he made.PAST constantly fool of
'He was constantly ridiculed.'
b. *En hund måste alltid gås ut med när man har minst lust.*
a dog must always go.PASS out with when one has less desire
'One must always take the dog out with him when one least feels like it.'

In contrast, and this time in accordance with English, a requisite is that the PP must be VP-internal. Contrast the following two sentences below in (28) from Norwegian. According to Maienborn (2005), the two locative PPs are different. While the first introduces a location that acts as a participant inside the event (the object used to sleep), the second is external to the event, and locates it in an area (see also Faarlund et al. 1997).

(28) a. *Jeg sov i sengen.* Norwegian
I slept in bed.DEF
'I slept in the bed.'
b. *Jeg sov i byen.*
I slept in city.DEF
'I slept in the city.'

The pseudopassive can only co-occur with the internal locative PP.

(29) a. *Sengen ble sovet i.*
bed.DEF was slept in
b. **Byen ble sovet i.*
city.DEF was slept in

3.3 The *s*-passive in Norwegian and Swedish: primary differences

Here we provide an overview of the main differences between the use of the lexical *s*-passive in Norwegian and Swedish. Despite grammatical tradition, that claims that in both languages the *s*-form tends to be used in cases where no reference to a specific event is made (Western 1921, Beckman 1916), this claim clearly

does not apply to Norwegian or Swedish, and there are clear differences between the two languages. With respect to the two languages, Laanemets (2012) notices that, while in very broad terms one could say that generic clauses are indeed associated with *s*-passives, both languages show instances of *s*-passive referring to single situations:

(30) a. *og jeg håper jo. at det nettstedet snarest* Norwegian
and I hope indeed that that website. soonest
nedlegge-s.
remove.PASS
'And I in fact hope that that website is removed as soon as possible.'
[Laanemets 2012: 107, ex. 6.16c]

b. *och medan dom är där så invandera-s landet* Swedish
and while they are there then invade.PASS country.DEF
av ett. annat land.
by one another country
'And while they are there, the country is invaded by another country.'
[Laanemets 2012: 109, ex. 6.21b]

Note, incidentally, that the Norwegian sentence above in (30a) that can be interpreted as referring to one single situation is within the complement of a verb of volition and is therefore modalized: the speaker reports a situation that is not actual in the real world and reflects his or her personal wishes. Similarly, in another example cited by Laanements (2012) there is a normative flavor:

(31) *Ottesens sensasjonelle rekord kom i den offisielle treningsomgangen og*
Ottesen.GEN sensational record came in the official training.round and
godkjenne-s derfor som verdensrekord.
accept.PASS therefore as world.record
'Ottesen's sensational record happened in the official training round, and therefore will be accepted as a world record.'
[Laanemets 2012: 107]

The *s*-passive here reports something that is obligatory given the previous circumstances, namely that because of when that record was obtained it has to be accepted as a world record.

There are also cases where the *bli*-passive is used not to express single situations, but more general or abstract cases.

(32) a. *Den [...] trebåten 'Stjernen' [...] blir ofte* Norwegian
the wooden.boat 'Stjernen' becomes often
benyttet av kongefamilien.
use.PART by royal.family
'The wooden boat 'Stjernen' is frequently used by the royal family.'
[Laanemets 2012: 108, ex. 6.18a]

b. *Handläggarna på försäkringskassan blir ofta utskällda* Swedish
administrators.the on insurance.fund become often call.out.PART
och ibland hotade.
and even threaten.PART
'The administrators of the insurance fund are often called out and even threatened.'
[Laanemets 2012: 110, ex. 6.25a]

This immediately shows that a vague difference between 'single situation' or 'concrete situation' and 'general situation' or 'abstract situation' will not be enough to capture the differences between the two languages. One will have to go deeper into the properties of the languages and the meanings associated to the structure.

For starters, the *s*-passive in Swedish is the unmarked form, while in Norwegian it is the *bli*-passive that counts as unmarked. This can be shown through statistical data from Laanemets (2012). She notes that in her newspaper corpora, 97% of Swedish passives are s-passives, while in Norwegian they only arrive to 48,2%. In conversations, Norwegian has a 20,4% of s-passives, while Swedish has 85,5% (Laanemets 2012: 92).

In Norwegian, the periphrastic form is used for specific events that are located in a specific time period and specific world, while the *s*-passive is used to express (as we will see) modalised situations, habituals, generics, and repeated actions. The marked character is observed in a variety of phenomena, for instance, in the fact that the *s*-form is rarely found with morphologically marked tenses that express specific situations (see §3.1 below). The verb *se* 'see' can take the *-s* form, and in the present, *se*-es can be interpreted as a passive ('is seen') or a reciprocal ('see each other'). In the past, *så-s* 'saw-s', however, only the reciprocal interpretation is allowed.

In Swedish the distribution of this form has been diagnosed in the opposite manner: the *s*-passive is the unmarked passive form (Engdahl 2006) as, in comparison with the periphrastic form, it is found in more contexts, attested more frequently in texts and allowed by more verbs. In contrast, in this language the periphrastic form is used when the inception or the completion of the event are in focus (Engdahl 2006: 34–37).

There are several senses in which the two passive constructions share essential properties. Åfarli (1992: 16–20) shows that both types of passive display the same restriction with respect to their possible subjects – with the caveat mentioned above about the preference in Swedish *bli*-passives for animate subjects.

Second, both the *bli*- and the *s*-passive are compatible with an agentive PP. Swedish *-s* allows for the expression of an overt agent PP (28). Laanemets (2012: 133–134) finds 104 cases in her written corpus, and 124 examples in the oral one.

(33) *Musik borde göra-s av oss alla.* Swedish
music should make.PASS by us all
'Music should be made by us all.'

It has been claimed that the Norwegian *s*-passive does not allow the expression of an overt agent PP, but this is not true. Laanements (2012: 133–134) documents some cases, although the numbers are much lower of what she finds for Swedish: 62 in the written corpus, and 5 in the oral corpus.

(34) *Jeg mener at dette bør gjøre-s av andre.* Norwegian
I think that this should made.PASS by others
'I think that this should be made by others.'

Third, even though it has been claimed that the Norwegian *s*-form is compulsory after modal verbs (that is, the *bli* form should not be used after modal auxiliaries), even if the lexical *s*-form is preferred in such contexts, this is not true, as demonstrated by (30). In Laanemets' (2012: 144) quantitative study, 61,6% of the Norwegian *s*-passives in the oral corpus, and 42,8% in the written corpus, appear under a modal verb. In Swedish, combination with a modal verb of the *s*-passive occurs only in 21,2% (written) and 26,6% (oral), but the passive is also attested with and without modal auxiliaries.

(35) *Hva bør bli gjort for å redde spekkhoggeren Morgan?* Norwegian
what should be done for to save killer.whale Morgan?
'What should be done in order to save killer whale Morgan?'
NRK, 14.12.2011

Let us now move to the contexts where we observe clear contrasts between Norwegian and Swedish with respect to the licensing of lexical passives.

3.3.1 Interaction with tense

The first differences between Norwegian and Swedish *s*-passives emerge in their combination with tense and aspect. Swedish can productively attach the *s*-exponent to all verb forms, including perfect participles (Faarlund et al. 1997: §7.1.5.2e, Engdahl 1999, Julien 2007, Lundquist 2015).

(36) *göra* 'make'
  a. *gör-a-s*
     make.INF-PASS
     'to be made'
  b. *gör-s*
     make.PRES-PASS
     'is made'
  c. *gjor-de-s*
     make.PAST-PASS
     'was made'
  d. *har gjor-t-s*
     has make.PART-PASS
     'has been made'

In her newspaper corpus consisting of a total of 951 *s*-passive constructions, Laanemets (2012: 97) finds 229 in infinitive, with a modal, 309 in the present, 303 in the past, and 74 in the perfect. Forms in pluperfect and future are also found. All temporal forms are also found in the *s*-passive in the conversation corpus. The following data have been found by the authors of this monograph in *Korp, Språkbanken*, and show that the construction is fairly productive in combination with the past and perfect tenses in Swedish. There were more than three million occurrences of the sequence *-de-s* in word-final position:

(37) a. *Det är ett Reportage gjort av Katrina Grönholm-Kulmala*
     It is a documentary done by Katrina G-K
     och filmades senaste vår.
     and film-PAST-PASS last spring
     'It is a documentary made by Katrina Grönholm-Kulmala and it was filmed last spring.'

b. *Onsdagen den 26. september firades*
Wednesday the 26. september celebrate-PAST-PASS
den Europeiska språkdagen.
the European language-day
'Wednesday the 26 of September the European language-day was celebrated.'

c. *Hon, liksom många ungdomar i Pargas, påverkades*
he, as many youngsters in Pargas, influence-PAST-PASS
starkt av det som hade hänt.
strongly by that had happened
'He, as many youngsters in Pargas, was influenced strongly by what happened.'

d. *I Tyskland avgjordes atomkraftens öde av katastrofen*
In Germany decid-PAST-PASS atom-power fate by catastrophe
i Fukushima.
in Fukushima
'In Germany, the fate of atomic power was decided by the Fukushima disaster.'

e. *Det första försäljningskontoret öppnades i Vasa i höstas*.
the first selling-office open-PAST-PASS in Vasa in autumn
'The first selling office was opened in Vasa in the Autumn.'

f. *Peltola koloniträdgård byggdes år 1947*.
Peltola allotment-garden build-PAST-PASS year 1947
'Peltola's allotment garden was built in the year 1947.'

g. *Breivik dömdes enligt terroristlagen och straffades*
Breivik judged-pass under terrorist-law and punish-PAST-PASS
som ansvarig för sina handlingar.
as responsible for his actions
'Breivik was trialed under the terrorist law and found responsible for his actions.'

Below are some cases where the *s*-exponent is attached to a perfect participle.

(38) a. *Manuset har skrivits av Timo Soikkanen,*
script.def has written.PASS by T S,
professor i politisk historia vid TY.
professor in political history by TY
'The script has been written by Timo Soikkanen, professor of political history at TY.'

b. *Hennes vardag har inte påverkats av OS trots*
her daily-life has not influenced.PASS by OS despite
att hon bor nära centrala London.
that she lives near central London
'Her daily life has not been influenced by OS even if she lives near central London.'

c. *Flera försök har gjorts för att få ett slut på dem*.
many attempts have made.PASS so to get an end to them
'Many attepts have been made to put an end to them.'

d. *Jag är ganska övertygad om att han har straffats*
I am quite convinced about that he has punished.pass
för något han gjort emot kvinnorna.
for something he did against women
'I am quite convinced that he has been punished for something he has done against women.'

e. *Den irländska ekonomin har körts i botten av ett gigantisk*
the Irish economy has driven.PASS in bottom by a gigantic
nyliberalt experiment.
neoliberal experiment
'The Irish economy has been driven to the bottom by a gigantic neoliberal experiment.'

In contrast, Norwegian is extremely restricted in this respect, and only allows this construction productively in the present tense and in the infinitive, two forms that do not inflect for tense.

(39) a. *må gjør-e-s*
must make-INF-PASS
'must be made'

b. *gjør-es*
make.PRES-PASS

c. **gjor-de-s*
make-PAST-PASS

d. **har gjor-t-(e)s*
has make-part-pass

In her conversation corpus, Laanemets (2012) finds 136 cases of the *s*-exponent with an infinitive and 75 in the present, with absolutely no occurrence of the *s*-passive in past, perfect, pluperfect or future. This temporal restriction does not change in the written language: in the newspaper corpus the same author finds

441 cases of *s*-marking in the infinitive, 561 of the marking in the present, and again no cases in other temporal forms.

There are a few Norwegian verbs that, because of historical accident, carry the *s*-exponent inherently and because of that, retain it in the different temporal forms. However, the combination of the exponent with past verbal forms and participles is not productive, and these verbs can be regarded as historical relics: in their meaning a passive component is not obvious. This is the case of the verb in (40), whose meaning is lexicalized and does not express, in any obvious sense, a passive.

(40) a. *Jeg syn-e-s at hun er pen.*
I believe-INF-PASS that she is pretty
'I believe that she is pretty.'
b. *Jeg syn-te-s at hun er pen.*
I believe-past.PASS that she is pretty
'I believed that she is pretty.'
c. *Jeg har (aldri) syn-te-s at hun er pen.*
I have (never) believe-PART.PASS that she is pretty
'I have never believed that she is pretty.'

In the *Språklab Bokmål Corpus* (University of Oslo), we searched for the sequences ending in *-te-s*, intended as the combination of a past tense marker and the passive morpheme. Once we eliminated those cases where the sequence /te/ was part of the verbal stem and not tense marking, the only occurrences we found belonged to the verbs *synes* 'to judge', *(mis)lykkes* '(not) to succeed' and *skyldes* 'to be due to'.

(41) a. *Det lyktes vi med.*
that succeed.PASS we with
'On that, we succeeded.'
b. *Men veteranene syntes slekt ikke brakka var bånn.*
but veterans.DEF believed at.all not barracks were bad
'But the veterans didn't believe that the barracks were bad.'
c. *At han startet for seg selv, skyldtes at han i 1986 ble uenig*
the he started by him self cause.PASS that he in 1986 was disagreed
med ledelsen.
with leadership.DEF
'That he started his own business was due to the fact that he disagreed with the leadership'

We found marginal occurrences of the *s*-exponent + past tense or *-s* + participle in other, in this case non-lexicalized, verbs. The sequence '*har* + word ending in

-te-s' gave only 28 occurrences, and once we eliminated irrelevant cases, these two were the only occurrences of a non-lexicalized verb with the passive *s*-exponent. These sequences are, however, occasionally rejected by speakers, who feel they are formal, literary, or archaic.

(42) a. *...at de har trådd til der det har trengtes.* [*Bondebladet*, 1995]
that they have gone to there it has needed.PASS
'...that they have gone to where it has been needed.'
b. *Det har trengtes helt siden Jo kom av dage.* [R. Magerøy, *Gunhild*]
it has needed.PASS all since Jo came from death
'It has been needed precisely since Jo passed away.'

With respect to the *bli*-passive in Swedish – remember that in this language it is the marked form of the passive – Laanemets (2012: 97) finds that all temporal forms are allowed in the spoken language, while in the newspaper corpus there were no occurrences of *bli*-passive in the perfect and pluperfect. Given that the spoken language allows these temporal forms, we conclude that their absence in the newspaper corpus is an accidental gap facilitated by the marked character that the *bli*-passive has anyways in Swedish.

3.3.2 Episodicity

Another difference between Swedish and Norwegian with respect to the use of this verb form is episodicity. Swedish can employ the *s*-exponent to express an episodic claim in the present, past, or perfect tense.

(43) *Han frågas nu ut av åklagar-en.*
he interrogate.PASS now out by prosecutor.DEF
'He is being interrogated now by the prosecutor.'

Example (43) refers to a specific instantiation of the event expressed by the base verb: we express no habitual statement, no future plans or hopes, and no generic situation (see Hacquard 2006). In such episodic cases, Norwegian cannot use the *s*-exponent.

(44) **Han avhøre-s nå av aktor-en.*
he interrogate.PASS now by prosecutor.DEF
Intended: 'He is being interrogated now by the prosecutor.'

Norwegian must express the intended episodic meaning in a different way:

(45) *Han blir nå avhørt av aktoren.*
He becomes now interrogated by prosecutor.DEF
'He is being interrogated now by the prosecutor.'

Faarlund et al. (1997: §7.2.4) note that inside proverbs and other generic statements, the *bli*-passive is not unattested, but the *s*-passive dominates clearly. The following examples are cited by them as ungrammatical with a *bli*-passive.

(46) a. *Han vet hva som skal sies i slike situasjoner.*
he knows what that shall say.PASS in those situations
'He knows what has to be said in situations of that kind'
b. *Han vet hva som skal bli sagt i slike situasjoner.

(47) a. *Hva menes med dette utsagnet?*
what mean.PASS with this proverb?
'What is meant with this proverb?'
b. *Hva blir ment med dette utsagnet?

See also, for Danish, which behaves like Norwegian in this respect, Heltoft & Falster Jakobsen (1996: 202–203, examples 5 and 6).

3.3.3 Habituality

In habitual contexts, both Norwegian and Swedish can use the *s*-passive. Notice that a habitual statement, as opposed to an iterative event (Carlson 2011) is a non-episodic statement, because in them the speaker's intention is not to present an event that takes place at a particular point in time. Habitual statements characterize an entity's typical participation in a class of events (not a specific individual event) across a time period. As such, they have been connected with stativity and genericity (Krifka et al. 1995).

(48) *Jon advare-s for ofte.*
Jon warns.PASS too often
'Jon is warned too often.'

(49) *Jon varn-a-s alltför ofta.*
Jon warn-PRES-PASS too often
'Jon is warned too often.'

3.3.4 Complement of perception verbs

Another empirical difference that is probably connected to episodicity has to do with whether the *s*-exponent can be considered to denote a perceptible event or not. The realization, or progression, of a particular instance of an event can be perceived through the senses, but there is no direct sense in which a habit or a generic statement can be seen or heard.

As it is well known, infinitives that are subordinate to a perception verb must denote events, as the following contrast illustrates.

(50) a. *I saw John [become red].*
b. **I saw John [be red].*

Intuitively, this difference is due to the assumption that states do not involve changes or other dynamic components that can be perceived (but see Maienborn 2005, 2009 for a more fine-grained distinction between kinds of states). In light of this property, consider the following contrast: a Swedish passive *s*-exponent (46a) can be embedded under a perception verb; whereas in this environment a Norwegian passive *s*-exponent (46b), is ungrammatical, as noted in Engdahl (1999).

(51) a. *Vi såg tavlan avtäcka-s.* Swedish
we saw painting.DEF uncover.PASS
'We saw the painting being uncovered.'
b. ??*Vi så maleriet avdekke-s.* Norwegian
we saw painting.DEF uncover.PASS
Intended: 'We saw the painting being uncovered.'

This distinction between the *s*-exponent in Swedish and Norwegian can be captured in at least three ways.

a) *s*-passives are stative
b) *s*-passives are generic
c) *s*-passives are modal

In the remainder of this chapter we will discuss the main proposals about the nature of *s*-passives in Norwegian.

3.3.5 Modal and generic readings

Out of context, the *s*-passive in Norwegian can be – and in fact, frequently is – interpreted as a normative sentence that states a general obligation, permission, or requisite. Engdahl (1999: 14) reports that out of context, a sentence like (52) is interpreted by Swedish speakers as reporting a repeated, habitual action: every year 550 people are killed in traffic accidents. However, she notes that a Norwegian speaker tends to interpret the Swedish example as a normative statement that presents some kind of rule that enforces that roughly 550 people must be killed in traffic accidents every year.

(52) *Varje år döda-s omkring 550 personer i trafik-en.*
every year kill.PASS roughly 550 people in traffic.DEF
'Every year around 550 people are killed in traffic.'

For some speakers, such as those whose judgments Engdahl reports, the modal component meaning is salient in passive contexts. These data have led some researchers, such as Heltoft & Falster Jakobsen (1996: 201–206), to propose that, in fact, the *s*-exponent should be associated to a modal component; even though the data reported by these two researchers come from Danish, language where they make their proposal, they can directly be extrapolated to Norwegian.

The *s*-exponent can be used, without the help of overt modal verbs, to present norms and rules. Norwegian administrative texts contain uses of the *s*-form without a modal verb to express a general rule that the intended addressee has to follow (Hovdhaugen 1977: 37, Vinje 1976: 105). Norwegian speakers consulted interpret the sentence in (53) used as a recommendation to students as part of the rules of the exam (see also, for Danish, Heltoft & Falster Jakobsen 1996: 203, example 7):

(53) *Gyldig legitimasjon bringe-s til eksamen.*
valid identification bring.PASS to exam
'A valid identification must be brought to the exam.'

This norm has to be generic, general, and refer also to a non-specific addressee. It coexists with the form that makes explicit the modal meaning through a modal verb (54), which is also possible in Norwegian.

(54) *Gyldig legitimasjon {skal / må} bringe-s til eksamen.*
valid identification shall / must bring.PASS to exam
'A valid identification shall be brought to the exam.'

To say it clearly, the *s*-exponent in Swedish can also be used to express a normative or generic statement. The crucial difference is that it does not need to, while in Norwegian the *s*-exponent can only be used in such contexts. The Swedish *s*-exponent is also used to refer to specific, non-generic, events, as in *Uppgiften lämnade-s in för sent* 'the exercise was handed in too late', and this possibility is what allows an *-s* form to be the complement of a perception verb and not to trigger general normative interpretations.

This observation is supported by Laanemets' (2012) detailed corpus study. Laanemets (2012: 144) reports that in her written corpus, in the context of a modal verb in 42,8% of the cases the verb appears in an *s*-passive (61,6% in the oral language), while in Swedish the numbers go down to 21,2% in the written language and 26,6% in the oral language. Engdahl (1999) captured this contrast by proposing that the Norwegian *s*-exponent codifies a generic or modal meaning, while its Swedish counterpart is only compatible with this meaning, which can be inferred from the context, but not directly represented by this sign.

3.4 Shared preferences in the *s*-passive

The previous sections dealt with contrasts between Swedish and Norwegian with respect to the use of the *s*-passive. This subsection, in contrast, deals with two preferences in the *s*-passive that are shared by both languages.

3.4.1 Agentivity

Lødrup (2000) notices a further difference for Norwegian: the *s*-passive is the only expression of agent demotion that can appear with three verb classes which share their common absence of an agent. The first class is two-place predicates that contain a benefactive subject, like *trenge* 'need'. Notice that this verb also has a stative flavor:

(55) *Flere råd trenges ikke.*
more advice need.PASS not
'More advice is not needed.'

The second class consists of two-place stative predicates with a subject experiencer:

(56) *Bulken føles ikke i det hele tatt.*
dent.DEF feel.PASS not in the all case
'The dent is not felt at all.'

The third class contains unaccusative verbs, in an impersonal passive construction.

(57) *Det dø-s altfor mye her i sognet.*
it die.PASS too much here in parish.DEF
'There are too many deaths here in the parish.'

None of these cases allow the co-occurrence an agentive PP, as expected.

In Swedish, there are also verb classes that reject the *bli*-passive but accept the (admittedly in this language, more common) *s*-passive. Teleman et al. (1994: 383) notice that in impersonal passives – that is, when there is no logical object that can be promoted to the subject position – the *bli*-passive is marked.

(58) *Det {?blev talat / talades} både länge och väl om flykten.*
it was spoken / spoke.PASS both long and hard about escape.DEF
'It was spoken long and hard about the escape.'

If the subject is interpreted as a benefactive or an experiencer, the *bli*-passive is also marked, if not completely ruled as ungrammatical.

(59) a. *Tålamodet får aldrig {*bli mist / mistas}.*
patience gets never be missed / miss.PASS
'Patience can never be lost.'
b. *Premiet {*blev erhållet / erhölls} av en tysk flicka.*
prize.def was obtained / obtained.PASS by a German girl
'The prize went to a German girl.'

Verbs of thought, involuntary perception, and judgment tend to reject the *bli*-passive in Swedish (Teleman et al. 1994: 397):

(60) a. *Han påstods vilja byta yrke.*
he thought.PASS want change career
'He was believed to want to change his career.'
b. **Han blev påstådd vilja byta yrke.*
he was thought want change career

(61) a. *De sågs gräla i bussen.*
they saw.PASS fight in bus.DEF
'They were seen fighting in the bus.'
b. **De blev sedda gräla i bussen.*
they was seen fight in bus.DEF

In Swedish, the passivization of stative verbs commonly appears in the *s*-passive (Teleman et al. 1994: 398).

(62) a. *Gården innehas av en cykelhandlare i stan.*
estate.DEF possess.PASS by a bicycle-dealer in town
'The estate is held by a bicycle dealer of this town.'
b. **Gården blir innehavd av en cykelhandlare i stan.*
estate.DEF is possessed by a bicycle-dealer in town

3.4.2 Passives of arguments related to an infinitive in Norwegian and Swedish

Norwegian allows the subject of a subordinate infinitive to become the subject of a passive sentence. However, this is only possible with *s*-passives, never with *bli*-passives. Compare the following two sentences in (58) and (59) below:

(63) a. *Publikum bes (om) å holde seg som normalt.*
public ask.PASS (about) to carry-on as usual
'The general public is asked to carry on as usual'.
b. *Publikum ble bedt *(om) å holde seg som normalt.*
public was asked about to carry-on as usual

With the verb *be* 'ask, request' two syntactic constructions are allowed. In the first one, the requestee is the subject of an infinitive.

(64) *Jeg ber deg å holde deg som normalt.*
I ask you to carry-on as usual
'I ask you to carry on as usual.'

In the second, the infinitival structure is introduced with a strong preposition (*om* 'about') and the requestee has to come syntactically from the main predicate's projection.

(65) *Jeg ber deg om å holde deg som normalt.*
I ask you whether to carry you as usual
'I ask you about to carry you as usual.'

Admittedly, there are different ways of interpreting (65) which to some extent depends on how one conceives control structures (Williams 1980, Chomsky 1981, Manzini 1983, Koster 1984). On the surface, (65) seems to be a control structure

where the goal argument of the main verb, *be* 'beg', gives reference to the PRO subject of the infinitive. This is the standard theory of control structures as represented in Chomsky (1981) (see also Landau (2000) for modern implementations of the same proposal). However, in work developed within the Minimalist Program (see, in particular, Boeckx, Nunes, & Hornstein 2010), control structures are treated as movement configurations, specifically as configurations where theta-assignment does not prevent movement of an argument from a lexical projection (the subordinate verbal complex) to another one (the main verb's verbal complex). When an argument moves from one theta-position to another, it simply adds new entailments related to its participation in the event(s) (see also Ramchand 2008). Under this assumption, when the infinitive is not introduced by a preposition, the goal argument of the main verb is base generated within the infinitival clause and moves from there outside the subordinate clause.

This movement approach, however, cannot always be applied (as Boeckx, Nunes, & Hornstein 2010 themselves admit). In particular, we contend that the presence of a preposition *om* introducing the infinitival clause prevents movement of the argument from within the subordinate clause to the main clause: the PP-layer creates an additional level of structural complexity. Therefore, with the preposition om the structure is traditionally a control structure. The generalization, we contend, is that *bli*-passives cannot promote to the subject position an argument of the main verb derived from the subject position of a subordinate infinitive.

The restriction against promoting subjects of infinitive complements to become subjects of *bli*-passives also holds in Swedish (Teleman et al. 1994: 382). Note, however, that in the examples below the argument promoted to the subject position is never marked as a goal of the main verb. Consider (66); here we observe that a verb that takes a subordinate infinitive whose subject becomes the subject of the passive can be built with *s*-passive, but never with *bli*-passive:

(66) a. *Sören ansågs ha räddat familjen undan vanära.*
Sören believed.PASS have saved family from infamy
'Sören was believed to have saved the family from infamy.'
b. **Sören blev ansedd ha räddat familjen undan vanära.*
Sören was believed have saved family from infamy

3.5 Differences between the *s*-passive and the *bli*-passive in Swedish

In light of the overview of the data provided above, an anticipated question at this juncture concerns what differentiates the two passives in Swedish, given that the

contrasts mentioned in Norwegian normally do not apply. This section is devoted to exploring and clarifying these differences. Several works (Engdahl 1999, 2006, Teleman et al. 1994) seem to agree that the unmarked passive in Swedish is in fact the *s*-passive, and that there is a core of passive constructions where it, in use, almost blocks the *bli*-passive. According to Teleman et al. (1994, IV: 382) the *s*-passive is unmarked in Swedish. The vast majority of verbs – but not all of them – that allow an *s*-passive can also appear with the *bli*-passive.

(67) a. *Den blev reparerad av en fransman.* Swedish
it was repaired by a Frenchman
b. *Den reparerades av en fransman.*
it repaired.PASS by a Frenchman
'It was repaired by a Frenchman'

Next to the differences already noted in §2.6, there are additional contrasts that have been noticed in the literature, typically presented as factors that surprisingly make *bli*-passives as equally natural as *s*-passives or even preferred in a language where the tendency is to use the *s*-passive by default.

a) Telic verbs, specially when the focus is on the result: in such context the *bli*-passive is preferred (Teleman et al. 1994: 399).

(68) a. *Vi blev körda till skolan av min syster.*
we were driven to school.DEF by my sister
b. ?*Vi kördes till skolan av min syster.*
we drove.PASS to school by my sister
'We were driven to school by my sister'

Atelic verbs with *bli*-passives tend to be interpreted, in fact, as telic.

b) If the subject in the passive is animate and can still have some control over the event (cf. Lundquist 2016, Teleman et al. 1994: 400), *bli*-passives are chosen.

(69) a. *Bli nu bara inte rånad i Barcelona!*
be now just not robbed in Barcelona!
b. ?*Rånas nu bara inte i Barcelona!*
rob.PASS now just not in Barcelona!
'Just don't get robbed in Barcelona!'

(70) a. *Han säger att han vill bli undersökt.*
he says that he wants be investigated

b. ?*Han säger att han vill undersökas*.
he says that he wants investigate.PASS
'He says that he wants to be investigated.'

3.6 Change of state and non-change of state passives

This section addresses the empirical contrasts to which the alternation between the two auxiliaries gives rise. In Norwegian, two different verbs can combine with the participle in order to produce passive constructions: *bli* 'to become' and *være* 'to be'. In contrast with the *s*-passive, these syntactic passives allow all temporal forms and are not restricted to modal, generic, or habitual contexts.

(71)

	bli-passive	*være*-passive
Present	*blir gjort* 'is done'	*er gjort*
Past	*ble gjort* 'was done'	*var gjort*
Perfect	*er / har blitt gjort* 'has been done'	*har vært gjort*
Pluperfect	*var / hadde blitt gjort* 'had been done'	*hadde vært gjort*
Future	*skal bli gjort* 'will be done'	*skal være gjort*
Conditional	*skulle bli gjort* 'would be done'	*skulle være gjort*
Future perfect	*skal være blitt gjort* 'will have been done'	*skal ha vært gjort*
Conditional perfect	*skulle være blitt gjort* 'would have been done'	*skulle ha vært gjort*

[apud Faarlund et al. 1997: 523]

In this book we will not discuss the alternation between *ha* 'have' and *være* 'be' as a perfect marker with the auxiliary *bli* 'become'. With atelic verbs, Faarlund et al. (1997) report that in both forms can be used to denote an ongoing situation:

(72) a. *Han er elsket av alle*.
He is loved by all
'He is loved by everyone.' (= 'He is in the state of being loved by everyone')
b. *Han blir elsket av alle*.
he becomes loved by everyone
'He is loved by everyone.'

There is also no noticeable difference in meaning with durative atelic verbs that denote the description that an agent does of an object, his or her judgment about that object or its opinion.

(73) a. *Han var beskrevet som en fin fyr*.
he was described as a fine guy
b. *Han ble beskrevet som en fin fyr*.
he was described as a fine guy

The *bli*-passive can, however, co-occur with atelic verbs to mark a change of state event. Given that an atelic verb does not denote the culmination of a process, the change of state is normally interpreted as the initial state of the event, that is, as the transition between a process not taking place and starting to take place. As a consequence, as it is the case with achievement verbs, a *bli*-passive allows a future-oriented interpretation in the present:

(74) *He arrives now*.
'He will arrive now.'

(75) *Han blir elsket av alle når han kommer hjem etter dette*.
he becomes loved by everyone when he comes home after this
'He will be loved by everyone when he comes home after this.'

The clearest contrasts between *være*- and *bli*-passives appear in contexts where the verb is telic. As is the case in other languages, the *være*-passive focuses here on the state that follows after a culmination of the telic process:

(76) a. *Huset er ødelagt*.
house.DEF is destroyed
'The house has been destroyed.' (= 'The house is now destroyed')
b. *Døra er åpnet*.
door.DEF is opened
'The door has been opened.' (= 'The door is now open')

These constructions allow the typical target-state / result-state ambiguity when the participle is syncretic with an adjective (Parsons 1990, Kratzer 2000, Embick 2004). In contrast, the *bli*-passives with these telic verbs do concentrate on the change of state that brings about the result state and are therefore eventive (as opposed to stative).

(77) a. *Huset ble ødelagt*.
house.DEF became destroyed
'Someone destroyed the house.'

b. *Døra ble åpnet*.
door.DEF was opened
'Someone opened the door.'

As expected, if the contrast is between a state (*være*-passive) and a change of state (*bli*-passive), only the latter allows adverbs that presuppose dynamicity in the verb.

(78) a. *Huset ble raskt ødelagt*.
house.DEF became quickly destroyed
'The house was quickly destroyed.'
b. **Huset var raskt ødelagt*.
house.DEF was quickly destroyed

Swedish behaves roughly like Norwegian in this respect, but *bli*-passives are favored in contexts where there is already emphasis in the culminating part of the event, not excluding the dynamic part of the event that precedes that culmination (Teleman et al. 1994: 392).

(79) *Mannen blev nerslagen bakifrån och fråntagen en kasse med öl och*
man became knocked back-from and stolen a bag with beer
sin plånbok.
and his wallet
'The man was knocked down from the back and got stolen a bag with beer and his wallet.'

Again, forward-oriented readings are allowed by *bli*-passives.

(80) *Åberg blev på ett par dagar älskad av alla*.
Åberg became on a few days loved by all
'In a few days, Åberg was loved by everybody.'

The primary goal of this chapter has been just to present the facts and point out the areas where Norwegian and Swedish differ in their use of the different types of passives. In the next chapter, we will present our analysis of these differences through the lens of Σ-structure. We will show that, once one has identified the syntactic constituents to which the s-exponent corresponds in each language, these distinctions can be derived from a simple syntactic analysis which does not differentiate between flavors of Voice-heads.

3.7 Interim summary

Before moving on to the next chapter, we provide an overview of the main facts that have to be accounted by our analysis.[6]

a) *s*-passives in Norwegian cannot combine with tense inflection, while this is possible in Swedish;
b) *s*-passives in Norwegian cannot refer to specific, actual events, while this is possible in Swedish;
c) *s*-passives in Norwegian are related to non-episodic, modal meanings, which is not possible in Swedish;
d) *s*-passives and *bli*-passives differ in both languages with respect to the availability of infinitival subjects as passive subjects; and,
e) *s*-passives and *bli*-passives differ in both languages with respect to the rejection of certain aspectual types of verbs.

Beyond this, we have seen some other differences that we explicitly admit here are likely not due to syntactic effects; however, we do make suggestions in our treatment of these data as to how they can be interpreted and integrated into our system. Swedish *bli*-passives contain agreeing participles and disallow impersonal passives and complex passives; none of these properties characterizes Norwegian *bli*-passives. We suggest that they are related to each other by a single morphological property rather than syntactic means. Since the morphological property we refer to is agreement – and since we do not develop a full analysis of

6 There is an additional difference between Norwegian and Swedish *bli*-passives that we will just mention and not analyze fully in this monograph. As noted, among others, by Engh (1984), Hellan (1984), Christensen (1991) and Holmberg (2002), Norwegian *bli*-passives allow a complex passive structure where a control verb appears in the passive form followed by a past participle.

(i) *Bil-en ble forsøkt reparer-t.*
car-the became tried repair.PART
'Someone tried to repair the car' (lit. **The car was tried repaired*)

Holmberg (2002) relates the availability of this structure with whether the participle agrees or not. In his analysis, which we will assume here, the fact that Swedish participles contain agreement indicates that they head phases. Norwegian participles do not head phases. Given a configuration like (ii), if the participle heads a phase in Swedish, introducing the participial ending associated to 'try' spells out the object, preventing its moving to the subject position. If PartP does not head a phase, as in Norwegian, the second PartP does not force spell out of the object, and it can continue moving up to the subject position.

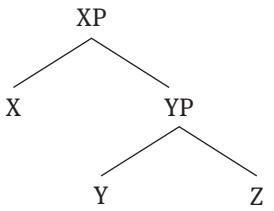
(ii) $[_{\text{PartP}}$ -ed $[_{\text{VP}}$ try $[_{\text{PartP}}$ the car$_i$ $[_{\text{Part}}$ -ed $[_{\text{VP}}$ repair $t_i]]]]]$

agreement here – we admit that our current proposal concerning the connection between these properties is not conclusive in this respect and will be the focus of future research. This caveat notwithstanding, we hope that the reader will find that there is some plausibility to our ideas in connection with the analysis we outline and develop in the subsequent chapters.

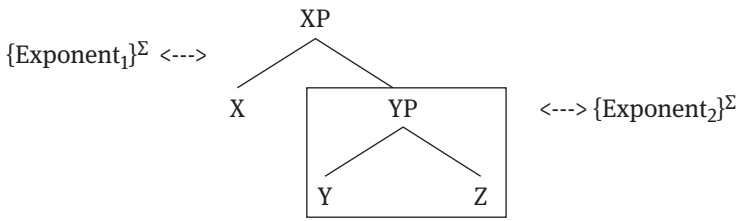
4 Deconstructing Norwegian and Swedish passives

In this chapter, we will elaborate on our Σ-structure-based analysis of passive constructions in Mainland Scandinavian. Let us briefly remind the reader of the general shape of our theoretical approach. We assume that syntax first builds constituents through the merger of heads containing abstract (matrixes of) features (1). Before transfer, those constituents are matched at Σ-structure to the available exponents in the language (2), on the condition that each syntactic feature must be matched by an exponent.

(1)



(2)



4.1 Passive voice in three types of representation

How many analytic possibilities exist that can best account for the properties of voice and diathesis? We start this chapter with a short discussion of what we hold to be the three main possibilities, and we will provide arguments in favor of the initial plausibility of the third one. Remember that the phenomena we want to account for are the following:

a) Without altering the theta roles assigned to arguments, languages seem to have the possibility of assigning the grammatical function of subject, alternatively, to an external argument or to some internal arguments.
b) This choice is generally marked morphophonologically, and there are different devices and strategies, even in the same language, to mark structures where the subject is an internal argument, not an external argument.

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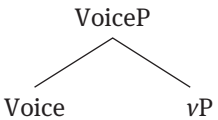
c) The choice of voice interacts with aspectual information, argument structure, case realization and –even– mood.

Let us start from a relatively uncontroversial assumption: Voice and verbs combine following the abstract representation in (3): there is a projection VoiceP that heads the verbal complex, here represented just as *v*P. While the verbal complex is responsible for properties such as theta-structure and *Aktionsart*, Voice would be associated with passive, active and – for instance, in Norwegian, Swedish, and Spanish – middle construals.

(3)



Starting from this assumption, three possibilities present themselves as viable options to account for the distinction between active and passive, the two prototypical diathesis-types:

a) A lexicalist solution: both active and passive involve one head Voice, and there are no configurational differences, but in each case Voice is a different, unique head with different features. For specificity, we could say that there are different *flavors of Voice*, in the same way that it has been proposed that there are flavors of little *v* (Harley 1995), each one containing a different feature endowment.
b) A representational solution: the difference between active and passive is reflected structurally with the primary consequence being that one of them involves more or less heads than the other. In a cartographic approach, Voice should in actuality be decomposed into two or more heads, so it is more appropriate to talk about a 'voice area' than about a 'voice head'.
c) A derivational solution: both active and passive involve VoiceP, and this VoiceP is the same projection in both cases; there are no additional heads in the active with respect to the passive or vice versa. Both construals involve the same features and heads, and the difference is derivational: what moves where, and when.

The analysis that we adopt in this monograph is a derivational one. As we will argue throughout this chapter and throughout the remainder of this book, positing a single VoiceP is that is required to account for the intricate facts of passives and middles in Mainland Scandinavian with their different morphophonological manifestations. This, we contend, makes correct predictions that the previous

two approaches cannot make, and additionally help solve one long-standing theoretical problem in verbal syntax (since Kratzer 1996): that the lexicalist and representational solutions duplicate in part the roles of *v*P and VoiceP, both being able to introduce – in some cases – an agent.

This serves as our starting point. Harley (1995) (see also Folli & Harley 2008, inter alia) famously proposed that little *v* can have different lexical representations in the same language, manifested in the form of distinct 'flavors' of this head.

(4) *v*BE
*v*BECOME
*v*CAUSE
*v*DO

These flavors are nothing but distinct matrixes of features that share a category feature '*v*' but differ in other respects. The type of complement that the heads select can be different. Significantly, *v*BECOME selects small clauses. The heads also differ with respect to the theta-role associated to them, and therefore with the semantics of the DP that can be located in their specifiers: *v*DO selects for agents, and therefore can only host in its specifier entities able to initiate and control the event (Folli & Harley 2008), accounting for contrasts such as (5):

(5) a. The earthquake threw the chairs to the other side of the room.
b. #The earthquake dragged the chairs to the other side of the room.

Finally, the existence of different flavors of *v* predicts that different heads will be able to select them, accounting for effects where the *Aktionsart* and argument structure of the verb will be relevant for several verbal periphrases. Here we review some of these facts.

This system invokes two important predictions. First, the deontic reading of modals requires agents, which in this flavor of *v* theory means that they reject of *v*-type heads such as *v*BE and *v*BECOME, which do not include agents in their structure.

(6) a. It must rain. EPISTEMIC
b. He must run. DEONTIC

This is explained if the deontic layer is sensitive to the presence of a particular head *v*DO below it, and explicitly rejects *v*BE as complement.

Another expected fact of selection if the flavors of little *v* are distinct is that aspectual periphrasis will be sensitive to the type of little *v* included, to the extent

that each auxiliary might have different selectional restrictions. For instance, the progressive form famously does not combine with stative verbs, which means that *v*BE cannot be taken as a complement by it.

(7) a. John is getting sick. *v*BECOME
b. The storm is breaking the trees. *v*CAUSE
c. John is running. *v*DO
d. *John is being sick. *v*BE

In Spanish, the use of *romper* 'break' as an auxiliary is restricted to verbs that contain *v*DO in Harley's theory:

(8) a. *Juan rompió a llorar.* *v*DO
Juan broke to cry
'Juan (violently) started crying.'
b. *Juan rompió a correr.* *v*DO
Juan broke to run
'Juan started to run.'
c. **La tormenta rompió a destruir la casa.* *v*CAUSE
the storm broke to destroy the house

To summarize, as these facts are crucial in our argumentation, the facts that are associated to a 'flavor of X' approach are the following:
– The complement selected can be different for each flavor of X
– The type of specifier can be different for each flavor of X
– Each flavor of X can be selected by different heads

Let us see how this 'flavor of X' approach would look like in the realm of Voice. Alexiadou and Schäfer (2013) and Alexiadou, Anagnostopoulou, and Schäfer (2015) in fact have proposed that each flavor of Voice is different by virtue of the second property, the type of specifier, and have argued for a system like the one in (9).

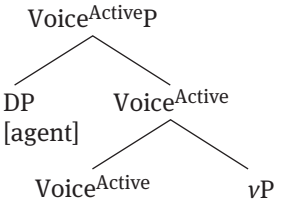
(9) a. $\text{Voice}^{\text{Active}}$ b. $\text{Voice}^{\text{Passive}}$ c. $\text{Voice}^{\text{Middle}}$

This approach is reminiscent of Schäfer's treatment (2006, 2008) of little *v*, where Schäfer also argues that different kinds of anticausative systems reflect differences in the feature endowment of different little *v*-flavors.

Voice in its active flavor would select agents in its specifier, while passives and middles would assign a different interpretation; for the time being we are not primarily concerned with whether this restriction should be manifested as a

feature [*u*Agent] contained in the active flavor of Voice or emerges as the interpretation of the configuration at LF (for instance, in the form of 'interpret as agents the DPs merged in spec, Voice^{Active}P).

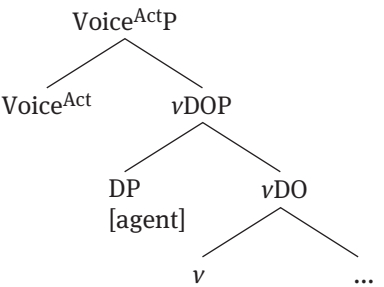
(10)



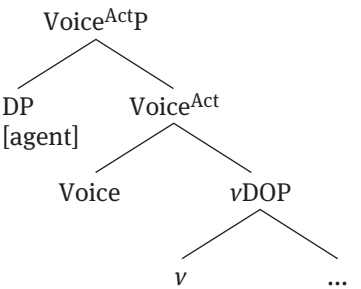
This produces a problem, acknowledged by Alexiadou and Schäfer (2013), with a potential duplication of roles between Voice and little *v*. What happens when the complement of Voice^{Active} is a *v*DO? The head *v*DO also assigns an agent theta-role to its specifier. Thus in the active sentence (11), it seems that we obtain the same result in configurations (12a), where the agent is assigned in *v*P, (12b), where it is assigned in VoiceP, and (12c), where both positions assign it and the argument moves, apparently vacuously, from one to the other.

(11) John pushed the cart.

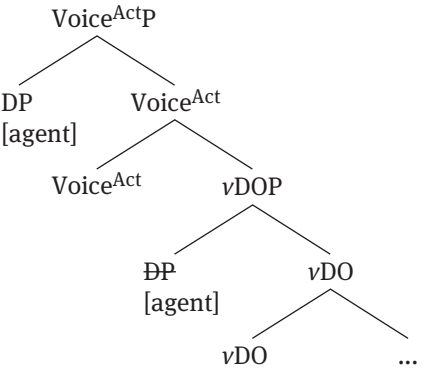
(12) a.



b.



c.



Theory-internal considerations might favor one of these three options over the other two (e.g., whether specifiers are compulsory in one or the other projection), but this problem shows that there is a certain redundancy in a system that uses flavors of Voice-projections.

But there are other considerations that also disfavor an approach to Voice carried out through flavors, or in general distinct heads sharing the same category and differing in other features. Is it true that different voices would select different kinds of *v*Ps? *Prima facie* this could be the case: as we saw in chapter 1, even if some verbs are inherently transitive, they reject passive voice.

(13) a. John deserves a punishment.
b. ??A punishment is deserved by John.

These verbs are generally stative, which could mean in an approach based on flavors of little *v* that Voice^{Passive} rejects *v*BE as a complement. However, there are more plausible ways to interpret this restriction: we know that the periphrastic passive in (13) is associated to aspectual effects in addition to the diathesis meaning it conveys: periphrastic passives seem to highlight the result state of an action, and stative verbs by definition cannot have result states associated to them. In fact, languages like Swedish or Norwegian, where there is a morphological passive do not reject it with (transitive) stative verbs. Consider the Spanish equivalent of 'to deserve', *merecer*, or the also transitive and stative verb *saber* 'to know': while they reject the periphrastic passive, the passive with *se* is accepted by them.

(14) a. **Un castigo fue merecido por Juan.*
a punishment was deserved by Juan
b. *Los castigos se merecen.*
the punishment SE deserve
'One deserves punishments.'

(15) a. ??*Esta cosa fue sabida por Juan*.
this thing was known by Juan
b. *Se saben estas cosas*.
SE know.3_{PL} these things
'These things are known.'

We conclude that it does not seem to be the case that a presumable flavor of Voice would select a different flavor of little *v*. This is at odds with an approach where different voices involve different feature endowments of the head of a Voice-projection.

Consider now the other side of the prediction: are there heads that select 'passive Voice'? In the languages we consider here we are unaware of any case where a particular complementizer or tense value is incompatible with a passive construal – remember that even though the *s*-passive in Norwegian is not compatible with past tenses, the periphrastic passive is. With respect to external or grammatical aspect, we are aware that the periphrastic passive in some languages, like Spanish, disfavors imperfective aspect (16). However, the prohibition is not strict, as imperfective aspect is possible in for instance a habitual reading (17). In any instance, the *se*-passive in Spanish is compatible with imperfectives unproblematically (18).

(16) ??*Juan es detenido*.
Juan is detained
'Juan is being detained.'

(17) a. *Juan es detenido cada vez que intenta entrar en Irán*.
Juan is detained each time that he.tries to.enter in Iran
'John is detained each time he tries to enter Iran.'
b. *Juan era detenido cada vez que intentaba entrar en Irán*.
Juan was.IMPF detained each time that he.tried to.enter in Iran
'Juan was detailed each time that he tries to enter Iran.'

(18) a. *Se vendían casas*.
SE sold.$_{IMPF}$ houses
b. *Se vendieron casas*.
SE sold.$_{PFCV}$ houses
'Houses were (being) sold.'

There are of course incompatibilities that have to be explained, but this pattern of data suggests that it is not because Voice^{Passive} cannot be selected by perfective aspect in Spanish; in that case, (17) and (18) would be unexplained. The analysis

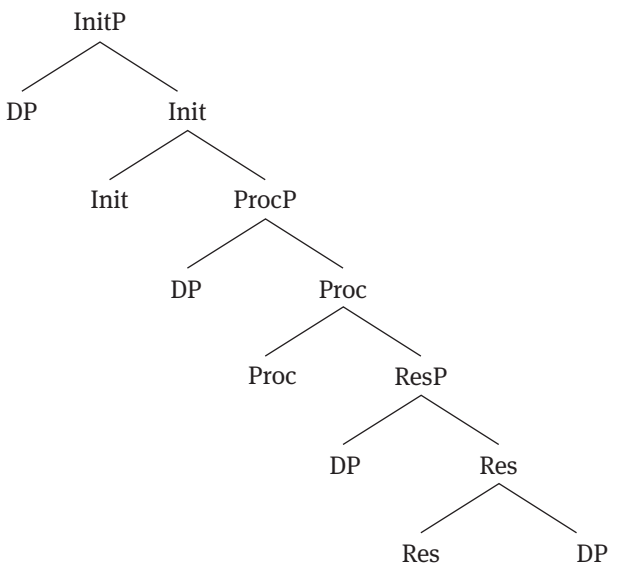
we assume here for (16) is due to Crespí (2015): the problem is in assigning an aspectual value to the participle in (16), through agreement, not selection.

Thus, the problems with treating the different voices as manifestations of flavors of the same functional head can be summarized as follows: those heads would not differ in their selectional restrictions, and there would be a duplication of work between some *v*Ps and some VoicePs.

We now move to the representational account, which encounters many of the same problems as the lexicalist view with flavors of Voice. In a nutshell, what we call the representational account is an account where 'voice' is split into more than one head. The combinations of these heads is what we jointly call 'voice', in the same way that Rizzi (1997) proposed that what we had been calling ComplementizerP is in actuality a sequence of strictly ordered heads designated for each one of the distinct roles that CP was proposed to perform: TopicP, FocusP, FinitnessP, etc. From this perspective, the difference between passive an active would not be performed through two different Voice heads, but through the presence or absence of a head or several heads within the area that we call voice. Passive could be viewed as an impoverished Voice sequence, as claimed by Haegeman (2011) that CPs can be impoverished in particular types of subordinate clauses.

We are not aware of explicit approaches where this specific claim has been made for Voice, although there are approaches to verbal complexes that represent this view. Take, for instance, Ramchand's (2008) proposal, in which events lexicalized as verbal units can be decomposed in at least three heads (init – proc – res).

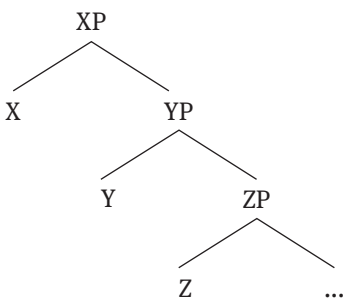
(19)



The different argument structure and *Aktionsart* properties are defined representationally through the combinations of these heads. In practice, Ramchand's (2008) approach transfers the syntactic configuration found in flavor-based approaches (such as Harley's 1995) to the feature endowment of each flavor for the same head. Leaving this difference aside, the predictions are roughly the same in both models. Init and Res are both stative heads, while Proc is dynamic and eventive; the difference between Init and Res emerges configurationally, depending on whether they are the complement of ProcP (ResP, a result state) or they select ProcP (InitP, a causation stative relation following the form 'the DP is the initiator of ProcP'). Different auxiliaries might select InitP or ProcP, accounting for the restrictions to the progressive form and deontic modals, and the specifier of each one of these heads assigns distinct theta-roles: respectively, Initiator (Init), Undergoer (Proc) and Resultee (Res).

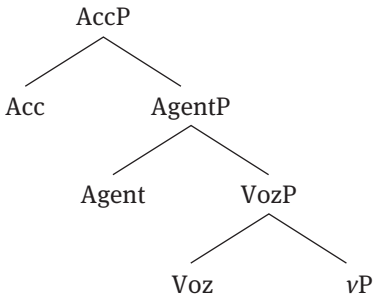
As previously mentioned, we are unaware of any explicit attempt to apply this view to voice phenomena, and perhaps for good reasons. Consider a toy representation of the Voice domain, decomposed for our purposes in three heads.

(20)



Following traditional mainstream theoretical assumptions from the Government and Binding era, passive voice is a defective version of the active where the internal argument is unable to receive accusative case and perhaps the agent is not introduced as an argument. We could even try to assign labels to each one of these heads, and claim that X is the head responsible for accusative case, Y is the head that introduces or licenses the agent in the active, and Z stands just for a head that marks that we have entered the Voice area (call it Voz).

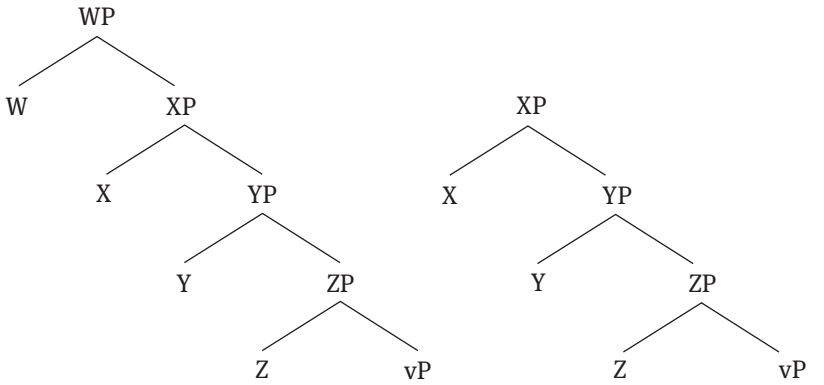
(21)



In this view we could treat the passive as a structure where the Voice domain has been impoverished and the heads that license accusative and the agent are missing. However, according to this view, we also make the wrong prediction that different heads should select different voices, which we just saw for the flavor-approach. If X has been correctly identified as Acc(usative)P, we would expect that at least some aspect would select it, or that when it is not present only heads that select AgentP or VozP can appear in the configuration. For the general case, we would expect some head to be selecting Z, and thus force the absence of Y and X, etc. The duplication problem would not be solved in this approach, either: if one of the heads in the Voice area has as a role to license agents, when the verbal complex contains a head (InitP or *v*DO) that also needs agents we would run into the same trouble as with the previous approach.

But this approach would face yet an additional problem: in a cartographic approach where there are areas dedicated to particular aspects of clausal structure and function, the heads that form a sequence inside that area are generally regarded to be strictly ordered (see specially Cinque 1999 for the middlefield between *v* and T). The prediction is that one of the two voices would contain the other voice, for instance that active would contain passive. The morphophonological evidence does not support this view. We are unaware of languages where the active is built over passive markers. The alternative view, namely that the passive contains the active, would be impossible for independent reasons.

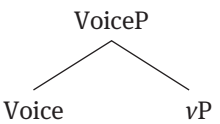
(22) a. Alleged passive representation b. Alleged active representation



The passive, as we have seen in chapter 1, seems to be defective with respect to the active, in the sense that there are case relations that become impossible in the passive. If the passive contained all the heads that the active counterparts do, and thus the active is contained in the passive, the immediate question would be why the heads involved in the active are unable to license the relevant properties, such as accusative case, when the extra passive voice is present?

Finally, we consider the derivational view, which is the one that we will defend in this chapter and throughout the remainder of this book: exactly the same head(s) are involved in the active and the passive representation of a verb. The difference is not in the feature endowment of Voice, or in projecting more or less heads within the Voice area, which explains why there are no selectional restrictions between active / passive and other heads. The rest of this chapter is devoted to further developing this approach, but we will summarize it here in a nutshell. Let us start with the representation of Voice above the verbal complex (here, *v*P for simplicity).

(23)

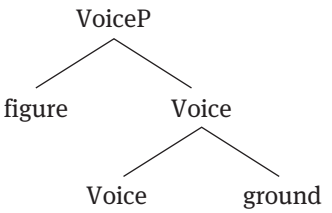


We argue that this is the initial representation of both an active and a passive (and as we will see, some middles) in the same language. The verbal complex *v*P has the role of defining the *Aktionsart* of the eventuality, assigning theta-roles and, in general, of denoting properties of an event. VoiceP does not perform either of these tasks, and is not related to agents, or the absence thereof, in any sense. The role of VoiceP is to profile the eventuality by highlighting one

of the constituents of the verbal complex as the figure inside a structured representation.

VoiceP will thus be taken in our proposal as a relational head, which profiles the eventuality by structuring it in two parts: its specifier is occupied by the constituent interpreted as the figure, and its complement contains the constituent interpreted as the ground, following the terminology of Talmy (1985). We could label Voice as simply RelP, but for expository purposes we will keep the traditional label 'Voice'.

(24)

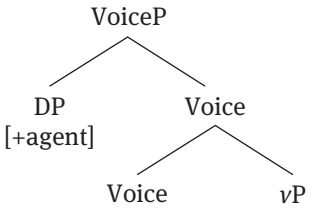


Voice is unselective with respect to the features that its specifier has to carry. It does not assign a theta role to them, beyond forcing a figure interpretation, and it does not differ in a passive and an active construal. In fact, the difference between active voice and the different types of passive voice follows from the constituent that moves to its specifier.

a) The 'active' voice is the situation where the agent introduced in *v*P moves to the specifier of VoiceP, therefore being defined as the figure –the most prominent member in the eventuality – against the background of the patient, other possible arguments and the different parts of the eventuality itself.
b) The *bli*-passive, as we shall see, is the situation where the figure of the eventuality is the whole VP, containing the patient but not the agent, against the *v*P-layer, containing the agent. This will explain, among other things, the aspectual interpretation of the *bli*-passive against the *s*-passive.
c) The *s*-passive, although for different reasons in Norwegian and Swedish, involves leaving all members of the eventuality in the background of the profiling of VoiceP.

What we call the 'active' voice is the situation where the external argument from *v*P moves to Spec, VoiceP and becomes the figure in the profiling of the eventuality. The rest of the event is interpreted as the background and is therefore not highlighted inside the eventuality.

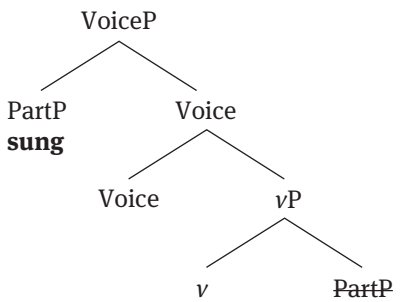
(25)



For the time being, we represent agentivity as a feature; we will see as we proceed that we propose that this theta entailment is obtained by the DP by virtue of being embedded under an agentive PP layer inside the *v*P.

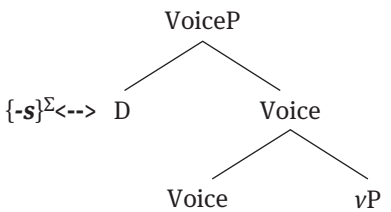
In the periphrastic passive part of the verbal complex becomes the figure (cf. also Collins 2005), with the immediate effect that the result state becomes highlighted.

(26)



Finally, in the case of the *s*-passive, which we analyze in greater detail below, no element inside the verbal complex can move to Spec, VoiceP, either because the position is occupied by the *s*-exponent (in Swedish) or because the spell out of the s-morpheme prevents any specifier from being merged inside VoiceP (in Norwegian). Example (27) represents the situation in Swedish; as the reader will notice, in the representation we make clear that we treat the Swedish *s*-exponent as the spell out of a pronoun, which is not a novel proposal among the theories that analysed the *s*-exponent in Scandinavian; see among others Hedlund (1992) and Julien (2007).

(27)



This is the analysis that we will develop in the rest of the chapter for voice phenomena, concentrating on Mainland Scandinavian. Before we move to the details, let us summarize our main theoretical claims:

- VoiceP is a relational head whose role is to profile the eventuality in a figure / ground structure
- The Voice head involved in passive and active construals is identical
- The difference between active and passive follows derivationally by the nature of the constituent that moves to Spec, VoiceP

We must be clear that with this proposal we do not intend to say that the whole structure involving an active construal and a *bli*-passive – to name the case that is most structurally complex in our account – are identical in any respect but what moves to the specifier of VoiceP. As the reader will see, a crucial part of our analysis is that the *bli*-passive, below Voice, contains an Aspectual head between VP and *v*P which, crucially, the *s*-passive and the active construction lack. The presence of this aspectual head forces movement of AspP to the specifier of Voice for interpretability reasons, this creating a configuration where the patient will be higher than the agent. Thus, our claim is not that any of the voice structures is identical to the others.

Our claim is rather that, as per the content of VoiceP, there are absolutely no feature endowment differences, or distinct semantic restrictions, in the active and the passive. Voice, as a head, will always be the same: a relational element that treats as a figure whatever is introduced in its specifier, and which closes the verbal complex. The differences between the so-called 'active' and 'passive' derive from the element that moves to its specifier, and the choice of which element moves could be forced by the presence of an additional layer below VoiceP, as we will argue happens in the case of the *bli*-passive.[1]

With this in mind, we discuss next our assumptions about case theory and participles.

1 Note, also, that AspP itself cannot be made responsible for the passive interpretation. AspP is passive only to the extent that it defines here a constituent where an internal argument is merged, but which excludes the external argument. AspP, here, is 'passive' only because it does not contain an agent, but this follows directly from the position where it is introduced and does not get reflected in its feature endowment.

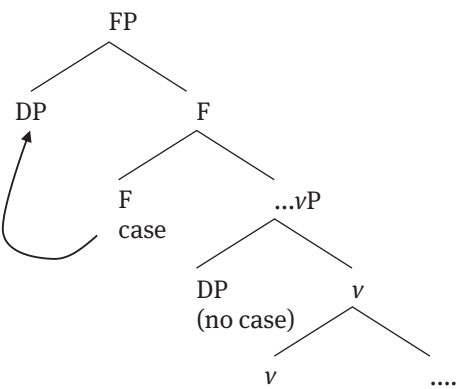
4.2 Background: case and participles

Before we make further advances and incorporate additional machinery into our analysis, however, we must clarify two important assumptions we make in this book, and which will play a crucial role in the analysis.

4.2.1 Case theory

The study of case has a tradition too rich to exhaustively review here. Instead, we will concentrate on two views of case: the checking theory of case and the case-as-extended-projection theory. The initial proposal of Case theory steps from initial proposals in the work of Vergnaud (1977) and Chomsky & Lasnik (1977), where case is assigned to arguments as a formal way of licensing them within the verb's extended projection. No argument enters the derivation with case, and a formal operation of some kind –generally involving feature checking– has to be applied to them in order to assign them case. There are many different alternatives here, all discussed in the relevant literature: whether case is a feature per se or the uninterpretable version of another feature (Pesetsky & Torrego 2001); some propose that case is just an outcome of full agreement of a DP with a strong probe (Chomsky 2000); some argue that the different morphological cases are not assigned until after syntax (Marantz 1991, Bobaljik 2007). However, the intuition remains in all these works that DPs are introduced without case and case is assigned under certain licensing conditions.

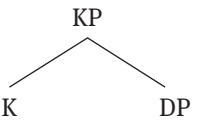
(28)



The competing view has received less consideration in the literature, until recently, and to the best of our knowledge was first proposed in Fillmore (1968). In Fillmore's theory, arguments are introduced carrying case as their highest

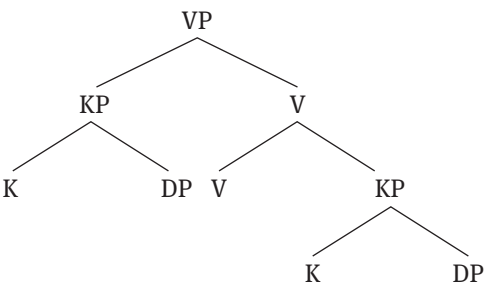
projection. No formal operation is necessary in order to assign case to them, as case is already present, and licensed, in the structure.

This second view is the one that we assume here. Thus, there is a difference between a case-less DP (29a) and a DP with case (29b) in terms of the syntactic projections that each one of them contains.

(29) a. DP b. 

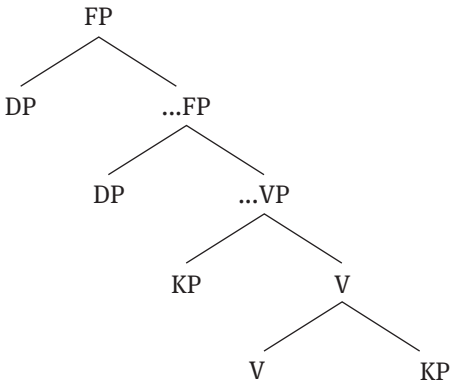
Among the authors that have argued for this theory in the last years, see Neeleman &Weerman (1999) and Caha (2009, 2010); each one of these theories has subtle and distinct differences: the distributional restrictions of phrases marked with, say, accusative and nominative differ because the licensing conditions of a KP marked as accusative are different from those that mark nominative. In Caha (2009, 2010), KP is split in a sequence of strictly ordered heads, accounting for Blake's (1986) case-hierarchy.

In the case-as-extended-projection theory that we adopt here, case projections can be used to account syntactically for the argument structure of a predicate (Starke 2014). Here we review the basic elements of Starke's approach. Imagine that we have syntactic configuration like the one in (30): a verbal predicate contains two arguments, each one of them marked with a different KP.

(30) 

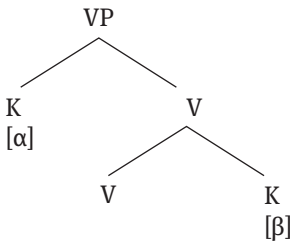
After movement operations, assume that the two DPs abandon the VP and leave behind their respective KPs which they are extracted from.

(31)



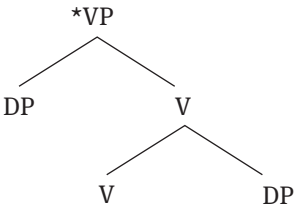
Now, the representation of the verb in syntactic structure is the one in (32): a VP that contains, marking the place of insertion of the two arguments, two KPs, which we assume to be marked by two different values, α and β.

(32)



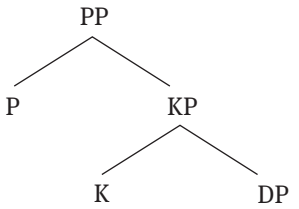
This representation would be matched by a number of exponents sharing the properties that (i) they correspond to a VP and (ii) they contain an argument marked as alpha and a second argument marked as beta. In this way, this theory of case, where arguments are introduced in the derivation with case projections, can account for how verbal exponents can only be introduced in contexts where a particular argument structure is licensed, without the need to define additional context-of-insertion constraints (as in Harley & Noyer 2000, for instance). Consequently, in this view KPs are the linkers between a predicate and its arguments, capturing why a DP cannot act as an argument of a predicate unless it is related to case. In our theory, the following representation is impossible, because a DP without KP is inserted in an argument position, thus providing a nuanced interpretation of the traditional Case Filter.

(33)



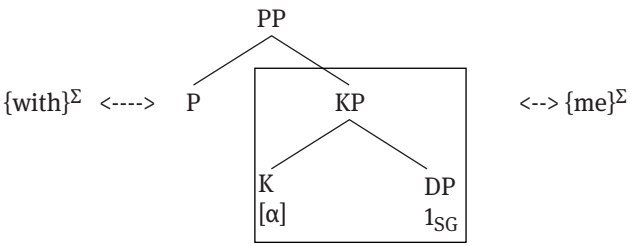
KPs are selected in several contexts. Not only verbs, but also lexical prepositions can select for KPs. Let us focus shortly on this aspect, as it will be crucial in our treatment of agents: consider (34).

(34)



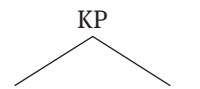
In this configuration, the preposition selects a KP that can be marked in different values (e.g., German prepositions selecting accusative, dative or genitive; Russian prepositions selecting instrumental, genitive or dative, etc.). On the standard assumption that a pronoun is a DP, in the sequence *with me*, *with* corresponds to P and me is the exponent that materializes KP+DP, with a particular case value.

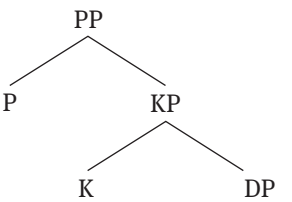
(35)



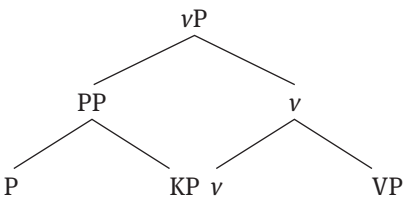
The boundaries between case and prepositions are, as is well-known, difficult to define: some prepositions seem to act as case markers (as for instance the differential object marking preposition *a* 'at' in Spanish, cf. Torrego 1998). Thus, P and K can be viewed as two stages in the extended projection of a DP. It is also known that some prepositions have the ability to assign theta-role to their complements, as it is the case with *with*, while others seem to assign a particular theta-role in cooperation with other predicates. One case illustrating the second situation is

the preposition *by* when introducing agents. It is clear that *by* is able to assign several theta-roles: some locations are also introduced with this preposition (*by the sea*). However, in the context of a passive form of a verb, *by* assigns an agent theta role. Thus, we predict that there can be three types of DPs, and that two of them can be introduced as arguments of a verb (36b, 36c).

(36) a. DP b. 

c. 

Our claim will be that agents are always introduced as PPs (36c):

(37) 

In this configuration, the agent theta role is assigned by P in the context of Spec, *v*P: out of the different interpretations of P (in English materialized as *by*), Spec, *v*P selects the agentive one.

4.2.2 Participles

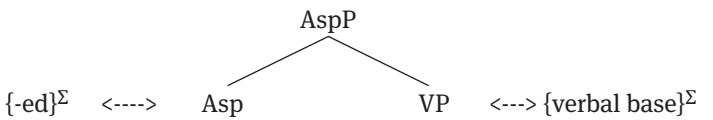
Another important aspect of the analysis of voice and diathesis is the nature of the participle. Again, the literature on participles is too extensive to provide a full overview of it their properties (however, see, among many others, Wasow 1977, Levin & Rappaport 1986, McIntyre 2013, Bosque 2014 for a substantial review).

Theories about the participle differentiate between adjectival and verbal participles, and there are two possible analyses on the table: a lexicalist one and a neo-constructionist one. The lexicalist one treats verbal participles as the result of syntactic operations, while adjectival participles involve a morphological operation that redefines the label of the participle from V to A (Wasow 1977). In the neo-constructionist analysis, both kinds of participles are generated in syntax (cf. Embick 2004, specifically), and the differences between adjectival and verbal

participles depend on how much verbal functional material is embedded in the participle. In this monograph, we assume a neo-constructionist analysis, and in fact we try to push a little bit further the underspecification of participles.

There are several questions about how many heads participles include. In our proposal, participles are simply big VPs – that is, VPs lacking the causative *v*P-layer – selected by an underspecified Asp(ect) head, corresponding to external or grammatical aspect (38).

(38)



The first question here is whether Voice is necessary to define participles. It is true that *ed*-participles tend to be associated to a passive meaning, without agents (39), which suggests to some that Voice is necessary in their definition (Bosque 2014). In our account, this follows from the fact that all it takes to form a participle is to select VP with an aspectual head, so *v*P is not necessary in their structure, in principle (although, as we will see, it can be present but lexicalized by another exponent). However, participles can also appear in active constructions, where the subject of predication is interpreted not as an internal argument, but as an agent (particularly in the presence of degree modifiers; cf. Armstrong 2013) (40).

(39) a. a broken bone
b. a fully written book

(40) a. a well-read man
b. a well-travelled man

Thus, there is nothing in the participle that in principle forces a passive interpretation, and therefore Voice is excluded from the internal structure of the participle. We will not deal here with how the active construal in (40) is to be analyzed. We suggest that it is a result of the subject being interpreted as an undergoer, i.e., the entity that has 'travelled' through a path defined by a process, in our cases the processes of reading and travelling, not as the resultee that is to be found in a particular result state once the process has culminated. See Armstrong (2013) for a minimalist analysis of the distinction where the conceptual semantics for each predicate is crucial in licensing this non-passive interpretation.

Second, let us substantiate the claim that the aspect of the participle is underspecified, rather than defined by a particular value. One first observation is that

participles tend to inherit aspectual properties from their bases. The participle of a purely stative verb denotes a simple state, while the participle of a telic verb tends to denote the result state that follows the culmination of the telic process.

(41) a. The answer is (well-)known.
b. This house is owned by the government.

(42) a. The house is destroyed.
b. The book is written.

Atelic verbs, when they allow participial constructions, denote ongoing processes. This does not happen very frequently, and sometimes a manner adverb is necessary to license the reading, but this imperfective, non-stative, reading is attested (McIntyre 2013) (remember that manner adverbs are ungrammatical with stative predicates, Dowty 1979, Maienborn 2003):

(43) a. a carefully driven car
b. a carefully guarded entrance

For all these reasons, it seems clear that the aspectual node heading the participle must be underspecified with respect to its information. As such, we expect the aspectual interpretation of the participle to follow from the *Aktionsart* of the base verb, the modifiers combined with it or, in some other cases, auxiliaries combined with them.

(44) John has driven the car.

This book is not about participles, so we will not get into the complex patterns of data that the different aspectual interpretations of participles in different contexts exhibit. What is crucial for our analysis is that, in principle, participles involve an aspectual head, and that aspectual head is severely underspecified. To the extent that stativity is taken to be the default aspectual value –the interpretation that emerges when dynamicity and telicity have not been defined–, this underspecification explains their tendency to denote states, although the nature of the selected verb and the presence of arguments can impose other interpretations. In principle, participles are built by selecting the VP-layer, and that explains their tendency for non-agentive meanings, because the head *v*P that introduces agents is missing, but Voice is not present, and as such non-passive interpretations where the entity is interpreted as an undergoer are also possible.

With this background in place, let us now move to our analysis of the passive constructions in Norwegian and Swedish.

4.3 The *bli*-passive in Swedish and Norwegian

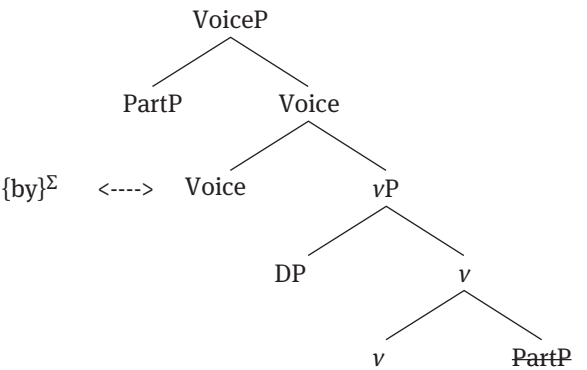
For reasons that will become clear soon, we will start with the analysis of the *bli*-passive in both languages. As a reminder, here are the differences between the two passives shared by the two languages:

i. *s*-passives are possible in long passives, but *bli*-passives reject long passives
ii. *s*-passives are possible with a variety of verbs that lack an agent subject, passive or eventive, while *bli*-passives are impossible with them.

4.3.1 Outline of the analysis

Our proposal about the *bli*-passive builds on Collins' (2005) smuggling analysis, with some technical changes that will be spelled out in due course. Collins' proposal is as follows: the basic structure of a passive is the one represented in (45) (2005: 87, 95).

(45)



The analysis has three crucial components: the first and crucial one, which we will accept here, is that the surface structure of the passive is obtained when a verbal phrase below *v*P, the head that introduces the agent, dislocates to the left, becoming the specifier of a VoiceP. Note that this VoiceP has to be defined as passive, in part because of its spell out. The second component of the analysis is the proposal that the preposition *by*, which introduces the prepositional agent in the passive, is the spell out of the passive voice head. We will reject this part of the analysis for empirical reasons, but also for its theoretical implications: the

only Voice that spells out as *by* would be the passive voice, which means that the distinction between passive and active would have to be codified in the feature endowment of the head.

The third component of our analysis is that the displaced element contains the internal argument, which, after movement to Spec, VoiceP, becomes structurally higher than the external argument, which explains that it can move to Spec, TP and become the subject of the sentence, by relativized minimality (Rizzi 1991). We will also accept this part of the analysis.

We propose a version of this analysis that is intended to avoid proposing that Voice can have flavors, passive and active (eventually, middle) constructions:

a) the *by*-phrase is not the spell out of Voice when it is passive; in fact, we avoid proposing that Voice has any flavors at all.
b) movement of the verbal subconstituent is not required to satisfy a property of Voice: it is due to the independent presence of an aspectual head between *v*P and VP, which eventually is responsible for the spell-out of the displaced element as a participle.

Since our main difference with Collins (2005) is with regard to what is responsible for spelling out the preposition, we will start with this piece of our analysis.

4.3.2 The spell out of the *by*-phrase

In Collins (2005), the *by*-phrase is not a syntactic constituent; the DP part is the materialization of the external argument hosted under *v*P, while the PP part is the spell out of a flavor of Voice^{Passive}.

(46) The house (was) [$_{VoiceP}$ [$_{PartP}$ built] by] [$_{vP}$ John …]]

This is problematic based on the fact that the *by*-phrase behaves like a syntactic constituent according to several tests: take, for instance, movement. It is possible to move the *by*-phrase without moving the participial phrase or a *v*P-oriented adverb:

(47) a. The question was intelligently answered by John.
b. By (nobody else than) John the question was intelligently answered.

Cleft and pseudo-cleft structures also allow movement of the *by*-phrase as a constituent.

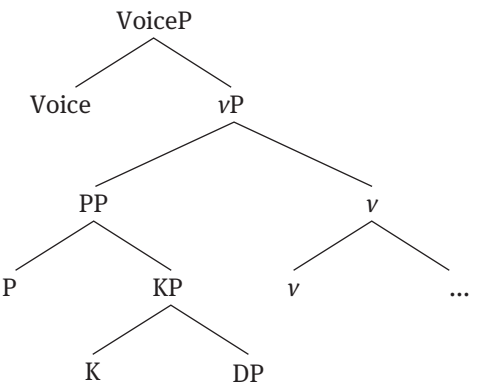
(48) It was by John that the house was built.

Coordination also confirms the diagnostic that the *by*-phrase is one single constituent.

(49) The house was built by John and by Mary.

The alternative that we will explore here is reflected in the following structure:

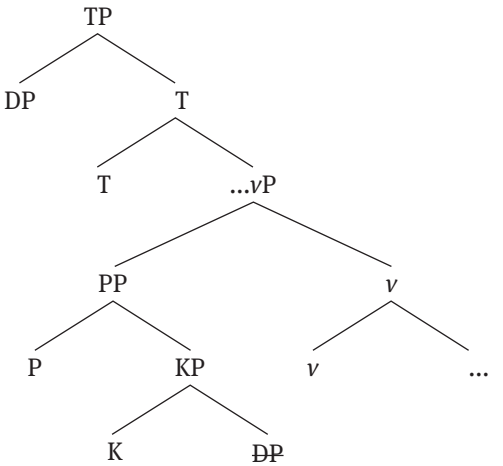
(50)



Following a line of research that goes back at least to Fillmore (1968), we treat case not as a property that has to be assigned to DPs inside a syntactic context, but as the materialization of a structural layer that acts as an intermediary between the argument and the predicate and that has an independent syntactic reality. As we mentioned, this idea has been explored in modern times by Neeleman and Weerman (1999), Caha (2009, 2010) or Starke (2014): the DP argument cannot be merged directly with the *v*P, and in order to do so it is necessary to project an intermediate layer that defines it as an argument of the *v*P. This layer is PP, containing KP.

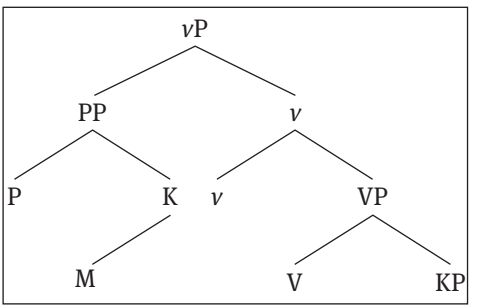
This technical proposal removes the need to assume that passive is a flavor of Voice. Here we elaborate specifically on why this is so: If *by* is a materialization of Voice, one needs to block that it appears in the active voice, and as a consequence the proposal that *by* is the materialization of Voice only when this head is specified as passive becomes unavoidable. However, if *by* is a projection related to P and case, the technology that we presented in Chapter 2 allows a different perspective on the issue, one that makes postulating flavors of Voice unnecessary. Given that PP and KP are layers required for argument selection, if movement of the agent to TP is not related to its argument status, the expectation is precisely that the DP would move to that position without KP and PP, producing the configuration in (51).

(51)



Why doesn't the *by*-exponent materialize independently here? Our proposal is that the lexical entry of a verb that selects an agent will look like (52), ignoring the internal argument for the sake of clarity):

(52)



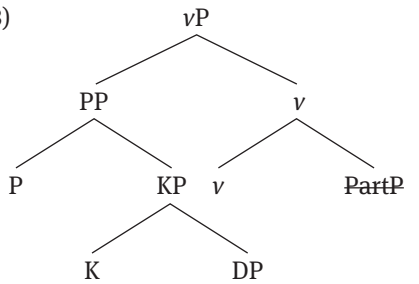
<---> {destroy}$^{\Sigma}$

In essence, this means that the case projection acts, as Starke 2014 puts it, as the Fregean hooks used by the lexicon to define the argument structure of a verb: the entry of an exponent *destroy*, that forcefully selects an external argument, is associated to a structure that includes a case projection in Spec, *v*P, and that means that unless an argument was introduced in that position, the exponent will not be able to lexicalize the verbal structure (and at that point, alternative exponents would have to be used or the derivation would be not legitimate at the PF interface). In order for the entry in (52) to be used, however, it is crucial that PP and K have become, for the purposes of spell out, a constituent to the exclusion of its complement, the DP that is interpreted as an agent. If the DP had remained *in situ*, not moving to Spec, TP, then PP would not be a constituent of its own,

and lexicalization would be impossible. Hence, in an active construal, where the agent moves to Spec, TP and becomes the sentential subject, the exponent *by* would never be used.

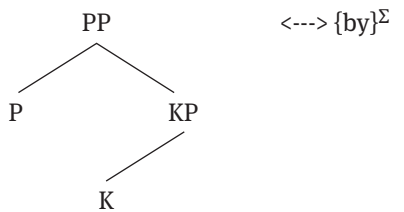
Contrast this with a 'passive' construction. There, for reasons that we have not yet presented, the agent DP remains in situ, and the lower anchor of the verbal constituent, including at least the VP-layer, have displaced to a different position, as shown in (53).

(53)



The exponent in (52) cannot be used now to spell out (53): PP+K is not a constituent to the exclusion of DP and the complement of *v*P does not form a constituent with *v*. It is at this point that other exponents need to be used, and one of them is (54), which we will review in due course.

(54)

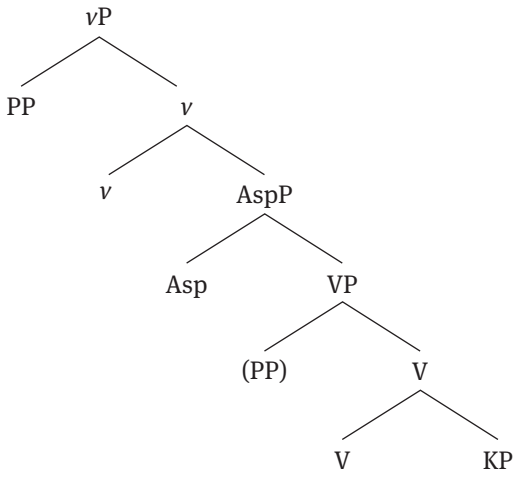


4.4 The materialization of the participle

The second reason to propose that Voice has to be specified as passive comes from the movement of a verbal subconstituent to its specifier. In this section we will show that the movement of the participle can be forced for reasons entirely independent of Voice, purely related to the participle.

The starting configuration of the structure where the VP and the *v*P end up as two different syntactic constituents is (55).

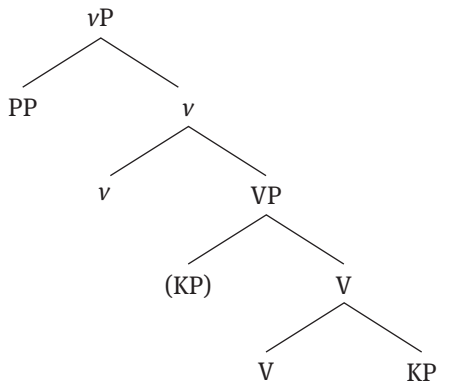
(53)



We suggest that what forces AspP to is the impossibility to interpret (52) at LF in any coherent way. Let us explore here why this may be the case.

In a configuration like (56), without AspP between *v* and V, all members of the structure contained under VoiceP denote lexical aspect properties related to the introduction of arguments (sub-events of the same event description). The functional heads *v* and V denote sub-events of one single event; VP is in a head-complement relation with *v*, and this is the kind of configuration where event identification can take place (Ramchand 2008).

(56)



The only way in which (55) would be interpretable in the same way – as a configuration where all the members under VoiceP describe the same eventuality – would be if AspP could be claimed to denote a sub-event. However, there are reasons to think that this is not the case. Participles are used cross-linguistically,

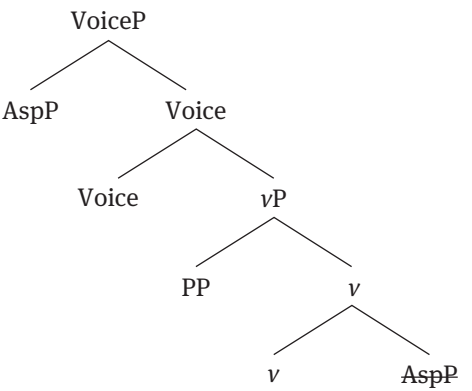
and definitely in the languages under study here, as markers of external aspect. In combination with auxiliary verbs, they denote perfect aspect:

(57) a. John has read the novel.
b. *Jan har lest romanen.* Norwegian
c. *Jan har läst romanen.* Swedish

In (57), the participle is associated to external aspect and cannot denote a sub-event: the verbal event is already defined by the time that the participial head is introduced. Unless we want to propose that there are several homophonous participial heads –something unlikely, given the cross-linguistic tendency– the conclusion is that the head that defines participles is not a sub-event, but rather a manifestation of external Aspect (see also Embick 2000, 2004, Bosque 2014). The consequence of this for (55) is that, unless something is done, it will be impossible to give a coherent interpretation to the *v*P-phrase. Moreover, the position where external aspect is placed in the structure, below *v*P, presumably violates general principles of domain-ordering whereby situations (defined by the heads T, Mood and Asp) should embed events (defined by v and V) and not vice versa (see Ramchand & Svenonius 2014, Ramchand 2018 for an elaboration of this line of reasoning). Either way, AspP is placed in the wrong base position in (55), and the minimal solution is to somehow circumvent AspP to get it out of the way.

In our view, this is what forces movement of the participial structure out of the *v*P constituent: avoiding the problem of containing a sub-event that is not integrated with the *v*P through event identification and making external aspect be interpreted above, and not below, *v*P.

(58)

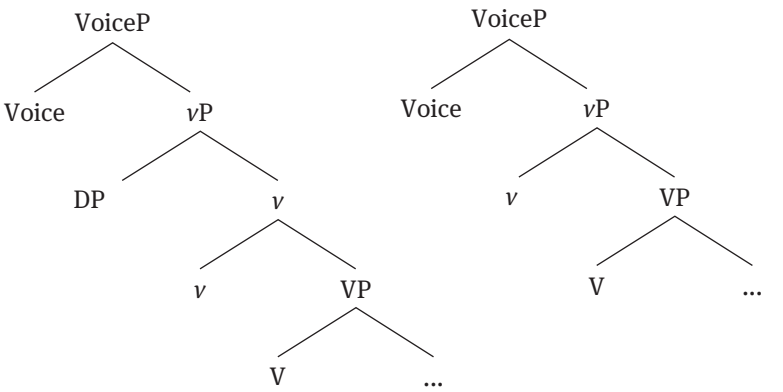


The result of the movement operation in (58) is to take the uninterpretable aspectual head out of the first phase, where events are being defined. The consequence of this is that after movement to VoiceP, the PartP is inside a different structural domain: that of situations, where external aspect and mood are defined.

4.4.1 The nature of Voice and a unified treatment of agents in passives and active construals

Our claim is that there is no difference, with respect to the presence of the agent, in the active and in the passive construal of a verb that is able to have both. The alternative view would be to claim that agents are not projected, as syntactic objects, in the structure of the passive, as in (59b).

(59) a. Active b. Passive



From this perspective, the *by*-phrase that can appear with passives would be an adjunct whose presence is legitimate because of the existence of a *v*P, even if its argument has not been projected. Much has been written about the nature of the by-phrase in passives, and here we will focus on two facts that suggest to us that the right option is to claim that the agent is present syntactically even in the passive, as an argument.

The first fact is the observation that even in a passive without an overt agent, there can be adverbials that clearly act as modifiers of that agent. Consider (60).

(60) That was unanimously decided.

Unanimously is a kind of adverb that introduces some presuppositions: it requires that there is a group of animate entities (61a-c), and it requires that that group of entities act as the agent of any event (61d-e):

(61) a. *John killed the students unanimously.
b. *John decided unanimously that we would stay home.
c. *John ran unanimously.
d. *The students died unanimously.
e. *The children were born unanimously.

The question is what is the plural agentive entity that is represented in (60) in order to allow this adverb. Our claim is that it is precisely the agent argument, which even implicit, is present syntactically, licensing the interpretation of the adverb.

The second fact comes from the interpretation. It is well-known that the interpretation of a syntactic structure can be enriched at LF, or later, introducing elements which are not present in the configuration. However, by Full Interpretation, it is impossible to decide not to interpret, semantically, a constituent that is syntactically present. In relation to this, consider (62).

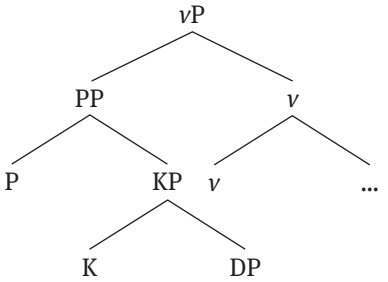
(62) a. #The TV-set was broken by itself.
b. The TV-set broke by itself.

In the anticausative structure (62b), the presence of the adverbial *by itself*, which forces an interpretation where the event takes place without the intervention of any external causer, is legitimate. This suggests that the agent is not syntactically projected in this construal, much in accordance with the standard analysis of anticausatives (Levin & Rappaport, 1995; Reinhart & Siloni, 2005; Schäfer, 2008). However, the same adverbial is impossible in the passive in (62a), even though the verb has been shown to allow the adverbial in other contexts. Why would this be so if agents in passives were adjuncts? If passive agents were adjuncts, we would expect that (62a) should be grammatical, given the absence of an agent. However, if the agent is an argument which can be unexpressed in the passive, we expect the ungrammaticality of (62a).

At this point, the obvious option is that agents are projected in the same way in actives and in passives, and the challenge, then, is to explain why in the passive construal they appear introduced as PPs. Here is our explanation, which will make us revise slightly our proposal for agents advanced in §4.1. The *v*P of an agentive verb introduces the agent always in the same way, including an already

projected case layer and a preposition, which is ultimately responsible for licensing agentivity:

(63)



As noted in (63), with respect to the first approximation we made in §4.1, we are here proposing that the agent contains a PP layer in addition to the case layer. This is motivated by the empirical facts: note that the by-phrase has three components (64): a preposition, case, and a DP.

(64) by me

Given that the pronoun (D) is marked by case, it follows in our proposal that an additional layer is necessary to host *by*. That is why the PP layer becomes empirically necessary to capture the facts. The alternative would be (as Caha 2009 does) to split KP into a series of heads and propose that by is the spell out of a bigger chunk than, say, the one corresponding to accusative (65).

(65) a. by-case: [W [X [Y [Z]]]]
b. accusative case: [Y [Z]]

Then, the chunk W-X would receive the spell out *by*, while Y-Z would be spelled out as part of the pronoun:

(66) [W [X [Y [Z]]]]
[by [me]]

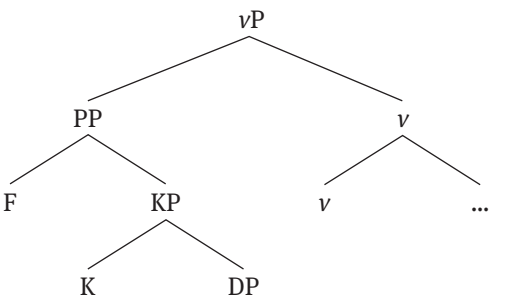
In the accusative, there would be no remaining material for the preposition to be introduced as an exponent. In this view, the 'preposition' would just be case marking, just like the accusative, while in the view we are adopting here, *by* corresponds to P that embeds case.

The argument that supports our view comes from phenomena where case and P behave as distinct elements. As an example, consider the fact that case marking is copied under agreement, while prepositional marking is not (67).

(67) a. in [AP pulchr-a:] Hispani-a: Latin
in beautiful$_{\text{-ABL}}$ Spain$_{\text{-ABL}}$
b. *in [AP in-pulchr-a:] Hispani-a:
in in-beautiful$_{\text{-ABL}}$ Spain$_{\text{-ABL}}$

Consequently, we adopt the proposal that *by me* spells out P+K+D. Our analysis however is compatible with Caha's (2009) view in other respects: the crucial idea in both is that the highest projection that introduces {*by me*} (the case layer W or P) defines a domain that blocks direct movement of DP out of it to raise to a higher projection. Thus, in the proposal we discussed above, P and the case projection mediate between the *v*P and the argument when the second is projected as an agent.

(68)



From here, the DP argument has two options that both allow it to be interpreted as an agent. The first one is to stay in situ, under the PP that will give it the denotation of an agent. We know that the preposition *by* has several interpretations (Huddlestone & Pullum 2002):

(69) a. to live by the sea (location)
b. to travel by bus (means)
c. to write by hand (instrument)
d. be done by someone (agent)

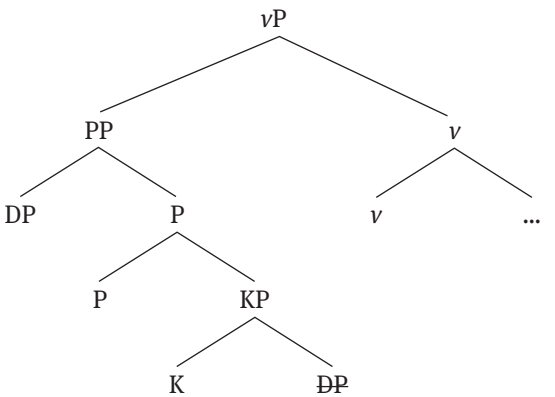
Similarly, the preposition *av* in Norwegian and Swedish has a number of distinct readings, here illustrated for Norwegian (see Julien & Garbacz 2014).

(70) a. *å lage noe av stein* (matter)
to make something of stone
b. *å bli syk av maten* (cause)
to get sick of food.$_{\text{DEF}}$
c. *å være en del av livet* (part-whole, inclusion)
to be a part of life
d. *å bli gjort av noen* (agent)
to be done by someone

The idea is that each one of these Ps has a series of meanings, out of which one is selected in the context of Spec, *v*P where agent readings are produced. As theta-roles are interpretations in configurations, one way for the DP to be interpreted as an agent is by staying in the complement of PP inside *v*P by the time that the structure is interpreted at LF. This is an 'agent-in-situ' reading.

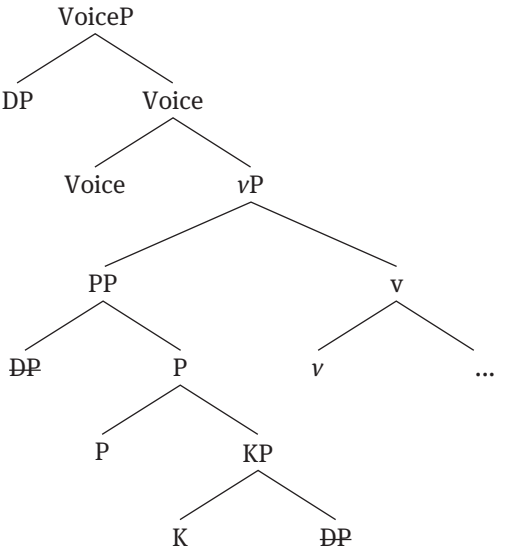
The second way of being interpreted as an agent is to move above PP and be extracted from it, which ultimately produces the active construal of voice:

(71)



If this movement operation takes place (cf. van Riemsdijk 1978), the DP is not in a configuration where it is directly interpreted as the agent of the event, because now it is not in the appropriate relation with respect to P and K: it is not in the domain of P, its predicate, which assigns a theta role to it. In this situation, we claim, its only option is to move to VoiceP, where it will be interpreted as an 'agent-by-default'.

(72)



Let us explore in a bit more detail exactly how the 'agent-by-default' reading is obtained. In a nutshell, it involves the DP being interpreted as the agent because it is the profiled element inside the event construal, and no other element in the domain of Voice has received the agent interpretation.

It has been repeatedly noted in the literature that there is some level of overlap between *v*P and VoiceP, as both of them have been proposed to host agents (see Pylkkänen 2002, Harley 2013, Ramchand 2018). The way in which we see is this ambiguity is the following: Voice is a head whose role is to impose some perspective to the event that it selects, defining one element as the one highlighted in the event's structure, and the rest as the background against which that participant is evaluated. In a sense, VoiceP simply represents a relational head that defines a figure-ground structure (Talmy 1985, Hale 1986), with its specifier becoming the figure and its complement becoming the ground.

For the DP that has left the PP structure where it could have been interpreted as an agent, becoming the figure inside a particular participant-profiling of the event allows it to become interpreted as an agent, by default. The default interpretation of the most prominent argument in a configuration is always 'agent' (Van Valin 1990, Haspelmath 2001):

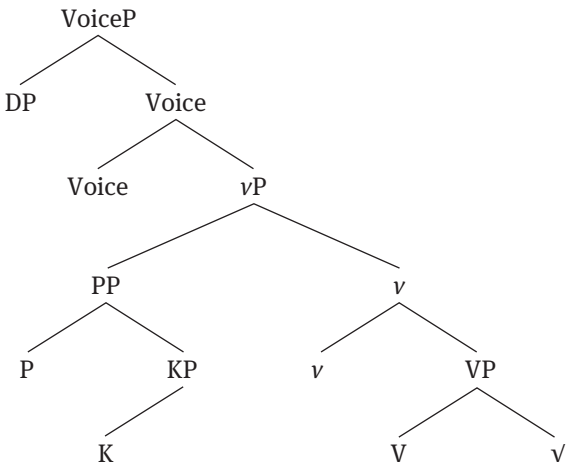
(73) agent > patient > benefactive

Identifying the agent as the default most prominent argument implies that, in the absence of other information, such as another argument being already interpreted

as the agent in the complement of VoiceP, the figure defined in Voice would be the agent.

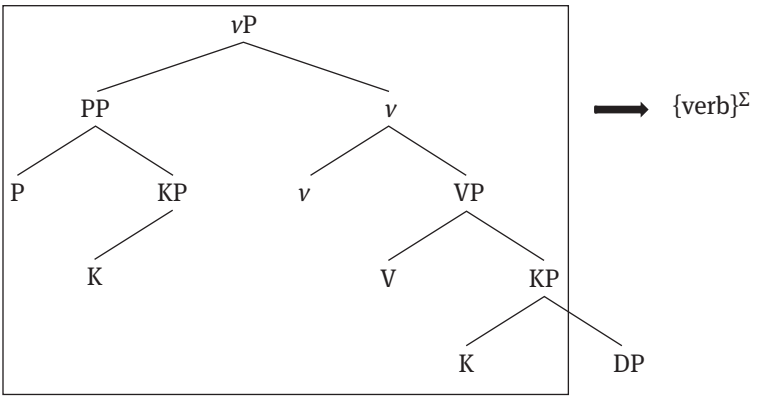
This is then the configuration of the active voice, once lower copies have been ignored for purposes of spell-out (for simplicity, we deal here with a verb with only one external argument, without internal arguments):

(74)



The important property is that, after extracting the DP from inside the PP structure, now P and K form one single constituent to the exclusion of the DP. The sequence of heads is uninterrupted by DP, and at this point the PP and the KP are materialized as part of the verbal exponent.

(75)

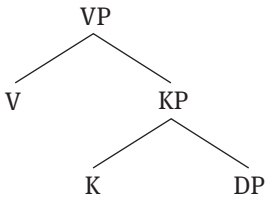


In the next section we will deal with the passive construal.

4.5 The shape and interpretation of the *bli*-passive, step by step

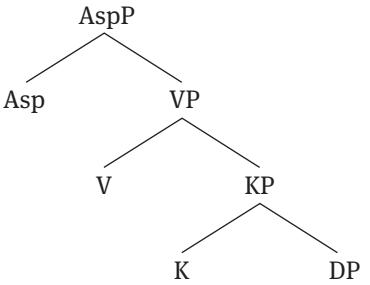
Let us now present our analysis about the *bli*-passive. The *bli*-passive is the result of a configuration whose lower layer is the one represented in (76): a VP-layer which contains one or more internal arguments (here represented with only one).

(76)



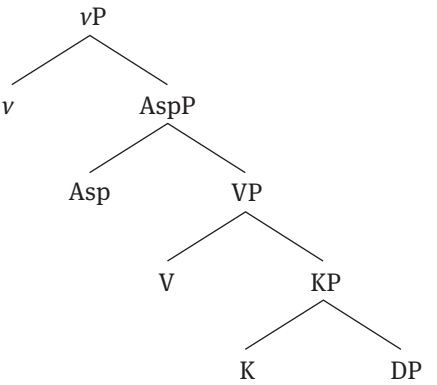
At the point of the derivation represented in (76), the sentence could have the shape of a passive or the shape of an active. The distinction emerges in the next layer: in the active, *v* is directly merged above VP. In the passive, in contrast, AspP is introduced.

(77)



The merge of AspP in the configuration, as we will see, will be ultimately responsible for the relation between aspect and the periphrastic passive, that we highlighted in chapter 1. In the next derivational step, *v*P is introduced.

(78)



In what has been described as 'active' voice, the element that moves to the specifier of VoiceP is the highest argument, the agent. This had, as we saw, two effects: first, by extracting the DP agent from KP, it converts K into a constituent to the exclusion of DP, allowing its spell out with the verbal projections. Second, by defining the agent as a figure, it highlights it as the prominent member of the event, against any other participant or sub-event.

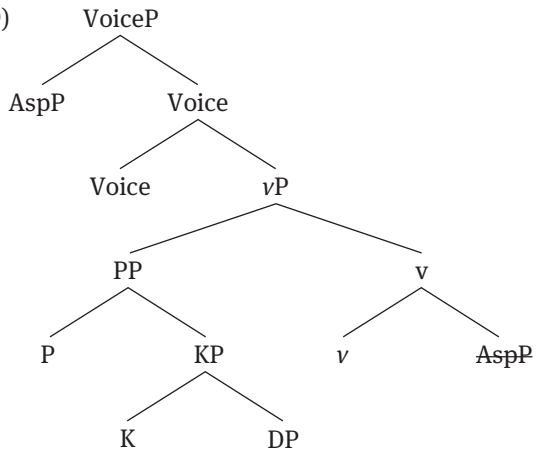
The periphrastic 'passive', in contrast, is the situation where the element that moves to spec, Voice is not the agent DP. In the case of the *bli*-passive, there is no choice with respect to which element will move: once AspP is merged between *v*P and VP, it will have to move to the specifier of VoiceP for interpretability reasons.

Which ones? Remember that we are treating AspP as a projection that defines external aspect, that is, the viewpoint of the proposition. This head is therefore distinct from the projections that define lexical aspect or Aktionsart, which are *v*P and VP with their different semantic entailments about dynamicity, change, telicity, etc. We assume, standardly, that External aspect in AspP introduces a reference time (Klein 1994) that has to be ordered with respect to both the Utterance time introduced by TP and the eventuality time introduced by the lexical verb. Both Wiltschko (2014) and Ramchand (2008) emphasise that external aspect does not belong within the verbal domain, because it defines a viewpoint that is built on the temporal properties of the Davidsonian event defined at the *v*P-level. Material contained within *v*P, in Wiltschko (2014) and Ramchand (2008), introduces eventuality descriptions related to argument structure and Aktionsart. For this reason, a head that refers to the viewpoint and is not related to Aktionsart or argument structure cannot be contained in the material that gets interpreted within the verbal complex headed by *v*P, when transfer to LF takes place.

Moving AspP to the specifier of VoiceP places it at the edge of the highest head within the verbal complex, asymmetrically c-commanding the whole *v*P

and therefore being placed above the material used to describe the eventuality. In the same way that the specifier of VoiceP extracts an agent from the *v*P and allows it to interact with TP becoming the subject of the clause, moving AspP to that specifier position removes it from within the domain of eventuality descriptions and lets it interact with the domain where it can be interpreted, the viewpoint entailments of the clause. The following diagram represents the relevant configuration.

(79)

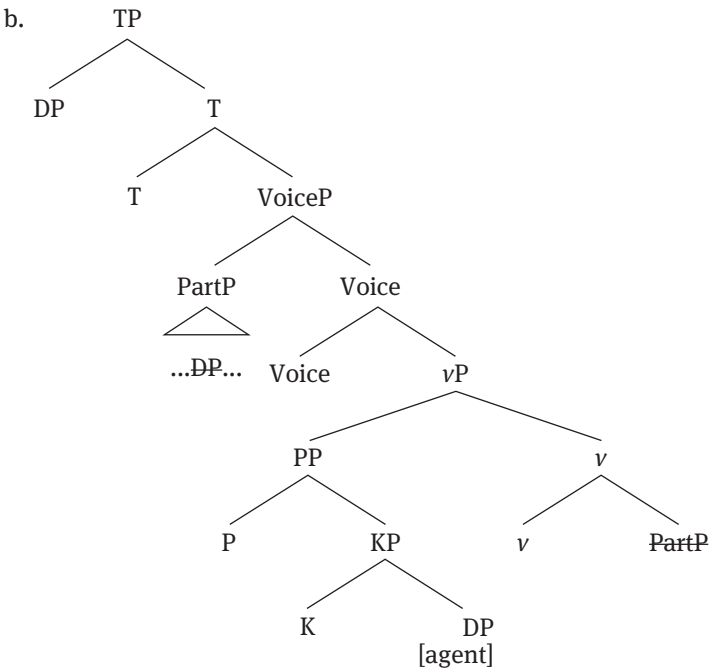


The effect of this structure in (79) is an interpretation that has repeatedly been noticed in participle-passives across languages: the interpretation associated to these passives is not just that the internal argument is highlighted with respect to the external one, but also that the part of the event that is emphasized is the one related to the culmination of a change of state, and its subsequent result. This was noticed already for the competition between the Swedish *bli*-passive (in contrast to the *s*-passive), and it has also been noted for English and Spanish, for instance. The explanation in our proposal is that VP, which corresponds to the change of state sub-event (excluding the causative layer), has become the figure in the profiling that Voice produces. The consequence is that the change of state, and its eventual result state, become highlighted against the background of the causing entity and the causing sub-event.

Once we have obtained this configuration, our analysis continues much like Collins': the internal argument, smuggled by movement of PartP, is now higher than the agent. If one of the two moves to Spec, TP, it will have to be the internal argument:

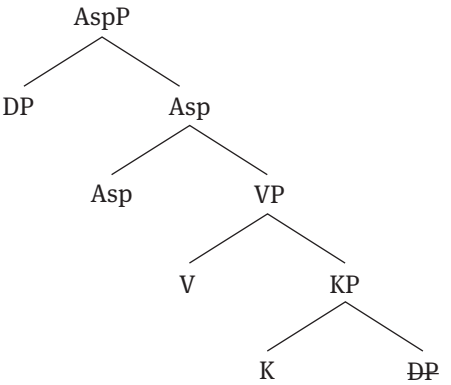
(80) a. *En stein ble kastet av meg* Norwegian
a stone was thrown by me

b.



Let us now focus on the internal structure of the AspP once it moves to the specifier of VoiceP, to see how the internal argument can be extracted. In exactly the same way that the agent DP cannot be directly extracted from within the specifier of *v*P, we do not expect the internal argument to be extracted from the specifier of VoiceP in one single step. Just as in the case of the extraction of the agent, we assume that the internal argument DP is moved to the specifier of the highest projection there, AspP, as in the following diagram.

(81)



This structure places the DP in the escape hatch of the specifier, being the highest c-commanding element, and allows it to be extracted to arrive to the Spec, TP position to become the subject of the clause. This movement is not without consequences. As mentioned, in this book we take seriously the idea that every step of movement should be interpretable. In fact, remember that the reason why movement of the agent-DP to the specifier of PP is possible is that the P layer is a predicate that introduces the argument, assigning to it agent entailments. If there is no semantic relation between the P head and the DP, that movement step would not be interpretable, and therefore we assume could not take place. Similarly, in the case of the internal argument and AspP, that movement step is interpretable because the AspP layer defines a (result) state where the internal argument is the holder of the state defined by the VP, i.e., if you want, an internal subject of the stative situation built by AspP above the VP. From here the principle in (82) follows:

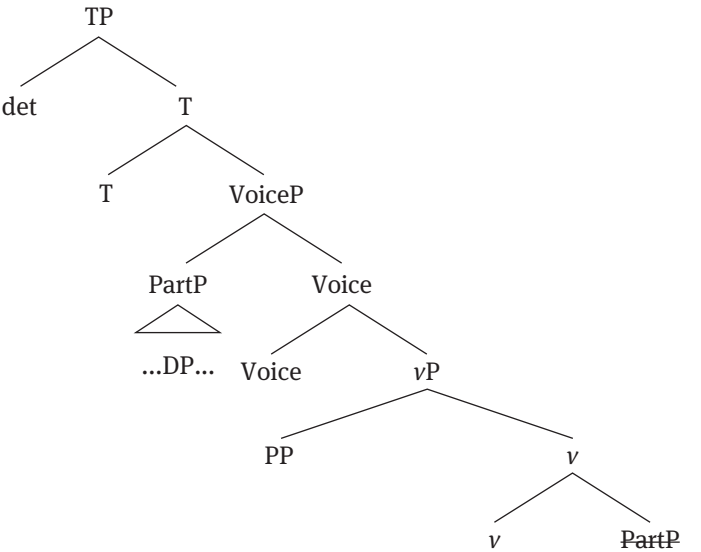
(82) Movement of a DP to the specifier of AspP is only possible when the DP is the argument of the eventuality whose viewpoint is provided by AspP.

This will have consequences for the unavailability of passives where the subject of is derived from an infinitival clause in the *bli*-passive (see §5.4.2 below).

Extracting the internal argument from the AspP specifier is not the only option. Alternatively, an expletive is introduced in Spec, TP and none of the two arguments moves to that position.

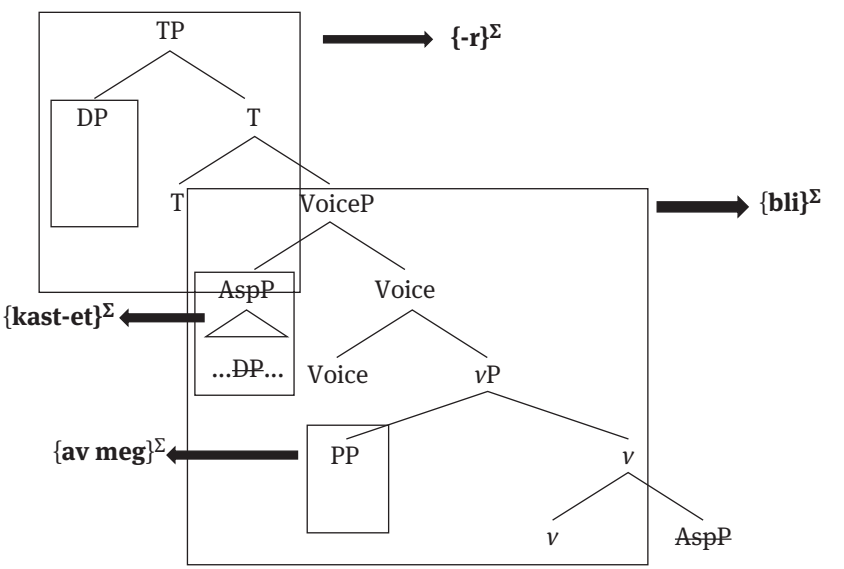
(83) a. *Det blir kastet en stein av meg.* Norwegian
it is thrown a stone by me
'A stone is thrown by me'

b.



The structure in (84) represents the spell out of the resulting structure in (83). The constituent including *v* and VoiceP is lexicalized as the verbal form *bli*, which is an auxiliary-like element that lacks a full-fledged semantics but contains and expresses eventivity (*v*P). A T-head which is unspecified for a tense value (thus, interpreted as 'present') is lexicalized by the clitic *-r*. We assume that the ordering between *-r* an *bli* is resolved through a phonological operation that raises the exponent *bli*.

(84)



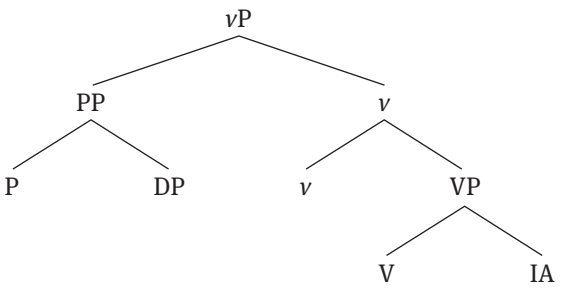
4.6 Capturing the fine-grained facts: predictions

We now move on to show how our analysis captures the empirical properties of *bli*-passives in Swedish and Norwegian that we highlighted in the previous chapter. Let us start with the fact that stative and non-agentive verbs reject the *bli*-passive in both languages.

4.6.1 On non-agentive verbs

At this point we are in a position to provide a principled account of why non-agentive predicates reject the *bli*-passive both in Swedish and Norwegian. The crucial factor is that these verbs, lacking an agent, do not contain a *v*P-layer, and as a result, merging AspP above VP would produce ungrammatical results, so the derivation described in §4.4 cannot apply to them. In order to see why let us contrast, in Norwegian, *danse* 'dance' with *trenge* 'need'. The first is an agentive, although intransitive, activity verb which can have a *bli*-passive in Norwegian, but not in Swedish (see §5.4.3. on why this is the case for Swedish):

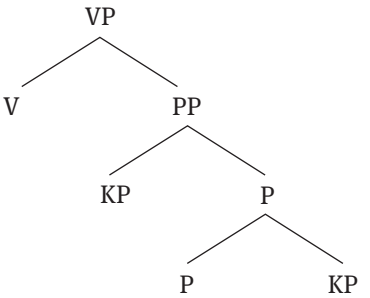
(85)



The second is a stative verb which lacks a causing sub-event; it just denotes a relation of 'needing' between a beneficiary and a theme. The intuition along different analyses is that these non-agentive stative verbs are simpler (that is, contain less structure) than agentive verbs (see for instance Pesetsky 1995, Pylkkänen 2004).

There are several potential ways of representing the intuition that non-agentive statives contain less structure, but, following Hale and Keyser's (2002) analysis of relational states, we propose the following:

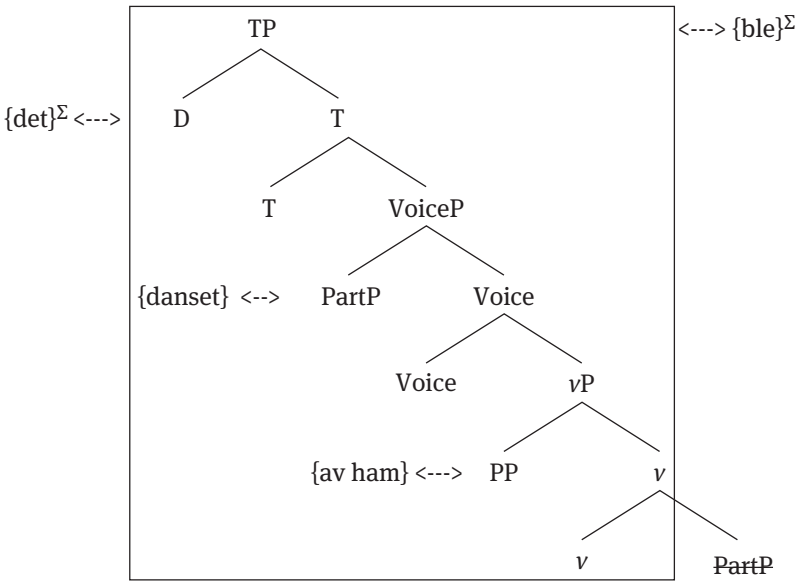
(86)



What is crucial for our purposes is that *v*P is not present in these non-agentive verbs; we could have equally adopted a proposal where both arguments are introduced by VP (thus, $[_{VP}$ [KP] V [KP]]), but we propose (86) to highlight the relation between *need* and *have*.

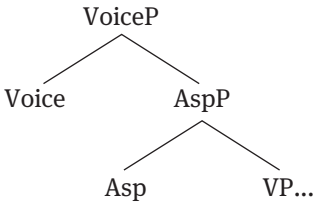
Let us see, now, what happens if we merge AspP between *v*P and VP in the first verb. The derivation proceeds as explained before: AspP moves up, carrying no argument, and the external argument, as it could not displace to VoiceP leaving its KP behind, becomes trapped inside the *v*P-phase. An expletive has, then, to be introduced in spec, TP.

(87)



Let us do the same in the case of a verb that lacks a *v*P-layer. The crucial derivational step is highlighted in (88).

(88)



The problem, once again, is that AspP will need to move into the domain of situations, which would mean that it would have to become the specifier of VoiceP. However, according to adherence to principles of Anti-Locality (which bans movement from the complement position of XP to the specifier of XP; cf. Abels 2003), this movement is impossible: AspP is the complement of Voice, so it cannot become its specifier at the same time. Consequently, these verbs that lack a split between *v*P and VP are predicted not to be able to undergo the syntactic passive in these two languages.

4.6.2 On why *bli*-passives cannot promote arguments of subordinate infinitives to the subject position

Recall that one difference between *s*-passives and *bli*-passives in both Swedish and Norwegian is that *bli*-passives cannot promote the subject of an infinitive to the subject position in the passive. We repeat the data here, for convenience.

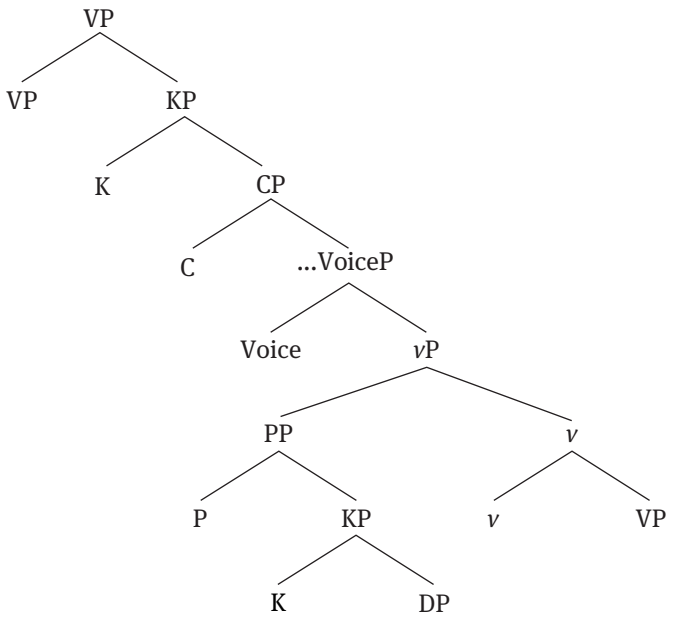
(89) a. *Publikum bes å holde seg som normalt*. Norwegian
the.public ask.PASS to carry-on as usual
'The general public is asked to carry on as usual.'
b. **Publikum ble bedt å holde seg som normalt*.
public was asked to carry-on as usual

(90) a. *Sören ansågs ha räddat familjen undan vanära*. Swedish
Sören believed.PASS have saved family from infamy
'Sören was believed to have saved the family from infamy.'
b. **Sören blev ansedd ha räddat familjen undan vanära*.
Sören was believed have saved family from infamy

A full analysis of this distinction involves a complete analysis of Extraordinary Case Marking (ECM) structures, which we are not in a position to provide. For this reason, we will represent the structure with the minimal amount of layers forced by the internal rules of our proposal. One important property of ECM structures

is that the argument of the main verb is the whole infinitival clause, not the argument that is case marked in accusative. That case-marked argument is an argument of the infinitival clause's *v*P-complex. In (91), we represent the relevant configuration, where the KP introduced by the main verb's VP selects the infinitival clause.

(91)

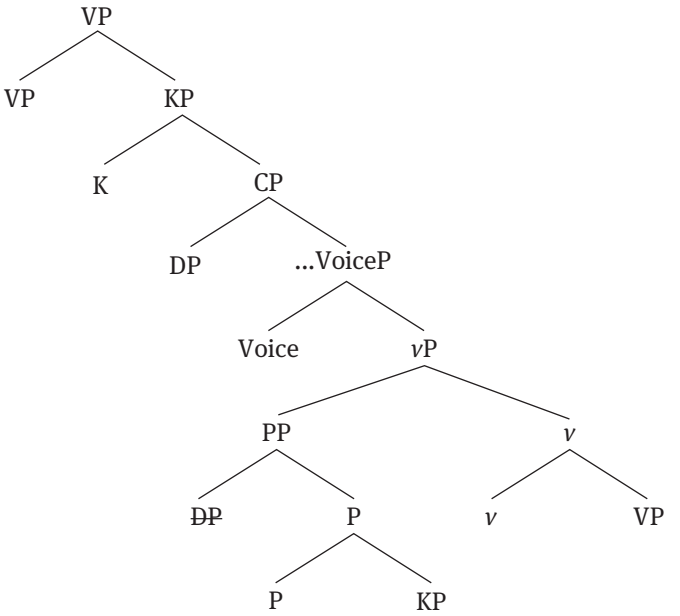


From within this structure, the agent-DP moves first to Spec, PP and then to Spec, VoiceP, then to Spec, TP – where it becomes the subject of the infinitival clause – and finally to Spec, CP in order to get the case marking assigned by the main verb to the whole clause.

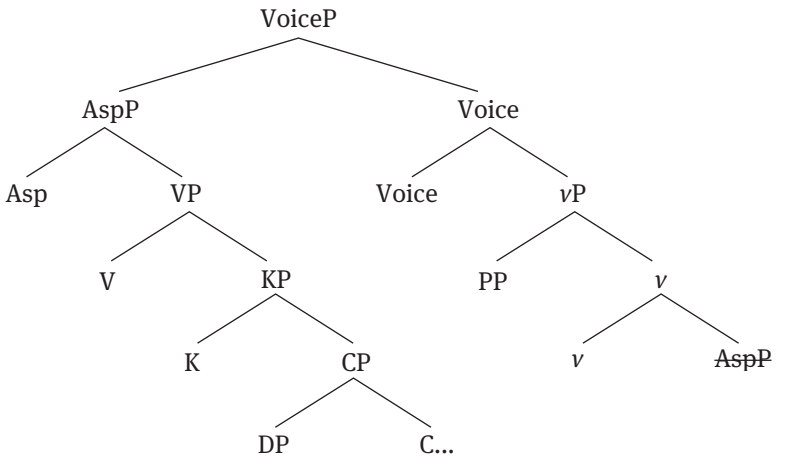
Now, the crucial point here is that the DP is not an argument of the main verb. Provided that the argument stays in the complement of VP, this is not a problem to extract it, because from that position, just like a regular internal argument, it can be promoted to the Spec, VoiceP position. This is the reason why the *s*-passive, which does not lock the argument inside a complex specifier, allows that the subject of an infinitive is promoted to subject.

The *bli*-passive, in contrast to the *s*-passive, moves the internal argument to Spec, VoiceP inside the AspP. In the Spec, VoiceP position, then, the internal argument can only be extracted if it moves to the escape hatch, which is Spec, AspP. The configuration is the following.

(92)



(93)



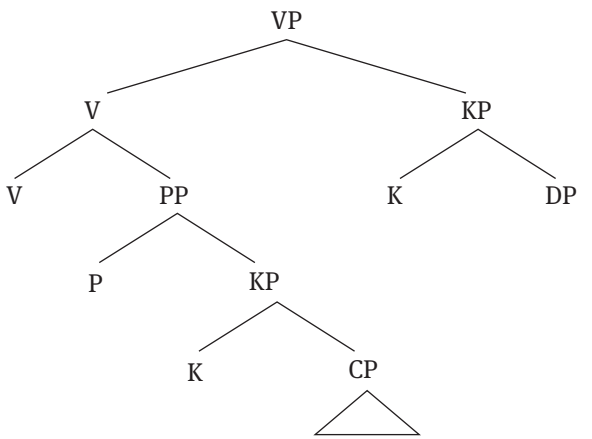
The DP is buried inside the complex specifier, and in order to extract it, it will have first to move to the escape hatch, which is Spec, AspP. However, AspP is building a perspective above the VP related to the main verb, and the DP that we want to extract is not an argument of that verb. Therefore, by the principle stated above as (82), the DP cannot move to Spec, AspP and therefore it cannot be promoted to the subject position. This is what makes this *bli*-passive impossible.

Norwegian, as noted, allows the extraction if the clause is marked by a strong preposition, *om* 'about'.

(94) *Publikum ble bedt om å holde seg som normalt.*
the.public was asked about to carry-on as usual
'The public was asked to carry on as usual.'

We take the strong marking in the clause as a sign that, in this construal, the DP promoted to the subject position is in fact introduced as an argument of the main verb, which forces the use of a full strong preposition to introduce the second argument, the infinitival clause.

(95)



Thus, this would be a real control structure where the subject of the infinitive is coreferential with an internal argument of the main verb; the DP can be then moved to the escape hatch in Spec, AspP and further promoted to the subject position.

4.6.3 On the impossibility of having impersonal passives in Swedish

Swedish rejects impersonal passives, such as the one involving the verb corresponding to *dance*.

(96) *Det ble danset (av ham).*
it became danced (by him)
'Dancing was done (by him).'

Norwegian allows them, as we have seen. Why so? There is an independent difference between Norwegian and Swedish *bli*-passives that it is tempting to relate to this. In Swedish, as we saw, the *bli*-passive involves an agreeing participle. (97) repeats the main facts.[2]

(97) a. *Fabrik-en* *blev* *nerlag-d.*
factory-DEF.M.SG became close.down-PART.M.SG
'The factory was closed down'
b. *Företag-et* *blev* *nerlag-t.*
company-DEF.N.SG became close.down-PART.N.SG
'The company was closed down'
c. *Filialer-na* *blev* *nerlag-da.*
branch-DEF.PL became close.down-PART.PL

When the verb licenses an internal argument, Swedish allows *bli*-passives with an expletive subject. As noted, the participle agrees with the internal argument when the object precedes the participle. Note that, instead, if the object follows the participle, the participle agrees in neuter with the expletive (cf. Holmberg & Nikanne 2002, Engdahl 2017).

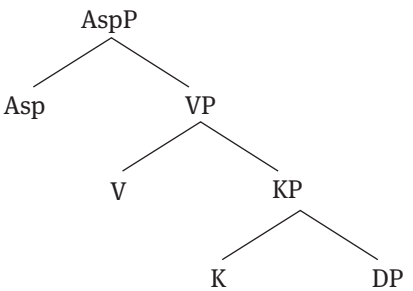
(98) a. *Det* *blev* *skrivet* *tre* *böcker* *om detta.*
it became written.NEUT three books about this
b. *Det* *blev* *tre* *böcker* *skrivna* *om detta.*
it became three books written.PL about this
'Three books were written about this'

2 In fact, the fact that Norwegian *bli*-passives do not contain agreeing participles, while *være*-passives do, constitutes an argument in favor of a view where the *bli*-passive and the *være*-passive are not instances of the same type of construction. In our proposal, what the *være*-passive and the bli-passive have in common is that the VP-layer is dominated by external aspect (AspP) with a stative meaning, producing a (result) state interpretation. The difference between the two in that in the *være*-passive no dynamic *v*P is introduced, and therefore no agent is introduced –a common observation being that *være*-passives are adjectival passives and adjectival passives do not express an agent (Wasow 1977, Levin & Rappaport 1986). The aspectual differences between the *bli*-passive and the *være*-passive, then, do not come from different external aspectual considerations, but by the presence or absence of a dynamic change component expressed at the level of lexical aspect / Aktionsart by the *v*P materialized as *bli*. In other words, we follow the theories where *være*-passives are ultimately copulative structures where the verb is an auxiliary introduced to satisfy the inflectional properties of the clause. We leave open the question of what differentiates between agreeing and non-agreeing participles in Norwegian.

In what follows we will try to relate the absence of impersonal *bli*-passives in Swedish to the fact that in them the participle has to agree with the object. What we will say should be taken as a suggestion, and the reason is that in the course of the explanation we will have to make proposals about how agreement works, but without providing a full account of agreement. For starters, we will have to start from the assumption that the participial head; namely, AspP, in Swedish contains uninterpretable phi features that trigger agreement. We do not derive this fact but take it as a distinction between the participle used in Norwegian and Swedish in the context of the *bli*-passive.

Holmberg (2002) proposes that the presence of these features in the participle of the *bli*-passive makes the participle a phase head in Swedish; that is, a head that defines a domain where formal operations must be satisfied (Chomsky 2000). We will assume that this is right, at least in the sense that the presence of agreement within the participle means that there must be a DP that satisfies agreement in the domain of AspP. (99) represents the relevant domain: it is VP and the material contained within it.

(99)

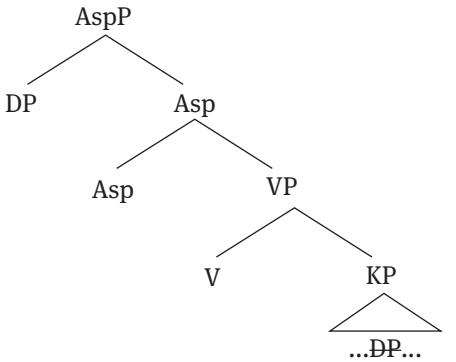


The structure in (99), of course, represents a verb with an internal argument, which is not the case of *dance*. In this context, the DP can satisfy the agreement of Asp. We assume that the agreement has to be satisfied at the height of AspP, and not later.

(100) Swedish participle agreement must be satisfied within the domain of VP

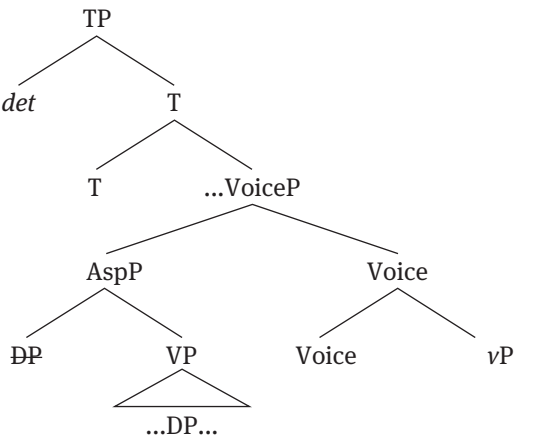
Once this happens, there are two possibilities. The first one is that DP moves to the specifier of AspP. If this is the case, then agreement in the Asp head must remain the agreement triggered by that DP. (101) represents this step, which is independent of whether the DP then is extracted from AspP and promoted to the subject position.

(101)



The second option is that the argument does not move to the specifier of AspP. In that case, the object would be linearized after the participle, and will not be extracted to satisfy the subject position. In that context, the neuter expletive is merged in the subject position. We assume that in the second phase defined by CP, the expletive overwrites the participle agreement that was previously motivated by the internal argument and imposes neuter inflection.

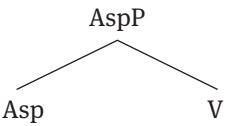
(102)



Thus, crucially for our proposal to work, we must assume (i) a condition on the participle having to get its features checked within the phase that it defines and (ii) the possibility that in the second phase the agreement can be overwritten if the internal DP argument does not intervene between the expletive subject and the participle. Both of these two assumptions have consequences for the nature of agreement in general and for the conditions that Swedish imposes on its agreeing elements, and we will not explore either here.

But assume for the sake of the argument that our proposal has merit is on the right track. The reason why Swedish *bli*-passives do not allow impersonal construals with an expletive is that, as represented in the following diagram, a verb like *dance* does not introduce an internal argument in VP that can license the participle agreement in the phase defined by it.

(103)



4.6.4 Pseudopassives

It has been repeatedly noted that Scandinavian passives do not reduce the case properties of the predicate: passives are compatible with accusative objects and double object constructions. This property follows directly from the account we have proposed here, where passive and active are descriptive terms for different configurations that are not differentiated in any way by the nature of the heads that intervene. Moreover, if case is introduced in the derivation as a hook designed to allow the presence of an argument, it also follows that the nature of the entity that moves will not have an impact in whether an argument carries case or not.

The idea is that a configuration where the *bli*-passive contains an accusative marked object is just a configuration where the internal argument contained in the participle remains *in situ*, combined with its KP, and an expletive has been introduced in the TP layer. In contrast, a configuration where the internal argument appears unmarked for case involves a derivation where the internal argument DP leaves the KP layer behind to be lexicalized as part of the verbal stem and no expletive is introduced. The KP is then lexicalized as part of the verbal exponent at Σ-structure.

(104) a. *Det ble kastet en stein*. Norwegian
[TP DP T [… [VoiceP [AspP [VP [KP [DP]]]] Voice….]]]
det **kastet** **en stein**
'There was a stone thrown.'

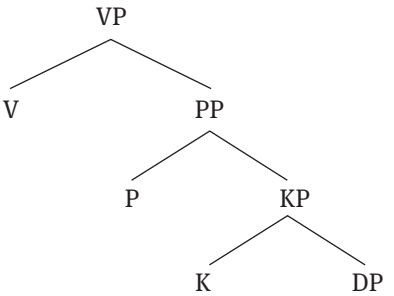
b. *En stein ble kastet*.
[TP DP T [… [VoiceP [AspP [VP [KP [~~DP~~]]]] Voice….]]]
en stein **kastet**
'A stone was thrown.'

Here we demonstrate how the same set of assumptions makes it expected that pseudopassives are possible with *bli*-passives –and also with *s*-passives–. (105) is an example of this construction.

(105) *Jeg ble tenkt på.* Norwegian
I.NOM was thought of
'I was thought of.'

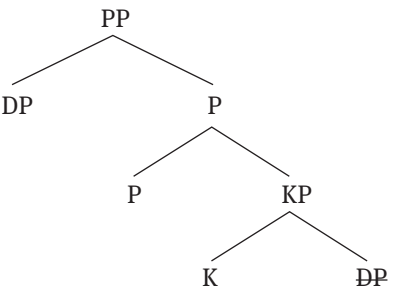
In this construction *på* is the spell out of PP, and therefore that with respect to an accusative-marked internal argument there is an extra layer of structural complexity.

(106)



If PP does not define a phase head, extraction of the DP from the complement of PP would be as unproblematic as extraction from KP. Assume, however, that he PP layer is a phase defining head. The DP would have to be moved to an escape hatch, which is Spec, PP. This movement step is possible because the PP layer is in a semantically-interpretable relation with the DP.

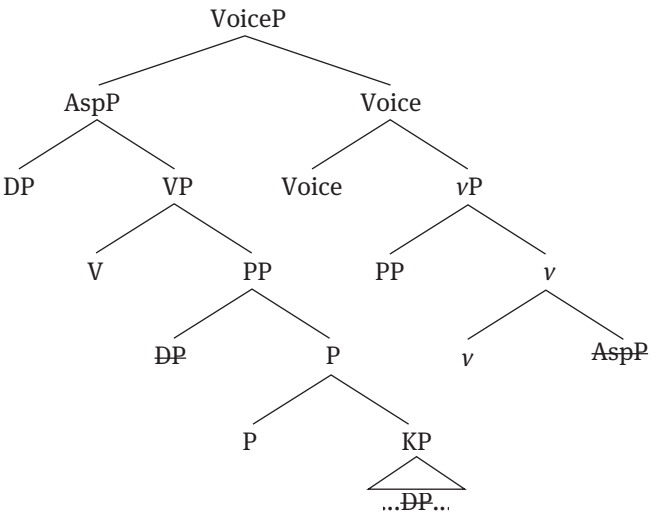
(107)



In the *s*-passive, this structure remains in the complement of vP, meaning that from there the DP can be extracted and move to Spec, VoiceP, from where it could be promoted to Spec, TP to become the subject of the whole clause.

In the *bli*-passive, this structure is contained within an AspP that moves to Spec, VoiceP. In order to be extractable from it, the same derivational step would have to happen: the DP moves to Spec, AspP to be placed in the escape hatch. This is again possible, because the DP has been introduced by the PP as an argument of the VP that Asp provides a viewpoint for; specifically, it is the entity which holds the state defined by AspP.

(108)



4.7 Analyzing *s*-passives

We now consider the specific elements of our proposal as they relate to the *s*-passive, where Swedish and Norwegian sharply contrast. The nature of the *s*-passive is one of the classic problems in the descriptions of Norwegian, and in general Scandinavian languages. Some of the proposals that we will discuss now were originally made for Danish, however given the remarkable similarities between Danish and Norwegian in the domain of the morphological passive, they have been considered by researchers in their analysis of the Norwegian data (cf. Lødrup 2000, Lundquist 2015).

There are two main approaches to the nature of the *s*-exponent, explicitly or implicitly. On the one hand, some scholars have argued that the *s*-exponent has a pronominal nature, as a clitic or as an exponent, in which case it would be a complement or specifier of one of the projections inside the (extended) verbal phrase. On the other hand, other scholars have argued that the *s*-exponent should be viewed as a marker of aspect, diathesis or even mood, in which case it should be

rather viewed as the spell out of the extended verbal projections themselves, say, particular values of AspP, MoodP, or VoiceP.

Mikkelsen (1911: 381) is generally cited as the first scholar that emphasized the stative and non-episodic nature of the *s*-passive. In his proposal, the *s*-passive is described as an aspectual and modal marker of verbs, which makes this scholar fall in the second group we just presented. The idea is that whenever there is no event, the event has not culminated, or one refers to a generic or habitual action, the *s*-passive is preferred. This invites a view of the *s*-passive as related to an operator that induces non-episodicity in the event it subordinates, which we will assume to be placed in the head little *v*.

(109) [MoodP **-*s*** [Op_i] ... [$_{vP}$ *v* [e_i]

The description that Mikkelsen made for Danish was adopted for Norwegian in Western (1921: 159–164), Næs (1972) or Vinje (1976: 105), among many others, which makes it a popular solution for Norwegian.

Hovdhaugen (1977) reports that in his own variety of Danish, and that of the speakers he consulted in the 1970s, the distinction between the two passives that was reported following the Danish description was not as sharp as those grammars would suggest. He admits, however some differences with respect to the use of *s*-passives to convey norms and regulations, where he agrees that substitution with *bli*-passives would yield ungrammatical results. He seems to suggest, then, that to the extent that there is a real difference between the two passives, the *s*-passive is associated to some deontic meaning, again associating the *s*-exponent to the expression of mood.

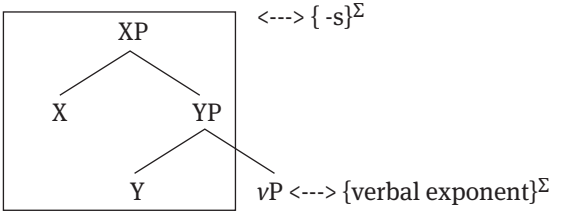
Heltoft and Falster Jakobsen (1996), for Danish, and later Engdahl (1999) for Norwegian, have proposed that the *s*-exponent codifies modal meaning. In fact, Engdahl's (2006) suggestion is that the Norwegian *s*-exponent, even when used as a passive, is associated to some kind of modal meaning that Swedish lacks, and from where the genericity and non episodicity of the form follow.

Consider how this proposal would account for the impossibility to have *s*-passives as complement of perception verbs in Norwegian, a property that was discussed in the previous chapter. It seems intuitive that one cannot directly perceive generic events, although one might infer their genericity from repeated observations of singular events. It is a well-known property of modal verbs that they cannot occur as complements of perception verbs, even when they have an infinitival form. Consider this minimal pair from Spanish, a language in which modal verbs have an infinitival form.

(110) a. *Juan vio a* *Luis recitar el poema.*
Juan saw ACC Luis recite the poem
'Juan saw Luis recite the poem.'
b. **Juan vio a* *Luis poder recitar el poema.*
Juan saw ACC Luis can.INF recite the poem

Along the same lines, Lødrup (2000) associates the *s*-passive directly with a stative meaning, where stativity has to be understood not as a strict *Aktionsart* type, but rather as involving absence of an agent and a cumulative event that can be directly anchored to. In a nutshell, what all these approaches seem to be saying is that the *s*-exponent is part of the spine of the verbal extended projection, roughly along the following lines:

(111)



If the values of X and Y are defined properly, then these heads can have the role of binding the event variable contained in little *v*, and therefore they would be ultimately responsible for the impossibility of displaying tense marking in the verb: T cannot bind the event, because the event is already closed by the operators placed in X and Y, and which give the event the flavor of non-episodicity, normative character, etc.

This is the general line of reasoning that we adopt for the analysis of the Norwegian *s*-exponent; however, we must keep in mind that Swedish *s*-passives are very different. The second line of analysis adopted for the *s*-exponent is that it is a pronominal element. Hedlund (1992) and Julien (2007) propose that the *s*-exponent is not the instantiation of passive morphology, but in fact the materialization of a subject, or of an element associated to the subject. Julien (2007: 225) capitalizes on the fact, noted by Lødrup (2000), that *s*-passives can appear with verbs lacking an agent, and uses it as evidence to claim that in fact *s*-passives are in fact not true passives, and do not involve a passive Voice head. Julien (2007) treats the s-exponent as a nominal element with underspecified features, which becomes interpreted as a generic or a specific (anaphoric) pronoun depending on the position where it is inserted, above or below a potential antecedent. Following Hedlund (1992) she assumes that the *s*-exponent is compulsorily [+human],

which forces that, when it is introduced under a [-human] non-agentive subject, it will not be coreferential with it, and will trigger a passive reading.

The idea that *s*-passives are not 'true' passives is at odds with the empirical fact that they license *av*-agent phrases, something that (as we saw) actives cannot do. It is also unclear how the analysis can account for the Norwegian facts, particularly that the *s*-passives in Norwegian have very specific interpretations. It is not obvious how the presence of a pronoun of some type can prevent a verbal complex to be marked for past tense, for instance. However, the proposal seems to account for the Swedish facts.

In what follows, we explicate the details of our analysis of *s*-passives in Norwegian and Swedish. We argue that the main difference between the two languages is in the material that the *s*-exponent spells out. As noted above, debate persists regarding the appropriate morphosyntactic and morphophonological categorization of the *-s(t)* unit in Scandinavian languages. Julien (2007) argues that this unit should be classified as a clitic (as opposed to inflection), while Heltoft and Jakobsen (1996) consider to be a mood marker. Following Julien and an earlier proposal by Eythórsson (1995), Wood (2012, 2014, 2015) classifies the *-s(t)* unit in Icelandic (and Faroese) as a clitic, generated in an argument position (usually in Spec, *v*P, but sometimes lower in the syntactic structure (e.g. Wood 2012)). The clearest evidence that the *-s(t)* is not a passive marker can be seen in the examples below (112), where the *-s(t)* cannot co-occur with agentive by-phrases, while the agentive phrase can appear in periphrastic passives where the *-s(t)* unit is absent (see also Sigurdsson 1989):

(112) a. *Einræðisherrarnir drápust. (*af lögreglunni).* Icelandic
dictator.DEF.PL.NOM kill.PAST.ST (by police.DEF)
'The dictators got killed/died.'

b. *Einræðisherrarnir voru drepnir (af lögreglunni).*
dictator.DEF.PL.NOM were killed (by police.DEF)
'The dictators were killed (by the police).

Lundquist (2015) demonstrates that the same alternation in Icelandic above is not in force in Swedish, where the *s*-exponent can co-occur with an agentive *by*-phrase (cf. (112a) and (113)):

(113) *Diktatorn dödades (av polisen).*
dictator.DEF kill.PAST.ST (by police.DEF)
'The dictator was killed (by the police).'

According to Lundquist (2015:187) "an argument clitic has at some point been reanalyzed as a Voice head in the Mainland Nordic languages, but not in Icelandic." The key to Lundquist's analysis is that the *-s(t)* marker occurs outside of the Tense-domain, thus violating the basic tenets of the Mirror Principle (Baker 1985). He makes further distinctions regarding the analysis of Norwegian and Swedish in his analysis, based on the distribution of the *s*-exponent that we discuss in detail through this book. According to Lundquist, the *-s(t)* marker never occurs in a projection containing tense in either Swedish or Norwegian. Where these two languages crucially differ, however, is that Swedish has a Tense-copying operation (see Wiklund 2007 for an analogous treatment of Tense-copying in Swedish in environments such as VP-topicalization and TMA-copying from aspectual to main verbs).

In the remainder of this chapter we illustrate how our model can add further clarification to the microvariant distinction between the licensing of the *s*-exponent in Swedish and Norwegian respectively. We must account for (at least) two core properties of the distribution of this exponent: (i) *the morphosyntactic distribution*, which relies on the positioning of units in the syntactic spine, and (ii) *the morphophonological realization*, which involves connecting syntactic structural representations with exponents at Σ-structure, followed by PF-reflexes. The fundamental difference between Swedish and Norwegian lexical *s*-passives are summarized as follows:

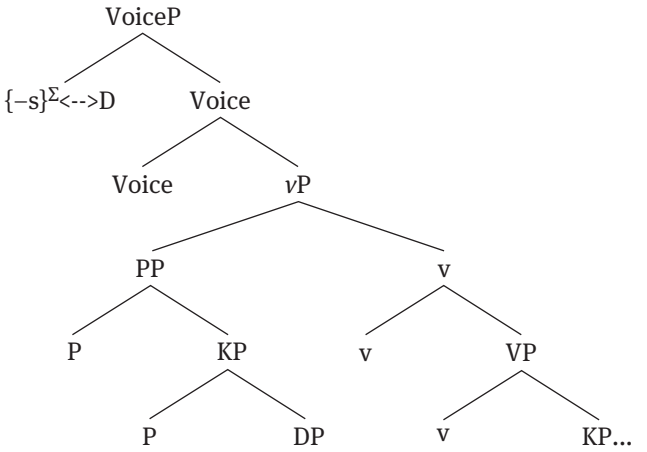
- For Swedish, we adopt Julien's (2007) position that the *s*-exponent spells out features on D and is thus on par with the status of *-s(t)* in Icelandic in being classified as a clitic. Accordingly, this unit must appear in a specifier position in the syntax.
- The *s*-exponent appears in Spec, Voice, functioning as a functional unit that profiles the event.
- In contrast, for Norwegian, we adopt a Mikkelsen-style analysis, where the *s*-exponent is the phonological realization of the verbal extended projections.

4.8 The *s*-passive in Swedish

As noted above, we have seen that a number of scholars (Hedlund 1992, Julien 2007) have argued that the *s*-exponent is actually the manifestation of an argument, thus an element that is not projected as a head but as a specifier. Following this line of theorizing, one can further assume that the *s*-exponent should not be regarded merely as a morphophonological reflect of inflection, but rather as a more independent structural element in the syntax. Recent proposals by Lundqvist (2015) and Wood (2012, 2014, 2015) have suggested that the *s(t)*-exponent in

Scandinavian languages is best classified as a clitic. Below in (114) we illustrate the structure of the *s*-passive in Swedish, in which the *s*-marker is an indefinite argument that is merged directly in the specifier of Voice.

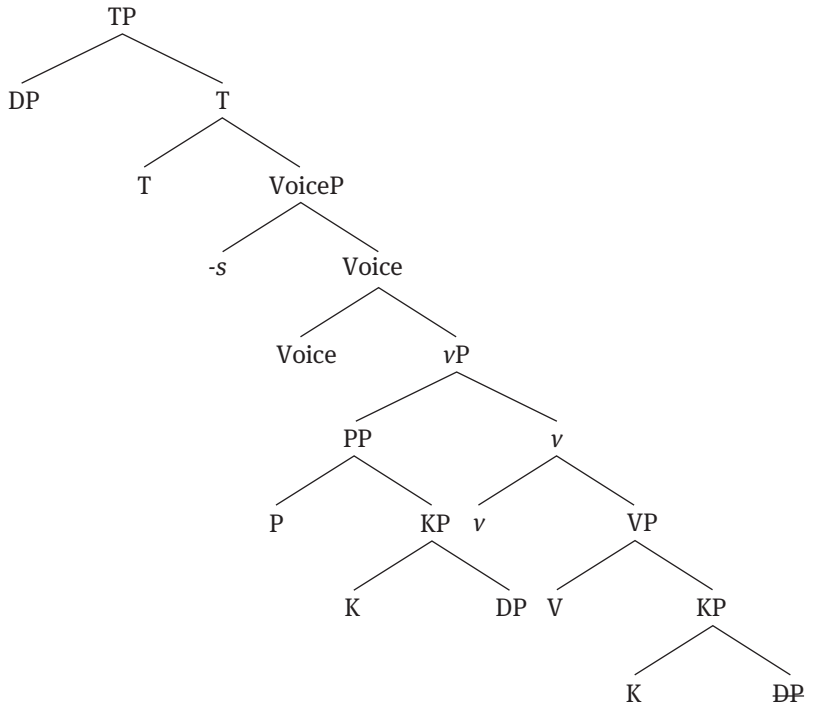
(114)



Having Spec, VoiceP occupied by the *{-s}* exponent comes with a number of accompanying consequences. The main one is that the agent cannot occupy Spec, VoiceP to be interpreted as the default agent of this event. For this constituent to be the agent of the event, then, the only option will be to remain under the (adjunct) prepositional phrase. Any extraction of DP out of PP would, have the effect that it will not be interpretable as an agent.

Two options remain: (i) either none of the two arguments will be extracted from their respective KPs, in which case the subject function will have to be performed by an expletive –which is a grammatical possibility– (ii) or the internal argument, which does not have the licensing conditions of an agent, is extracted from its KP or PP and eventually reaches TP. We will focus on this possibility. In the following configuration, crucially the internal argument DP can be extracted because it stays in the complement position of VP – the absence of phi features in the main verb suggests, following the same logic as Holmberg (2002), that in this language *v*P would not define a closed domain.

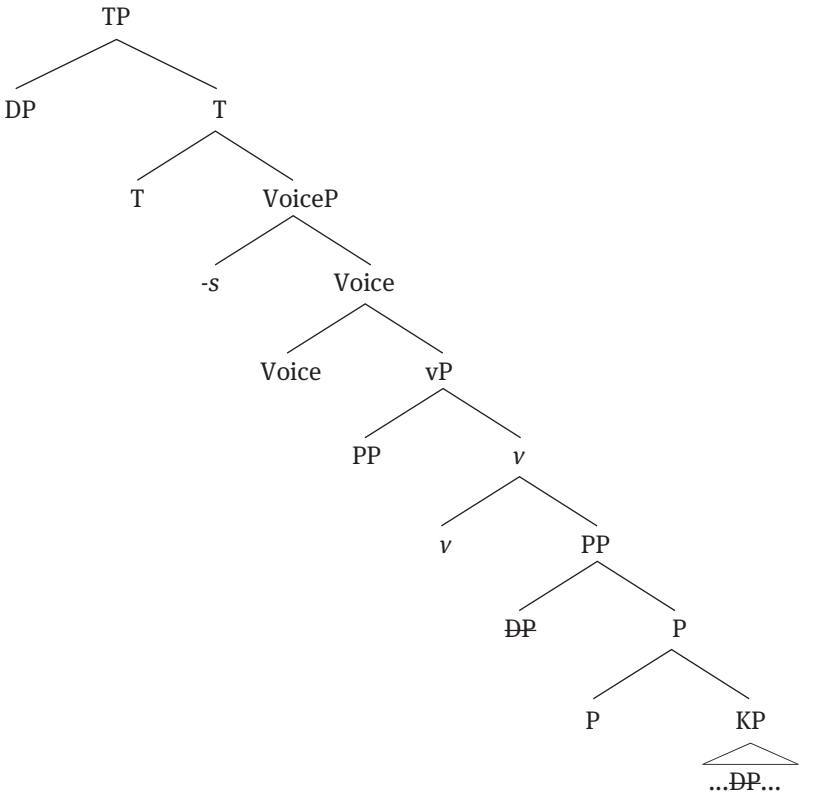
(115)



With respect to spell-out of the agent, notice that in this configuration the PP does not form a constituent in the absence of DP. Thus, the verbal exponent would only have to materialize the constituent *v*P, leaving the external argument to be spelled out as a *by*-phrase once it evacuates the projection. As a result, we have an *s*-passive construal by virtue of the Spec, VoiceP being unavailable for the agent argument.

Consider now the pseudopassive; this is simply a case where the internal argument is introduced by a PP. If the PP layer does not define a phase, extraction of the internal argument is still unproblematic because it is in a complement position. If PP happens to define a phase, there would be an extra step of movement, to Spec, PP before moving to TP.

(116)



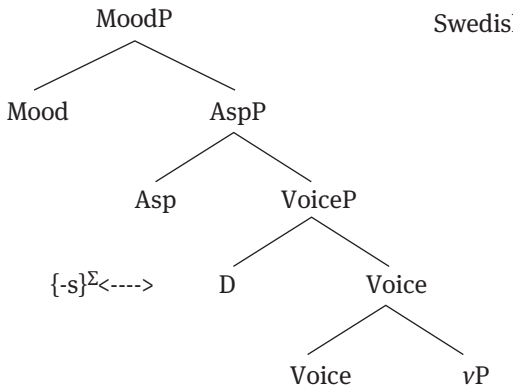
Therefore, the derivation of pseudopassives is possible both with *bli*-passives and *s*-passives.

This structure also explains why *s*-passives will be unable to pile-up on top of *bli*-passives. Remember that, in order to obtain a *bli*-passive, the VP-layer must be dominated by a participle-head, a variety of AspP, something that in turn forces it to move to the specifier of VoiceP. However, in this configuration, the s-marker is already occupying the position of the specifier of VoiceP, so that position is unavailable for the participle to move. Consequently, we predict, correctly, that (117) will be impossible, because AspP would be forced to stay *in situ*, where it uninterpretable.

(117) *Det blev fyra trafikoffer inlagda(*-s) i går.*
it were four traffic-victims filed yesterday
'There were four traffic victims reported yesterday'.

Moreover, our proposal explains why Swedish *s*-passives cannot codify a modal and aspectual meaning: in Swedish, the *s*-exponent is to be found in a specifier (due to its status as a clitic), so it will never form a constituent with Mood and Aspect in the absence of Voice, on the standard assumption that both grammatical Aspect and Voice are functional heads placed above VoiceP, outside the *v*P-complex. As exponents can only correspond to syntactic constituents, this result is obtained in our system without additional stipulation.

(118)



Notice, however, that in such cases the standard ordering between internal argument and agent-PP in both Norwegian and Swedish is not compatible with both arguments staying *in situ*. Without movement of either the internal argument or the agent-PP, we would expect the following ordering:

(119) *Det* *kaste-s* *av meg* *en stein.*
it throw.PASS of me a stone
'A stone is thrown by me.'

An important question at this point is whether the right ordering of the agent and patient are derived by morphological movement or other type of reordering. In our approach we strictly maintain that all syntactic operations (including movement) must be semantically interpretable, and at this point it is unclear what semantic interpretation would be added to either the agent-PP or the internal argument if their linear position is inverted by syntactic movement. In fact, in the appendix to this chapter we will show what would the minimal number of movement steps needed to derive the linear order with only syntactic means, and we will conclude that –while not impossible– this option is implausible because of the difficulty to motivate all movement steps within the syntax of the language. Moreover, we will

argue later in the book that Σ-structure might trigger some reorderings motivated solely by the specification of the exponent, autonomously from syntactic conditions. See also Agbayani and Golston (2016) for convincing evidence that some linear reorderings happen at PF proper. The conclusion is that some movement/linearization operations must take place after syntax.

In this regard, a relevant observation is that cross-linguistically there is a strong tendency to have PP-marked arguments linearize externally to other modifiers and arguments (Adger 2013). Take Spanish as an example. In (120a), the derived noun is accompanied both by a non-compulsory modifier (*agresiva* 'aggressive') and a PP-marked argument interpreted as the patient of the event described by the noun's morphological base. On standard assumptions, the argument must be generated internally to the NP, and the non-compulsory modifier should be external to it. However, the linear order in (120b) is ungrammatical. The PP-marked argument must be external within the nominal constituent.

(120) a. *la* *destrucción* *agresiva* *del puente* Spanish
the destruction aggressive of.the bridge
b. **la* *destrucción* *del puente* *agresiva*
the destruction of.the bridge aggressive
'The aggressive destruction of the bridge.'

We propose that the same principle that makes the PP-argument external in the Spanish example is responsible for the linear order restriction in Norwegian and Swedish.

(121) Participants marked by a P exponent at Σ-structure must be PF-moved to an external position within their domain.

Thus, in our view, the relative ordering between agent and patient in the *s*-passive with an expletive subject is not derived syntactically.

4.8.1 The position of the *s*-exponent in Swedish

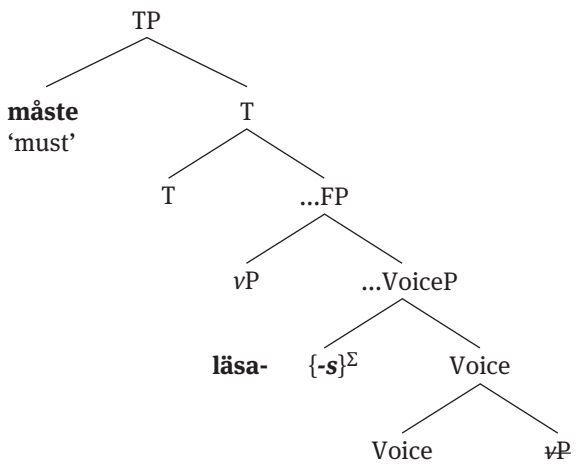
As we can see, the *s*-exponent is inside the same constituent as the verb but precedes it syntactically. How does the *s*-marker become a suffix? Our proposal, following Wood (2012, 2014, 2015) for Icelandic, a language where *-st* has a similar distribution as in Swedish, is that the *s*-marker is a syntactic clitic that has to attach to the right edge of the highest projection that contains the verb. We will preliminarily propose the representation in (122) for this exponent, and will come

back to it in more detail in chapter 6, where we will discuss more in detail morpheme ordering. The intuition is that the *s*-exponent, as an exponent, contains in its description the condition that is has to right-anchor to the closest projection containing the verbal constituent.

(122) *s*-exponent: $V]_{XP}$___

If there is an auxiliary verb and the lexical verb stays low in the tree, the *s*-exponent will anchor to the lexical verb, because it is closest to it. When the auxiliary is present, it is the auxiliary, and not the lexical verb, that moves up to TP to pick the tense information.

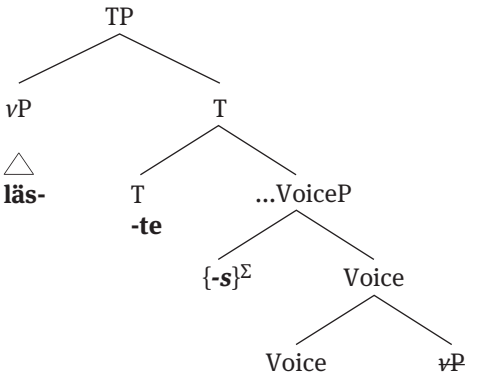
(123)



a. [FP [läsa] F] *-s*

However, if the lexical verb moves up to T because there is no auxiliary verb present, it is now TP that contains *v*P, and therefore the *s*-exponent right-attaches to that constituent in PF.

(124)

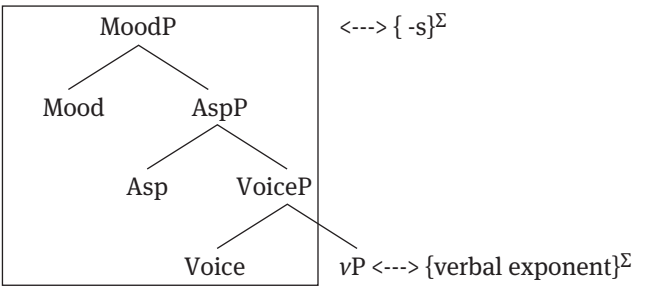


[TP [vP läs] te]-s

4.9 The *s*-passive in Norwegian

Remember that, unlike Swedish, the *s*-passive in Norwegian is aspectually and modally marked: it displays a modal flavor and cannot be used to refer to episodic events. Our proposal is that in this language, an *s*-passive has the structure in (125), where it spells out the constituent MoodP-VoiceP by phrasal spell out.

(125)



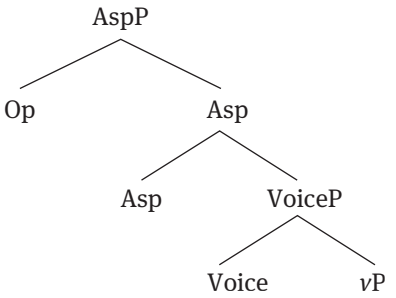
Notice that our claim is that the *s*-exponent in Norwegian corresponds to the spell out of the functional structure above lexical verbs. MoodP, being present, will provide the construction a modal interpretation, specifically a deontic flavor, and AspP, being also present, explains why the *s*-passive are always imperfective, that is, it cannot express the culmination of an event or the state following that culmination.

Following the Anchor Condition and the Superset Principle introduced in chapter 2, we predict that there could be contexts where the *s*-passive in Norwegian

will be able to appear without mood marking. In those situations, the *s*-exponent contracts to spell out only Asp-Voice, thus capturing the sentences without modal interpretation where the *s*-passive expresses a habitual, imperfective event.

The fact that the *s*-exponent encodes aspect makes two predictions. The first prediction is that it will be associated only to particular values of Aspectual Phrase. This is what captures the fact that the *s*-passive is associated to habitual, imperfective forms. To capture this association, which is systematic as far as we can tell in Norwegian, we can make the technical proposal that the aspectual value of the AspP contained as part of the spell out of the *s*-exponent is a configuration where there is a habitual operator in Spec, AspP:

(126)

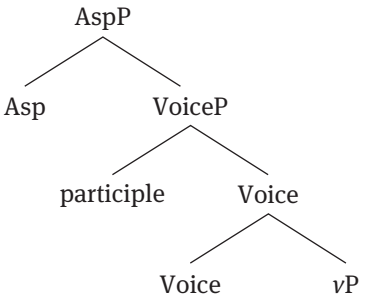


The second prediction is that the *s*-passive is expected not to be compatible any configuration where the information carried by Aspect is different from the non-episodic, habitual one that is associated to the content of the *s*-exponent. If the *s*-exponent spells out as part of its lexical entry an Aspectual head that carries a specific feature endowment, related to habituality, introducing any other aspectual information – perfect, perfective, etc. – within AspP would constitute an infraction of the Exhaustive Lexicalization Principle: there would be features contained in the Asp head which the *s*-exponent would not be able to spell out. This explains among other things why in Norwegian the *s*-passive cannot occur in the perfect.

(127) **Boken har skrevet-s.*
book.DEF has written.PASS
Intended: 'The book has been written'

In (128) below we show why the *s*-exponent will not be able to appear on top of a participle or a *bli*-passive: the Spec, VoiceP position is available, but notice what would happen if the participle would move up there to occupy that position:

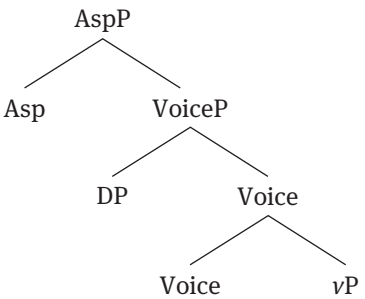
(128)



Now the constituent that the *s*-exponent lexicalizes contains an element, the participle, which is not included in the relevant lexical entry. The consequence is that now the *s*-exponent will not be available, because inserting it in this context would violate the Exhaustive Lexicalization Principle dictating that all features must be identified by lexical insertion.

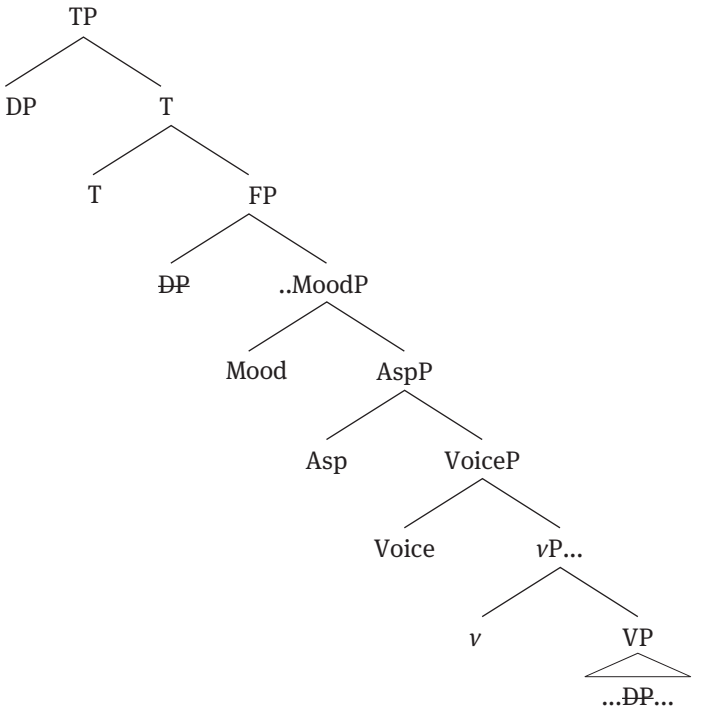
Depending on the timing of lexicalization, it can be the case that no element will be able to be in Spec, VoiceP, not even if later on it becomes the subject of the clause. On the assumption that the *s*-exponent has to be lexicalized before the subject of predication is defined, (129) will also prevent insertion of the *s*-exponent, because there is an element in Spec, VoiceP, that is not included in the lexical representation of the exponent.

(129)



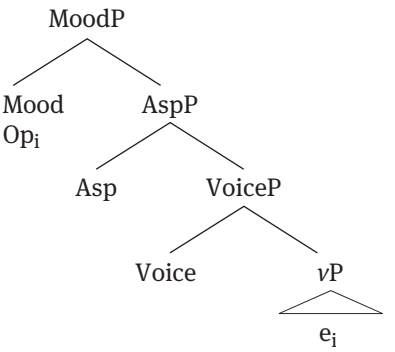
We assume that when the *s*-exponent can be used in Norwegian, because of the constituent that it spells out, the specifier position of VoiceP is not available. The immediate consequence is that in a Norwegian *s*-passive, as in Swedish but for different reasons, the agent DP will not be able to abandon the PP structure. The consequence of this is that, when a subject must be defined, the agent will not be accessible. We are faced once again with the two options that we have been seeing before: (i) if the internal argument is not extracted from *v*P, an expletive is merged in the subject position, whereas (ii) if the internal argument is extracted from KP, then it becomes the subject of the clause.

(130)



Let us see now how the presence of a modal head explains that the verb cannot be inflected for tense when the *s*-passive is present. The presence of the MoodP head has two roles; the first one is to give the configuration the normative feeling that Norwegian speakers report. The second one, which is crucial, is to force non-episodicity, and this will become crucial in our analysis of the middle use of the *s*-exponent, and in fact, it is the reason why Norwegian *s*-passives can be used to convey a middle meaning. We propose that this is performed by letting the verb's event variable to become bound by the modal operator.

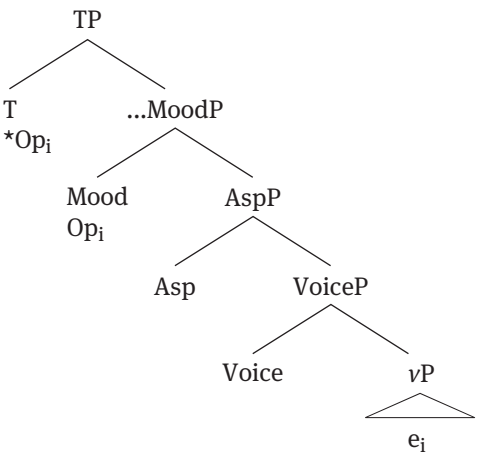
(131)



Under standard assumptions (see for instance van Hout & Roeper 1998), temporal binding of the event argument is performed by existential closure of the event variable at the TP-level. Of course, existential closure involves an existential operator whose interpretation is to assert that the event description took place at a particular time. The question is what the existential operator takes as a variable. In the presence of mood, the event variable is bound by the modal operator, so becomes unavailable as the variable of the existential operator introduced at the level of TP.

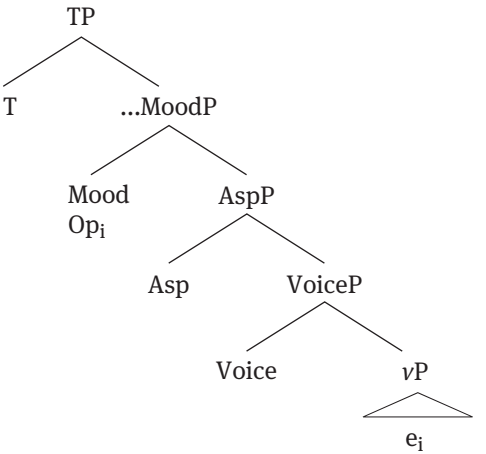
In other words: if temporal information is introduced in the clause, the operator associated with it will not find a variable of the right type (e) to bind it. This would be an instance of Vacuous Quantification (Partee, ter Meulen & Wall 1990) where an operator would be lacking a variable, which produces a crash at the LF-interface.

(132)



This explains why temporal marking is not allowed with Norwegian *s*-passives. Lacking the possibility of binding the event variable, Tense cannot trigger an episodic interpretation and therefore the event cannot be located in the past. The only option, then, is to use TP only as the layer where the subject is introduced, and therefore we get the impression of getting 'present' information simply because that is the default materialisation of tense, and in this case, T cannot introduce a temporal location.

(133)



Notice that to the extent that binding of the event by an operator is associated with anchoring, our proposal implies saying that in Norwegian *s*-passives the anchoring of the event is not performed by placing the event with respect to the time of utterance, but by anchoring it to possible worlds related to the value of the mood in the clause. This connects with Wiltschko's (2014, 2016, 2017) proposal that TP is not a universal category. What is universal according to Wiltschko is the need to have elements that perform the function of anchoring at the clausal level; assuming that the language has a category *v* – which is nothing but the head used for the classification of eventualities–, that opens the possibility that in different languages, or even in different constructions across languages, anchoring is performed by different means.

In fact, Lundquist (2015) argues that *s*-passives in Norwegian lack tense altogether. This is not necessarily incompatible with our proposal provided that the subject position and the tense projection are dissociated in the clausal architecture, which is an orthogonal question to our purposes. We are essentially saying the same as Lundquist, only that in our approach, where we assume that subjects are placed in Spec, TP, the TP-projection must be present, because *s*-passives can host expletive subjects. However, our TP lacks any temporal value in *s*-passives, precisely because the event is already unavailable as a variable, so our approach is consistent with Lundquist (2015) in that temporal information is lacking from *s*-passives in Norwegian.

In the next chapter, we will continue discussing the fundamental properties of the *s*-exponent. We will show how the difference proposed between the *s*-exponent in Norwegian and Swedish provides a conceptually-appealing way in which we can explain why each one of these two languages uses distinct

procedures to express middle statements. What will be crucial is whether the *s*-exponent can form a constituent with a particular modal head or not.

Appendix. How many movement operations in syntax?

As we noted, this monograph is concerned with the way in which the right configuration for the insertion of exponents is obtained, and its consequences. For this reason, we have not dealt in the analysis with how exponents are ordered in the surface, or the mechanisms that produce it. In this appendix we will shortly consider the matter. The way in which we will approach the issue is in the form of a question: how plausible it is that every single fact about the linear ordering of exponents and PF-constituents is fully derived by syntactic operations? Even though, admittedly, the most parsimonious theory would be one where all ordering facts are derived in the same level, it has been argued that it is necessary to make room for PF-branch operations that have effects on linear ordering (think, for instance, of prosodic movement as in Embick & Noyer 2001 or Agbayani & Golston 2016, or the specification of some exponents as infixes, as in Yu 2007).

Let us now consider the ordering of exponents, and let us examine how likely is that morpheme ordering –and specifically, getting *bli-r* as one single word– can be derived purely from syntactic movement in this case; that is, how likely it is that *blir* ends up being one single word because of the movement operations in syntax, previous to the insertion of exponents, and not from a morphophonological principle that is triggered by the lexical entry of the exponents themselves. What we will keep in mind is the following ordering facts:

i) In the absence of an auxiliary, the ordering is V-Tense participle PP-agent.

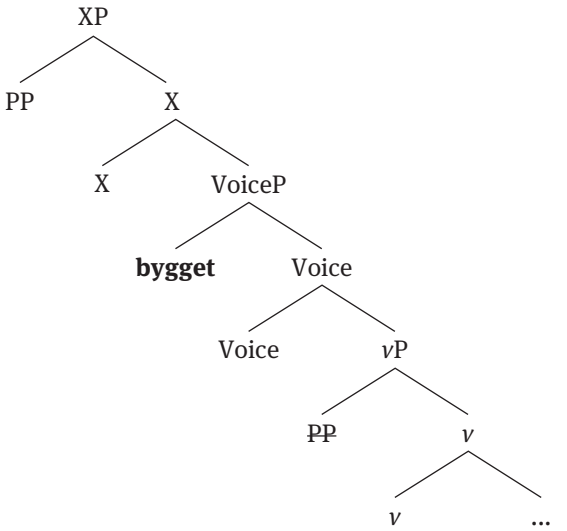
(i) *Huset blir bygget av ham.* Norwegian
house.DEF becomes built of him
'The house is being built by him'

ii) If there is an auxiliary, the order is Aux-Tense V participle PP-agent

(ii) *Huset måtte bli bygget av ham.* Norwegian
house.DEF had.to become built by him
'The house had to be built by him'

Here is what a syntactic movement proposal would look like: the first thing that would have to happen is that the PP-agent evacuates the *v*P constituent and merges in a position above VoiceP.

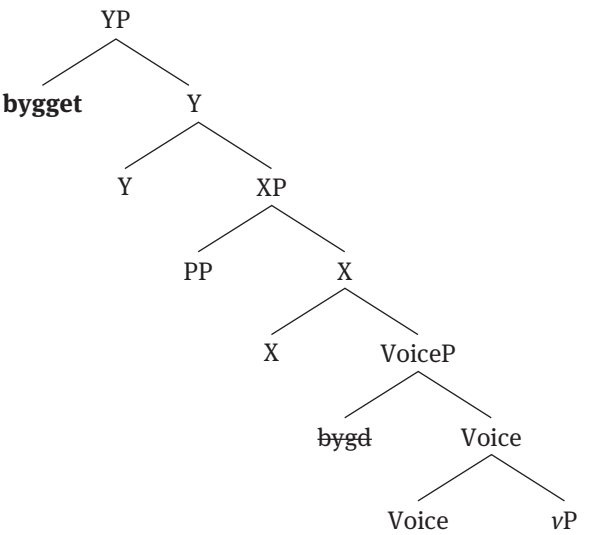
(iii)



It is unclear what motivates this movement, and how it is semantically interpreted. This movement might be related to the need of licensing a PP argument inside the verbal constituent (Takamine 2010), with the complication that in our view the preposition is already defining the relation with the predicate. XP is, then, difficult to identify.

Second, the participle constituent moves to a position higher than XP, maybe as part of the need to license the aspectual information carried by AspP; obviously the question would be why that AspP is defective.

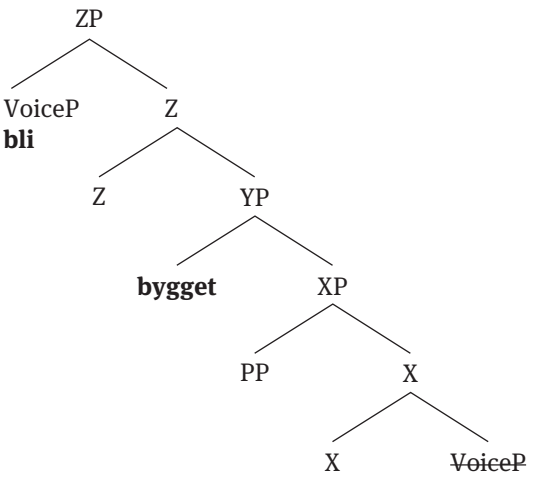
(iv)



At this point, the only material contained inside the VoiceP constituent is the two heads Voice and *v*, which are spelled out in isolation as *bli*.

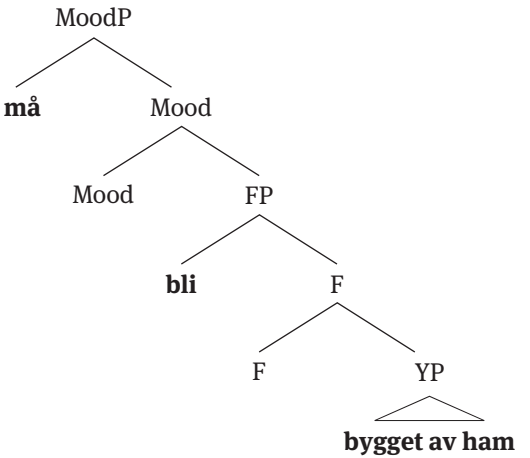
This constituent VoiceP would then have to move to a position above the participle.

(v)



From this position, the VoiceP constituent, as the highest element in the clause that has verbal nature, will be adjacent to Tense morphology. There is, however, a second option: that an auxiliary verb is projected in Mood or Asp, above VoiceP after it displaces. In such case, this auxiliary verb is the one that is adjacent to TenseP – that is, we would need to block that *bli* moves so high–, but it still will have to move above both the participle and the agent, to an intermediate position.

(vi)



Consequently, there should be an FP head that stays between auxiliaries and AspP where *bli* has to move necessarily. Note that this type of derivation requires two things that are problematic in our analysis:

a) Most of these movements have an unclear motivation, and it is difficult to determine what is their semantic effect. We have taken here the strong position that any movement step should be semantically interpretable, for instance preventing something that is not the argument of the VP to move to Spec, AspP.
b) We would have to multiply the set of functional heads allowed in a language even though most of these heads would be materialized as phonologically-null (zero) elements. It is not logically impossible that more than one exponent is materialized as zero, but still it would be implausible that in a system where syntax builds constituents that are identified by exponents, so many of those functional exponents are phonologically empty.

For this reason, in this book we will explore another solution, one that takes advantage of the proposal that Σ-structure is a level of representation: some of the linear ordering facts are determined by the specification of the exponent, disregarding the syntactic hierarchy. Exponents, then, respect the hierarchy as part of the configuration that allows for their insertion, but once the structure has been translated from syntactic trees to set of exponents, those exponents might have to be reordered to satisfy independent constraints. We will return to this problem in Chapter 6.

5 Differences in the expression of middles in Norwegian and Swedish

5.1 Initial distinctions

With some internal variation that we will discuss in more detail in §5.3, Norwegian and Swedish contrast in the way in which they express middle statements, that is, dispositional ascriptions of a non-agentive subject (Lekakou 2005). Both languages can express a middle with an adjectival participial structure (1) and this is by far the most common way of expressing dispositional ascriptions in both languages.[1]

(1) a. *Denne boken* *er lett-lest*. Norwegian
this book.DEF is easy-read
'This book is easy to read.'
b. *Den här bok-en* *är lätt-läst*. Swedish
this here bok.DEF is easy-read
'This book reads easily.'

In addition to this form, some varieties of Norwegian can express this kind of statement via a verb in a particular morphological form, which is identical to the *s*-passive (1).

1 In addition to these two structures, both Swedish and Norwegian are able to use a tough construction in contexts where there is no actual event:

(i) *Denne boken* *er lett å lese* (Norwegian)
this book.DEF is easy to read
ii) *Denna bok* *är lätt att läsa* (Swedish)
this book is easy to read

The three constructions are available in Norwegian. Despite their many differences, they share the interpretation that, even though they involve a verbal core, this event is not entailed to be instantiated in time (e.g. past, present, or future), and the predicates are used to ascribe a set of properties to the grammatical subject.

Note: This chapter is a revision and extension of our previous published work on middles in Mainland Scandinavian (Fábregas & Putnam 2014, published as, 'The emergence of middle voice structures with and without agents' in *The Linguistic Review*). Our analysis of middles in this chapter builds on the foundation of this work and we would like to recognize and thank the reviewers of the original article that planted the seed for this chapter.

https://doi.org/10.1515/9783110670912-005

(2) *Denne bandasjen fjerne-s lett fra huden.* Norwegian
this bandage.DEF removes.PASS easily from skin.DEF
'This bandage is easy to remove from the skin.'

Some Norwegian speakers – again, we will be more precise about this in §5.3 – accept the sentence in (2) to express the characteristics of a type of bandage that is easy to remove from the skin, and can therefore use it in a context where it is clear that the event expressed by the verb has never taken place: for instance, when that sentence is part of the theoretical description of a new bandage design that is being submitted to a pharmaceutical company so that they consider producing it.

In contrast to this, expressing the middle statement with the *s*-passive is much more restricted in Swedish. In our data – again, see §5.3 for more details – Swedish speakers of the Uppsala variety – and the information generally found in grammars and descriptions of the 'standard' Swedish variety – are unable to use the s-passive form for the expression of middle statements. Example (3) is only interpreted by these speakers as a habitual statement where the event must have taken place, that is, the bandage must exist and have been habitually removed from the skin for the sentence to be true. In order to express a middle statement, the copulative sentence involving a participial adjective with an adverbial modifier, as in (1b), is used by these speakers.

(3) *#Detta förband ta-s bort lätt från huden.* Swedish
this bandage take.PASS away easily from skin.DEF
'This bandage is normally removed easily from the skin.'

Throughout this chapter, we will refer to the middle statement that uses a verbal structure as the *verbal middle*, while we will use *adjectival middle* for the construction that involves an adjectival participle. Thus, Norwegian is able to express a middle statement with a verbal or adjectival structure, but (certain varieties of) Swedish is restricted to an adjectival structure. We want to be insist for the sake of explicitness that (i) in both languages there is an overwhelming preference for the adjectival middle over the verbal middle and (ii) what we call in the description 'Norwegian' and 'Swedish' should be understood as blanket terms for the standard varieties that gloss over interesting fine-grained differences among varieties internal to each language.

An anonymous reviewer directed our attention to the so-called absolute use of the *s*-exponent in Swedish (Lyngfelt 2007; ex. (4)), which we will also briefly discuss in this chapter.

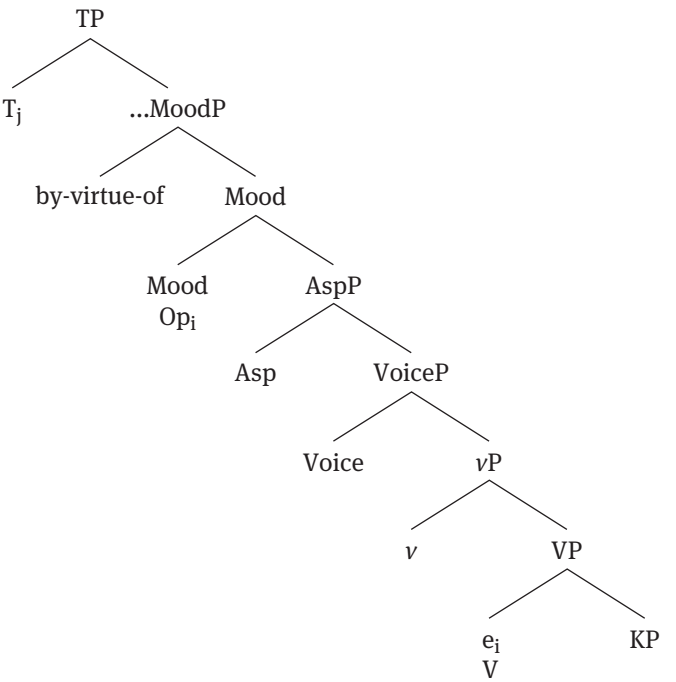
(4) a. *Se upp, katten riv-s.*
look up cat.the scratch.PASS
'Beware, the cat scratches.' (='the cat has a tendency to scratch').

b. *Pojken reta-s.*
boy.the tease.PASS
'The boy has a tendency to tease.'

There is a connection between middle statements and this absolute use of the *s*-exponent, as well as a number of other differences that we will emphasize. Norwegian lacks this use of the *s*-exponent, and we will provide a straightforward and conceptually appealing explanation for this towards the end of the chapter.

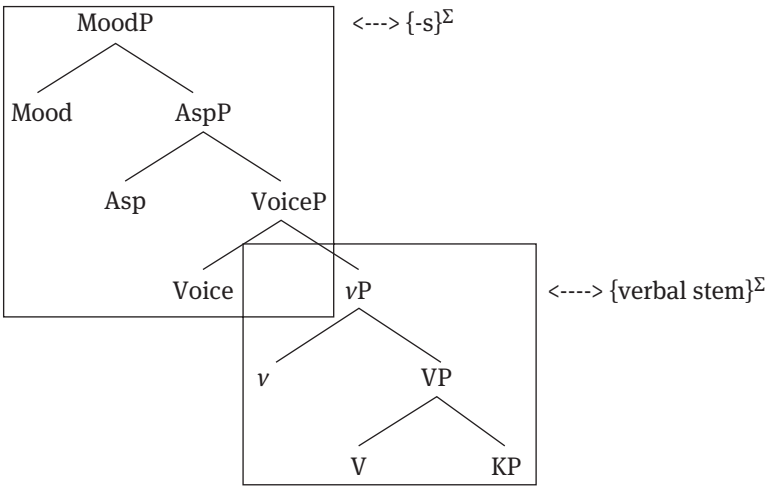
Here we introduce the core components of our analysis: We argue that (5) is the structure of a verbal middle structure in Norwegian. Crucially, the head *v* is present and introduces an event variable. This should be the default assumption, given that within the morphological structure of the predicate in this Norwegian construction it is possible to identify a verbal stem (cf. *fjern-e-s* vs. *fjern-e-r* 'I/you/(s)he/we/they remove'). The introduction of T over this head would imply that this variable becomes bound through existential closure, giving rise to a structure that at LF is interpreted as 'there exists a specific event instantiated in some time interval' (cf. Roeper & Van Hout 1998 for independent evidence of this). Middles avoid this interpretation by merging an operator (Op) with a by-virtue-of semantics between T and *v*. The operator binds the event variable, making it unavailable for existential closure.

(5)



However, in order to exploit this structure, languages must be able to lexicalize it at PF, that is, match it with some exponent. We assume that Full Interpretation forces every syntactic feature to be exhaustively lexicalized (Exhaustive Lexicalization Principle). This is where the difference between Norwegian and Swedish emerges. The *-s* exponent in Norwegian can lexicalize both (Passive) Voice and Mood, because, as discussed in the previous chapter, in Norwegian the *s*-exponent is the spell out of VoiceP, and VoiceP, AspP and MoodP can form a syntactic constituent to the exclusion of the material below VoiceP.

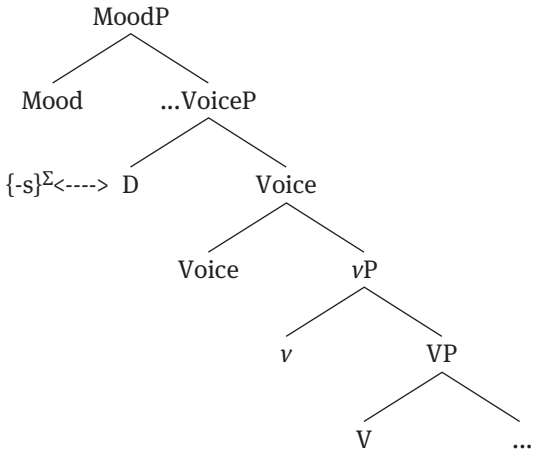
(6)



Norwegian can thus lexicalize (5) as represented in (2), but if (standard) Swedish tries lexicalization with these lexical items, one head; namely, Op, remains unmatched, with the effect that the Exhaustive Lexicalization Principle is violated.

Let us see why. We have argued that in Swedish the *s*-exponent materializes the features of a pronoun (with label D; cf. section §4.6) merged as the profiled specifier of VoiceP. In that position, the *s*-exponent does not form a syntactic constituent with MoodP to the exclusion of the other elements. The immediate prediction, thus, is that the Swedish-*s* will never be able to encode the modal semantics required by the middle interpretation, because no exponent in Swedish can be built that includes the *s*-exponent with Mood and Aspect to the exclusion of the other constituents.

(7)

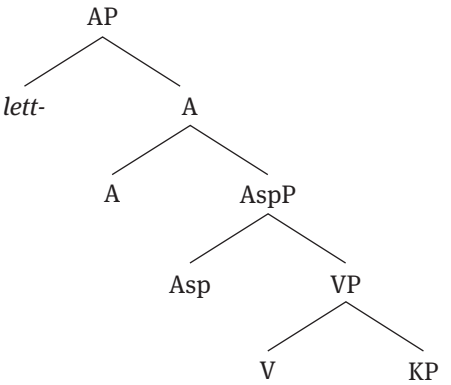


Ultimately the problem emerges at Σ-structure: Swedish cannot lexicalize the middle operator with *-s*. This is due to the fact that, as we saw in the previous chapter, the *s*-exponent is a clitic in Swedish, while it is a materialization of Voice in Norwegian. In Norwegian it is possible to lexicalize with the *s*-exponent the combination of Voice and the modal operator that dominates it.

Thus, in Swedish, the operator must be absent from the structure if the *s*-passive is used as a morphological form. Crucially, not having the operator merged in the structure has syntactic consequences for interpretation. Once there is no Op-head to bind the event variable, T triggers existential closure of *v* and the reading is that there exists an event; in other words, for the Swedish speakers that have this particular set of exponents, the interpretation is not middle (3), but the instantiation of an episodic event.

How can we avoid that the event is bound by tense without using an operator? One way to avoid a reading where the event is instantiated in a time interval without an Op that binds it is, obviously, to remove *v*, the head that introduces the event variable, from the structure. When *v* and the verbal structure above it is absent, we obtain an adjectival structure with middle semantics (8).

(8)



The rest of this chapter is structured as follows. In §5.2 we will be maximally explicit about the properties of a middle statement, given that without these properties in mind it is difficult to differentiate it from generic statements or even habitual and frequentative statements. Ultimately, the difference that we claim (standard) Norwegian and (standard) Swedish have with respect to the *s*-passive is a subtle semantic difference that is not obviously perceived by the surface properties. Even when the specifically middle reading is isolated, it is still true that there is internal variation within each one of the languages with respect to how acceptable the middle interpretation is with the *s*-passive, a fact that we will describe in §5.3 and that is likely to stem from the dialectal fragmentation of both Norwegian and Swedish. §5.4 focuses on the distinctions between the verbal and the adjectival middle. §5.5 analyses the verbal middle, and §5.6 presents our proposal for the adjectival middle. Finally, in §5.7 we discuss our analysis of the distribution of the absolute *s*-exponent illustrated in (4) above, which only Swedish has.

5.2 Properties of middles: What is a middle statement?

Even if different languages instantiate middle statements by means of different syntactic constructions (as noted among others in Condoravdi 1989, Lekakou 2005 and Klingvall 2007), their semantics is relatively clear. Following the specific proposal by Lekakou (2005: 90), we will consider a middle statement as a generic dispositional ascription, which predicates a set of properties from the grammatical subject without entailing that they are instantiated in any event. In a statement like *Such books read easily* it is said that, for a whole class of books, it is true that they have the properties necessary to be read easily, even –and this is crucial– if the reading event has never been instantiated with this kind of books. Syntactically, these statements share with passives the property that the grammatical

subject is semantically an internal argument, but they contrast with them in that in passives it is entailed that the event takes or has taken place (*Such books were read easily*). Even though they also involve genericity, habitual statements are different from middles in that, again, the existence of events is entailed –*Such books are (generally) read easily*. Some properties have been noted that are necessary conditions for being a middle. Let us revise them.

a) A middle structure denotes a potential situation dependent on the properties of the subject, that is, they are by-virtue-of statements. Thus, middles act like stative predicates, even though they must be built over verbal roots that have an event reading. This has consequences for temporal marking in some languages. For instance, in Spanish, middles, which are built with the clitic *se*, are different from impersonals or passives – which can also be built with the same clitic – in that they are restricted to imperfective tenses (present and imperfective past, for instance). Passives and impersonals can use the perfect tenses (perfect and indefinite past).

(9) a. *Esas camisas se lava-ba-n bien.* SPANISH
those shirts SE wash-IMP.PAST-3PL well
'Those shirts were washed well' (passive) or
'Those shirts washed well' (middle)
b. *Esas camisas se lava-ron bien.*
those shirts SE wash-PERF.PAST.3PL. well
'Those shirts were washed well'

Purely stative verbs also tend to combine with the imperfective past tense, given the absence of natural boundaries for the properties they express. When used in the indefinite tense, such boundaries are either implied or the verb is categorized as an achievement (10b).

(10) a. *Juan sab-ía que su mujer estaba enferma.*
Juan know-IMP.PAST.3SG that his wife was sick
'Juan knew that his wife was sick.'b. *Juan supo*
b. *Juan supo que su mujer estaba enferma.*
Juan know.PERF.PAST.3SG that his wife was sick
'Juan got to know that his wife was sick.'

b) As noted by Lekakou, the 'by-virtue-of' relation codified by middles is restricted to internal arguments. Thus, sentences whose subject is an AGENT or a CAUSER do not allow for middle interpretations. The sentence in (11a) is interpreted as a habitual, while the sentence in (11b) is a middle. In other words,

(11a) cannot be interpreted as 'John has a predisposition to plant grass seeds but has never done so'.

(11) a. John plants grass seeds.
b. This kind of grass seed plants easily.

c) The disposition must follow from internal properties of the grammatical subject, not the agent or any other participant that might be implied.

(12) a. This book reads well because it is fun and well-written.
b. *This book reads well because I have new glasses.[2]

Example (12a) is perfectly fine, because the properties that dispose the book to be read with ease belong to the book itself; in (12b) the book can be read easily because of properties of the agent, not the book itself. Therefore, (12b) cannot receive a middle interpretation.

d) Middle constructions are generic statements of sorts. Typically, the grammatical subject is interpreted as denoting a whole kind, independently of how the kind of determiner that it contains (bare nouns as in (13a), indefinites as in (13b) or demonstratives as in (13c)). When the agent is expressed prepositionally, there is also a strong tendency to favor generic agents.

(13) a. Bananas eat well.
b. A banana eats well (= every banana)
c. This banana eats well (=this kind of banana)

2 T. Stroik (p.c.) points out to us that in some cases the properties of the agent –or of objects related to the agent– can play a role in the disposition: *Small prints read best for me if I have a magnifying glass; This car handles poorly for me if I have only one hand on the steering wheel*. To the best of our understanding, this is allowed to the extent that it is possible to connect, conceptually, the grammatical subject with the agent property that is presented: the book itself (as in 12b) does not play any role in the fact that the agent has new glasses, but the type of print does play a role in a similar scenario, because the need for the instrument used by the agent to augment the letters directly relates to the size of those letters. The fact that this kind of conceptual effect plays such a significant role in the availability of a middle increases the plausibility that middles are the way in which we call the particular semantic interpretation assigned to structures built with grammatical constituents independently used in other constructions –such as passives and modal constructions–, and not the result of designated syntactic structures. Another factor that crucially seems to play a role in the examples pointed to us by Stroik seems to be that there is a benefactive (introduced by *for*) which is coreferential with the implicit agent, something that makes the connection between the predicate and the properties of the agent easier.

Note that the dispositional ascription meaning of middles is not codified through an auxiliary verb, even though the entailment that there exists an event is also suspended with modal verbs. Thus, the sentences in (14) are not properly middles.

(14) a. These shirts can be washed in cold water.
b. *Denne boken kan lese-s lett*. NORWEGIAN
this book can read.PASS easily
'This book can be read easily.'

These properties – non-agentive subject, generic character, absence of the entailment that there exists an event and stating a dispositional ascription depending on internal properties of the subject – are considered part of the standard definition of middles (see e.g. Condoravdi 1989; Fagan 1992; Hoekstra & Roberts 1993; Fujita 1994; Ackema & Schoorlemmer 1995; Zwart 1998; Mendikoetxea 1999; Stroik 1999, 2006; Steinbach 2002; Marelj 2004; Lekakou 2005; Klingvall 2007; Schäfer 2008; Fábregas & Putnam 2014). The controversy about the nature of middles has to do with two aspects of their syntax and semantics: whether an agent is syntactically present in their structure and what the nature of the verbal modifier (*easily* in *These shirts wash easily*) is. We will refer to both problems in our analysis but let us briefly consider here the first one.

It is generally accepted that middles are interpreted at a conceptual level as involving an agent, and that, for instance, in (13) the statement is interpreted still as describing the propensity of participating in a causative event of reading, as opposed to an anticausative reading like *The window gets broken*. There are exceptions, though: Klingvall (2007), in line with Rappaport (1999), treats the English sentences in (15) as middles, independently of whether it is possible to understand a disposition to an internally caused event ('this type of glass breaks easily because its structure is unstable') or to an externally caused event ('this type of glass breaks easily when someone hits it'). Depending on the modifiers that accompany the predicate, the internally-caused reading can be selected (15b) or the externally-caused reading, which is accepted by some speakers in the presence of an instrumental phrase (15c). These data suggest that the middle interpretation does not necessarily require a conceptual agent.[3]

3 In relation to verbs that allow for an anticausative reading consider the following Norwegian examples, where a middle reading is obtained without *-s*:

(i) *Denne boken brenner lett*.
this book burns easily
'This book burns easily'

(15) a. This glass breaks easily.
b. This glass breaks when temperature changes.
c. This glass breaks with a blunt object.

Evidence for the syntactic expression of an agent would be the overt presence of an agent argument introduced by a preposition. It seems that in such cases languages vary with respect to each other. As a case in point, contrast Spanish (16a) with English (16b). Spanish speakers do not reject agents with middles, provided they are generic,[4] but this possibility does not exist in English. Given this variation, whether a language introduces agents in a middle statement has to be determined by the properties of the sentence in each language, and interlinguistic comparison does not seem to provide with any definitive argument.

(16) a. *Este libro se lee con gusto por niños y mayores.*
this book SE reads with pleasure by children and grown-ups
Intended: 'This book reads with pleasure for children and grown-ups.'
b. This book reads with pleasure (*by children and grown-ups)

From this cursory overview of the properties of middles, it should be clear that middles are subject to syntactic variation not only among languages within the Germanic family, but also in a wider typological setting. Next to some semantic core properties that seem to be necessary in order to label some structure as having a middle meaning, there are other aspects that are more variable. This result is expected if 'middles' are not a construction – in the sense of Construction Grammar – but a particular interpretation obtained from structures that have in

(ii) ??*Denne boken brenne-s lett.*
this book burn.PASS easily

Whereas the first example (i) clearly exhibits "middle semantics" (with a possible implicit agent, understood at a conceptual level), the second one is not available. In the framework adopted, middles are not specific constructions, but interpretations obtained by the interplay of independent units inside a syntactic structure; as such, the difference between "middles", "passives", and "anticausatives" in the structure might be reflected in a variety of ways through the exponents, depending on the syntactic objects used in each case in order to prevent the event from being existentially bound, provided that the resulting structures can be lexicalized. It is, thus, expected that several syntactic structures for the middle coexist in one single language.

4 More in general, Spanish only allows agents with the passive form of stative verbs to the extent that they are generic. For the relation between stativity and genericity, see Kratzer (1995) and Chierchia (1995).

*(i) Juan es conocido por {todos / *Pedro}*
Juan is known by everybody / Pedro

common the lack of an existentially bound event variable but can be obtained syntactically in a variety of ways. We will return to this issue in several places in this article.

It should be noted, finally, that the set of constructions that can be classified as middles is still subject to some discussion; this is, again, expected if 'middle' is the name we give to a dispositional interpretation of a predicate whose grammatical subject is an internal argument.[5] Leaving these questions aside, in the following section we will concentrate on the verbal and adjectival middle structures in the two languages where our study focuses in order to describe in some detail their syntactic properties.

5.3 Acceptability of the verbal middle interpretation in Norwegian and Swedish

Before discussing the analysis in greater detail, there is an issue that we must address right away. As clearly illustrated by the Nordic Atlas of Language Structures (Johannesen & Vangsnes 2014-2018) what we refer to as 'Norwegian' and 'Swedish' is in fact a set of different varieties, sometimes differentiated by non-trivial grammatical preferences and contrasts. The dialectal fragmentation of Mainland Scandinavian language, due to historical, social and even geographical factors, is stronger than other living languages, such as Russian, English or Spanish. In fact, there are subtle differences between speakers belonging to different dialectal varieties. The kind of fine-grained distinctions that emerge in a comparison of the internal varieties of Swedish and Norwegian is, in fact, what we expect if a good deal of the variation attested in natural language is due to the material that each exponent lexicalizes, as we argue in this book. Ultimately, provided that the constituency principle is respected, the set of exponents available in each variety, with the material that each one of them identifies, is stored in an arbitrary list. It is not surprising, then, that across varieties of the same language there are minimal differences in the lexical entry of the exponents; this will not have wide-ranging consequences in most cases, but when one goes down to the level of detail that requires, for instance, the identification of the middle interpretation, such differences might come to light.

5 Some have actually argued that it is not necessary that the subject of a middle statement is an internal argument otherwise projected as a direct object. See Ahn and Sailor (2011) for arguments that structures such as *My car seats four people* and *Clowns make good fathers* have the basic properties of middles. To the best of our knowledge, however, agents are never subjects of statements interpreted as middles.

The middle interpretation of the verbal structure with the *s*-passive is not accepted equally by all Norwegian speakers and is not possible with all verbs, as the result of a survey that we reported in Fábregas and Putnam (2014: 206-210). We (Fábregas & Putnam, 2014) conducted an informal experiment asking 18 native Norwegian speakers – researchers, lecturers, and students of linguistics – to rate from 1 to 5 (1 being completely ungrammatical; 5 being perfectly grammatical) a set of sentences where the *s*-exponent of the verb was used in a middle context. The context was provided to the informants; they all involved situations where a habitual interpretation of the verb form was impossible, because the event clearly had not ever happened. The context was set to cases where the statement had to be interpreted as part of the project description of the properties of a non-existent entity that someone was sending a company in order to convince them of producing such a product for the first time. For instance, we provided a context where a researcher is trying to get funding from a company in order to build a prototype of a house made of a substance that makes it easy to rebuild in case of an earthquake. As part of the project description, the researcher sends the blueprint of the house and explains:

(17) *Denne typen hus gjenn-opp-bygge-s lett fordi det er laget av papp.*
this type house again-up-build.PASS easily because it is made of carton
'This type of house is easy to build up again because it is made of carton.'

15 of our 18 speakers gave very high marks to this sentence in that interpretation (4 or 5), although some of our informants noted that the sentence is not idiomatic in this reading, and that they would prefer to use a tough-construction. The sentence presented in (17) above was ranked as 5 by almost all our informants (15 of 18) in a context where it is part of the description of a non-existing type of bandage that someone submits to a pharmaceutical company for consideration; again, some informants noted that it is not idiomatic in his use of Norwegian, and that he would prefer a tough-construction.

In our estimation, the differences between speakers are not primarily dialectal. If anything, impressionistically, younger speakers tended to accept the construction more frequently than older ones, but the sample is admittedly not big enough to allow for any grand generalizations. For this reason, we will discuss some of the factors that might be involved in the individual preferences.

We hypothesize that there are three factors that are playing a role in the different acceptability of these structures as middle statements for Norwegian speakers. The first is the independent availability of adjectival structures to express these statements, particularly the adjectival participle and the tough-construction.

Tough-constructions are not homophonous with another kind of statement and transparently and unambiguously ascribe properties to the subject without entailing participation in an actual event. In contrast, the use of the *s*-exponent allows also for a habitual passive interpretation. Plausibly, the pragmatic principle that encourages speakers to be as clear as possible in their utterances makes some of them prefer any of the two alternative solutions; if they are independently available given the grammatical properties of the verb. Some of the individual preferences seem to be related to this, with some speakers accepting the use of the vague form better than others.

A second factor that influences the acceptability of these sentences as middle statements has to do with the aspectual modifiers of the utterance. One crucial difference between the participial construction and the verbal one is that in the former there is no event variable. Due to this reason, when the verb contains modifiers that quantify or modify this event, the participial structure is impossible – because it lacks the object that the aspectual constituent modifies– and many speakers find the verbal construction more acceptable. This is what happens with the sentence in (17), an iterative aspectual (*gjenn-*) particle stating the repetition of the event. In contrast, when the verb does not contain such modifiers, as in (18), the acceptability was in general lower in a middle context, although it still received 4 for many speakers.

(18) *Denne typen vogn skyve-s lett fordi den nye modellen har en ny type hjul.*
this type trolley push.PASS easily because the new model has a new type wheel
'This type of trolley is easy to push because the new model has a new type of wheel.'

The causativity or inchoativity of the event also plays a role for some speakers. Although marginally acceptable for a few speakers, (19) received in general very low grades in a middle context. In contrast, some speakers that rejected (19) said that (20) is acceptable as a middle statement. The difference between the two predicates has to do with external vs. internal causation. A car is driven by an external causer, but it can start its engine based on internal properties of its functioning.

(19) *Denne bilen kjøre-s lett fordi denne nye modellen har et forbedret kjøresystem.*
this car drive.PASS easily because this new model has an improved driving-system

(20) *Denne bilen starte-s lett fordi denne nye modellen har et*
this car start.PASS easily because the new model has an
forbedret system.
improved system
'This car is easy to start because the new model has an improved system.'

Almost all our speakers accepted the sentence in (21a) and assigned a 5 to it, which is necessarily an externally-caused event. One of the differences between (19) and (21a) is that the verb is atelic in the first but telic in the former, and it expresses a change of state. Telic change-of-state or change-of-location verbs seem to be more acceptable as verbal middle statements than atelic verbs, for reasons that remain obscure to us for the time being.

(21) a. *Dette stoffet vaskes lett fordi det har en utforming*
this fabric wash.PASS easily because it has a composition
som avviser skit.
that rejects dirt
'This fabric is easy to wash because its chemical composition rejects dirt'
b. *Denne bandasjen fjerne-s lett fra huden.*
this bandage-DEF removes-PASS easily from skin.DEF.
'This bandage is easy to remove from the skin'

Finally, there seems to be preferences for some verbal stems. One of our informants, who rejected all the proposed examples as non-idiomatic, volunteered one verb with which he can get the middle interpretation: *få* 'get', which can express a non-causative event and denotes a telic change.

(22) *Riggen er liten og veier lite, få-s lett inn i f.eks stasjonsvogn.*
Rig.DEF is small and weighs little, get.PASS easily in to e.g. stationwagon
'The rig is small and has little weight, so it is easy to get inside the stationwagon.'

It seems, therefore, that the *s*-exponent can be used by at least some Norwegian speakers in verbal predicates with a middle reading.

In addition our initial survey that we conducted in 2014, we have added one of similar scale and size for Swedish. The claim that Swedish completely rejects the expression of the middle statement with the *s*-exponent should also be nuanced, given the data that we obtained in this similar experiment involving 12 Swedish speakers. Although, in the case of Norwegian, we could not identify any

geographical preferences, the internal variation in Swedish appears to be more clearly conditioned by geographical area, although additional research is necessary on the future to gain a more comprehensive view.

Take, for instance, the following sentence, which was presented to the speaker within a context where it was made explicit that the car did not exist and therefore nobody had ever driven it:

(23) *Denna bil körs lätt eftersom den nya modellen*
this car drive.PASS easy because the new model.
har ett förbättrat körsystem.
has an improved drive-system
'This car is easy to drive because the new model has an improved driving system.'

In the scale from 1 (ungrammatical) to 5 (grammatical), 5 of our 8 speakers from Uppsala assigned 1 to it; one assigned 2, another one assigned 3 and there was only one speaker from this region that found it acceptable (4). Our only speaker from Göteborg assigned also 1 to this sentence.

In contrast, from our three speakers from Åland, which is a set of islands where Swedish is spoken in contact with Finnish, two assigned it 4 and one found it perfect, showing that in this variety of Swedish this aspect of the grammar is similar to the variety of Norwegian mentioned above. One anonymous reviewer, who revealed themselves as a native Swedish speaker, also informs us that in their variety the *s*-exponent can be used to express middle statements, although the reviewer was not included in the experiment.

Our speaker from Göteborg rejected all our test sentences with the *s*-exponent in the context that forces the middle reading. The 8 speakers from Uppsala provided marks of 3 or less to all our examples with very few exceptions; beyond the one speaker that evaluated the sentence mentioned above with a 4, the following sentence received higher marks from the Uppsala speakers, showing that there could also be some lexical preferences underlying some of these judgements.

(24) *Det här plåstret avlägsnas lätt från huden eftersom det inte klibbar*.
the here plaster remove.PASS easy from skin.DEF because it not sticks
'This plaster is easy to remove from the skin because it does not stick'

In contrast, the following sentence received the lowest mark from all Uppsala speakers, and also unusually low marks (between 1 and 3) from the Åland speakers.

(25) *Den här typen av spruta görs lätt av med eftersom nålen*
this here type of syringe do.PASS easy off with because nail.DEF
löses upp automatiskt inom 24 timmar.
dissolve.PASS up automatically in 24 hours
'This type of syringe is easy to dispose of because the nail dissolves after 24 hours.'

These preliminary findings highlight the microvariation present in the Mainland Scandinavian continuum that we sought to address and analyze in this book. These data confirm once again that it is idealistic, and to some degree disingenuous, to speak about these data solely in terms of 'standard' variants of Norwegian and Swedish; rather, a more detailed and nuanced treatment is required where additional variables such as dialectal regions (Göteborg-Uppsala vs. Åland) and the age of speakers (younger Norwegians from the Olso-area) play a more prominent role. From this data sample it can be inferred that there is a real difference between (some) Norwegian and (some) Swedish in this domain. It might be more difficult to perceive the contrast given that the adjectival middle is always possible, and more frequent, consequently making the *s*-exponent less felicitous for some Norwegian speakers. Additionally, the subtle semantic difference between the middle interpretation and other readings, such as the generic or the habitual (i.e., involving imperfective aspect), are two additional factors that may further complicate the strong dialectal fragmentation in Mainland Scandinavian once again on display here. There are other independent variables that may ultimately play an essential role that we do not consider further here, such as the presence of English among educated speakers, long-term mutual exposure to both languages through media and personal connections, and the effect of other regional varieties (Nynorsk) and languages that we have not included in our study (e.g., Danish and Finnish).

In spite of this variability in this specific domain of grammar, we conjecture our theoretical model is fully capable of accounting for these fine-grained contrasts. Ultimately, all that a Swedish variety needs in order to make the *s*-passive construction compatible with a middle interpretation is to add to its lexical repertoire an additional exponent (say it is materialized as zero) that spells out the MoodP with ascriptional semantics. Conversely, all that a Norwegian speaker needs in order to reject the middle interpretation of the *s*-passive construction is not to include an ascriptional modal operator in the material identified by the *s*-exponent. None of these changes seems radical, because they would not affect how the *s*-passive and the *bli*-passive behave otherwise, and they would just imply that another exponent has been added to the list, or that one existing exponent has slightly altered its lexical entry.

5.4 A comparison of the grammatical properties of adjectival and verbal middles

In this section we compare the grammatical properties of the verbal middle construction with the *s*-exponent in Norwegian to those of the adjectival middle construction – which is the most frequent way of expressing the middle in both Norwegian and Swedish. Building and expanding upon our previous observations (Fábregas & Putnam, 2014: 211-218) reveals that the evidence suggests that the verbal middle contains an event variable which is absent from the participial construction, and that, for some Norwegian speakers, the verbal construction projects an agent.

Consider example (26), which for many speakers of Norwegian can be a middle statement. Here, the middle is marked through the *s*-exponent, which attaches to verbal bases. The question is how many verbal projections are present in the middle reading.

(26) *Denne typen hus gjenn-opp-bygge-s lett (fordi det er laget av papp).*
this type house re-up-build.PASS easy because it is made of paper
'This type of house is easily rebuildable because it is made of paper.'

As we discuss in the remainder of this chapter, the underlying structure of (26) crucially contains a *v*P, in contrast to the adjectival middle, where this projection is lacking, and only consists of a bare VP. It seems that the verb to which the *s*-exponent attaches includes the syntactic projection that introduces the agent, at least for some speakers. Direct evidence of this comes from the fact that these Norwegian speakers accept an overt prepositional phrase (27a) interpreted as the agent of the potential event and, crucially, marked with the same preposition that introduces the agent in other cases (27b).

(27) a. *Denne typen hus gjenn-opp-bygge-s lett av alle.*
this type house re-up-build;PASS easy by everybody
'This type of house is easily rebuildable for everyone.'
b. *Denne boken ble skrevet av Ibsen.*
this book was written by Ibsen.

This is not a universal tendency in middles cross-linguistically; in English (28), a *by*-phrase cannot be licensed in a middle, although it can introduce an agent-like event participant with the preposition *for*. This contrast provides support for the idea that something structural happens in Norwegian to allow the presence of an agent.

(28) This kind of book reads well for university teachers.

What about Swedish? As we saw, with the exceptions noted in §5.3, Swedish cannot interpret the verbal passive construction as a middle. The way to express the middle, in the absence of the *s*-exponent, is an adjectival structure shared with Norwegian and composed of a participle and an adjective meaning 'easy', 'difficult', 'fast', 'slow' or other predicates whose conceptual semantics allows them to be taken as predicates of actions. This modifier is compulsory, and without it the sentence cannot get a middle interpretation.

(29) a. *Den här boken är lätt-läst.*
this here book is easy-read
'This book is easy to read.'
b. *Varm metall är mera lätt-hamrad.*
warm metal is more easy-hammered
'Warm metal hammers easier.'
d. *Stora väggar är inte så lätt-målade.*
big walls are not so easy-painted
'Big walls don't paint easily.'

As pointed out by Klingvall (2007, §6.1.1), the Swedish middle employs a passive-like structure where a past participle is present.[6] We demonstrate here

6 Klingvall (2007: 128) points to an observation originally put forward by Sundman (1987) that in limited, unproductive environments Swedish exhibits a construction that strongly corresponds to an English-type middle:

(i) *Den här boken säljer väldigt bra.*
this here book.DEF sells very well
'This books sells very well.'

Although this construction is fairly unproductive in Swedish, it can be used to create structures related to middles, which Klingvall (2007, Chapter 5) refers to as Instrumental dispositions (from Klingvall 2007: 129):

(ii) *Den här kvasten borstar bra.*
this here broom.DEF sweeps well
'This broom sweeps well.'
(iii) *Den här maskinen syr bra.*
this here machine.DEF sews well

Note, however, two properties of these constructions which leave them outside of the scope of this paper. First, crucially for our purposes, it does not contain passive morphology. Secondly, the subject is not a (semantic) object, but a non-animate initiator of the event described. The object is interpreted generically and the subject easily allows a type-reading, properties which suggest presence of a generic operator.

that Swedish shows empirical evidence that suggests that this construction contains a very impoverished verbal structure. In fact, we directly follow Klingvall's (2007) analysis of Swedish middle voice constructions where she asserts that the construction displays the properties of an adjectival participle.

Compare the availability of overt agents in Norwegian with the following data, which suggest that the adjectival construction cannot project an agent (example (30b) from Klingvall 2007: 138). Other modifiers are possible, like a beneficiary, but there is no possibility to introduce an agent PP marked with the av-preposition that introduces the agent in the passive. In the adjectival middle, however, it is possible to introduce a participant with the beneficiary / goal preposition *för* 'for' (cf. English *This book reads well for everyone*, without passive form).

(30) a. *Den här boken är lätt-läst (*av nunnor).*
this here book.DEF is easy-read (by nuns)
b. *Den här uppsaten är lättläst (*av mig).*
this here paper.DEF is easy-read (by me)

The adjectival and the verbal construction contrast also with respect to the phenomena that suggest presence vs. absence of an event (or spatiotemporal) variable inside their structure. Even though both are morphologically constructed from verbs, the verbal construction in Norwegian displays the expected behavior of exponents that contain an event variable, while the participle structure used in Swedish behaves as expected from a unit that does not have it. One reason that indicates this is that the verbal middle can combine with QPs that quantify over events.

(31) *Denne typen produkt bruke-s med hell mange ganger før det må*
this type product use.PASS with success many times before it must
bli erstattet.
be replaced
'This kind of product can be used with success many times before it must be replaced.'

The sentence in (31) is accepted by the Norwegian speakers that allow *s*-middles in the reading where given the properties of this new kind of product – a cleaning flannel that has not been produced yet – it can be used with success a number of times before it has to be replaced. In this reading, clearly there is a quantifier over the events in which the subject can potentially take part.

Compare this with the adjectival middle used in Swedish. There is evidence that here the participle does not include in its denotation any event variable and

displays the expected behavior of a qualitative adjective which denotes qualities rather than states Note first that the participle can combine with degree modifiers unavailable for verbs.

(32) *Den här boken er väldigt lätt-läst*.
this here book is very easy-read

In contrast, Swedish middles cannot license, or lexicalize, event quantification. In the same intended meaning of (31), the event quantifier *mange ganger* 'many times' is ungrammatical (33). This is an instance of Vacuous Quantification: the operator does not find an appropriate variable under its scope. Some Swedish speakers can interpret the modifier as degree, meaning 'extremely', but none accepts the reading where an event repeats many times.

(33) *Den här sortens produkt är lätt-använd (*många gånger)*.
this here type product is easy-used many times
Intended: 'This type of product can be used several times.'

It could be pointed out that perhaps what is ungrammatical in (33) is related to the stative or atelic nature of the adjectival middle. A consideration of other data involving event quantification shows that this cannot be the explanation. Rothstein (1999: 364 et seq.) shows that verbs, even stative verbs, have event variables that can be quantified over, in contrast to adjectives. Remember that states are both atelic and non-dynamic. Consider the minimal pairs in (34) and (35).

(34) a. The witch made her love the prince every time he drops in to visit.
b. *The witch made her fond of the prince every time he drops in to visit.

(35) a. The witch made her know Latvian three times.
b. The witch made her clever three times.

In (34), we see a clear contrast between having a stative verb embedded under make and having an adjective: only the first can be used as a variable under the scope of the temporal quantifier. In (35a), the sentence is ambiguous; the most salient reading is one in which there was been only one spell making someone know Latvian one day and forget it after a while, then know it again and forget it again, then know it again. That is: the adverbial expression can quantify over the stative verb, which means that it contains a variable. It can also, as expected, quantify over the verb *make*, meaning that there were three separate spells of making her know Latvian. However, in (35b) the reading is necessarily that there

are three different spells, each one of them making her clever, and we cannot interpret that there is only one spell. This is expected if the adjective does not contain any event variable.

What this suggests is that nothing prevents stative verbs from being quantified over. Note that the predicate *know Latvian* is, presumably, an individual-level predicate (Carlson 1977 /1980), and even in that case, the quantification is possible. Given this background, we conclude that the contrast between (31) and (33) is related to the verb / adjective contrast, and that, even if the participle in (33) is derived from a verb, it lacks one crucial ingredient of verbal predicates: an event variable. We will return to this issue later, as this will lead us to a minimal modification of Klingvall's analysis of adjectival middles.

The absence of an event variable in the participial middle vs. its presence in the verbal one is also visible in the co-occurrence with aspectual prefixes and particles. In Norwegian, we have already seen an example where the verbal middle statement hosted two aspectual markers of different nature (36).

(36) *gjen-opp-bygge-s*
again-up-build.PASS

In the interpretation assigned in the example above, *gjen-* is modifying the dynamic part of the event, presupposing that the event has already taken place and asserting that it takes place for a second time. In contrast, *opp-* is an aspectual particle that is compatible with a (result) state interpretation, expressing in that case that the state of being built is obtained up to its maximal degree. In other words, the result of the event is that the object is completely build. Containing full verbal structure, the two types of aspectual modifier, the one affecting the dynamic part of the event and the one affecting the result state, are available in the example. If the structure is truncated, and specifically the *v*P-layer that introduces the agent and the dynamicity is not there, we expect that the equivalent of *gjen-* would be out, while it would still be possible to have equivalents of *opp-*.

Consider once again the adjectival middle, illustrated for Swedish. Result state modifiers are not completely excluded. In (37a) the verb contains a resultative particle *bort* 'away'; in non-middle readings, such as the passive, this particle can incorporate to the participle (37b), but in the middle reading (37c) the particle is not acceptable for some of the speakers consulted.

(37) a. *tvätta bort*
wash away
b. *bort-tvättad*
away-washed

c. ?*lätt-bort-tvättad*
easy-away-washed

However, other speakers find it acceptable, and in fact in other lexical combinations the middle interpretation is compatible with an incorporated aspectual marker referring to the state. The following examples are documented in *Korp* (we thank an anonymous reviewer for bringing these examples to our attention).

(38) a. *en* *lätt-bort-tagen* *etikett*
an easy-away-taken tag
'a tag that is easy to take away'
b. *den* *svår-upp-blåsta* *luft-madrassen*
that difficult-up-blown air-mattress
'that inflatable mattress that is difficult to blow up'

Contrast this with a modifier like *åter* 'again', that implies a repetition of the event. As a particle, it can be incorporated to the participle, as seen bellow, but not in the middle interpretation.

(39) a. å*ter-konstruera-d*
again-build.PART
'built again'
b. **lätt-åter-konstruera-d*
easy-again-build.PART
Intended: 'easy to build again'

An alternative analysis of this pattern which does not relate the constraint to the presence or absence of an event variable could argue in favor of a purely morphological restriction – almost a templatic effect – that somehow forbids two modifiers inside the middle participle construction. This is the line or argument that we originally pursued in our previous (2014) research. Note, however, that this would not follow from any independent principle and would have to be treated as an idiosyncratic morphological quirk, which additionally should not apply, for uknown reasons, to particles that are interpreted as result state modifiers. In our account, this property connects with and follows from the same reasons that explain the rest of the contrasts with Norwegian verbal middle constructions: the infinitival form and the participle in other uses, such as the passive, contains an event variable, but not in the middle interpretation.

To summarize, in this section we have motivated two differences between the Norwegian verbal middle and the Swedish adjectival middle:

(a) The Norwegian verbal middle shows the behavior expected of a structure that contains an event variable, but the Swedish middle does not, but displays the behavior of an adjective.
(b) For some Norwegian speakers at least, the verbal middle can project an overt, prepositionally marked agent, but this is not accepted by any Swedish speaker in the adjectival participial construction.

As we will make explicit in the remaining sections of this chapter, we interpret these differences as indicating that the *s*-middle contains part of the functional projections of the verb, and crucially for our purposes, a head *v* that introduces in the syntax an event variable. In contrast, the participial middle that Swedish has to use is built over a lexical verb, but without the relevant functional projections.

5.5 The syntax of the verbal middle structure and why Swedish cannot lexicalize it

We have seen evidence that the Norwegian verbal middle construction, in contrast to the adjectival middle, contains an event variable which can be bound by quantifiers, and there is also evidence that the head responsible for the agent interpretation must be present – as the agent interpretation of a phrase introduced with a *v* is licensed.[7] We assume that the head responsible for introducing the event variable is *v* (cf. Harley 1995; it has received other labels in the literature; e.g. Proc in Ramchand 2008) and the one responsible for the agent is Voice (Kratzer 1996; Init in Ramchand 2008). Presence of a full verbal structure would introduce an event variable, on the assumption that the verb is eventive.

5.5.1 Mood prevents T from licensing the verb's event

Let us start with a structure with both *v*P and VoiceP.

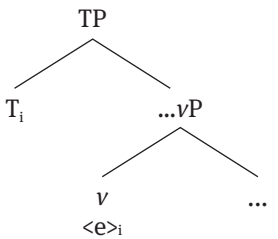
(40) $[_{\text{VoiceP}}\ \text{Voice}^0\ [_{v\text{P}}\ v^0 \langle e \rangle]]$

The presence (or absence) of the event <e> contained in v is crucial in our analysis. In the normal case, when tense (T) is merged in the structure, it will place this variable (cf. Roeper & Van Hout 1998), situating the event in a particular temporal

7 The proposal presented in this section builds upon a previous one drafted in Fábregas and Putnam (2013, 2014).

interval. The interpretative effect associated with it is that the event is instantiated in a particular time, or, in other words, it is stated that the event has taken place. This is clearly the interpretation that we want to avoid in the middle statement. We assume that in such cases the event variable is bound by an existential operator.

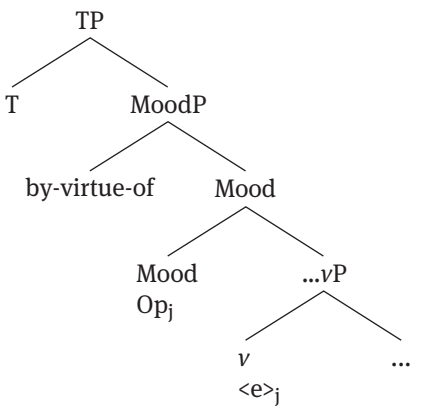
(41)



$\exists e[P(e) \& T(e)]$

This is not the structure of a middle statement. We follow Lekakou's (2005) proposal that verbal middles involve the presence of an operator with modal meaning at the verbal level (a by-virtue-of operator). This operator is introduced as part of the modal area of the clause. As is presumably the case with any other operator, it would be looking for a variable to bind or else a Vacuous Quantification violation will take place. The modal finds the event variable within its scope domain and binds it. This has the result of turning the event into a derived stative. Specifically, the event bound by Mood denotes not an episodic event, but a dispositional ascription predicated of the derived subject (Lekakou 2005: 90-99).

(42)



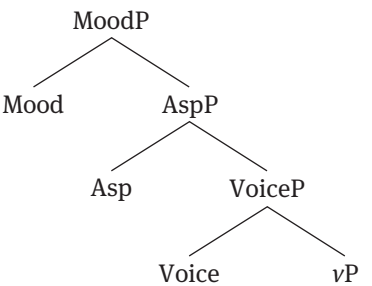
Now, tense cannot place the event directly. Existential binding cannot take place because the by-virtue-of operator already binds the event. What tense places in

the temporal axis in this case is the set of properties that the sum of the operator and the event denote: the meaning is, therefore, the time period during which the disposition can be ascribed to the subject. Consequently, when the modal is present there is no entailment that the event has taken place.

This amounts to saying that the anchoring of the event to the utterance is different in a verbal middle statement than in a non-middle statement. Following Enç's (1987) Anchoring Condition, the event has to be related to some salient reference point in the utterance. Ritter and Wiltschko (2005), Amritavalli and Jayaseelan (2005) and Wiltschko (2014, 2016, 2017) propose that in some cases this anchoring does not use the time axis, but can be done through person or mood, among other possible options. In the case of a middle statement, the anchoring, we suggest, takes place in the modal domain: the set of accessible worlds, from the world where the utterance is produced, where the subject has the properties ascribed to it.

From this explanation, which explores one consequence of Lekakou's analysis of middles, it follows that if the event variable is present and we want to obtain a middle reading, then the modal must necessarily combine with the verbal projection before Tense does. Let us be a bit more explicit about the ordering of the projections and their spell out. In the previous chapter, we argued that the *s*-exponent in Norwegian lexicalizes a constituent including MoodP, AspP and Voice.

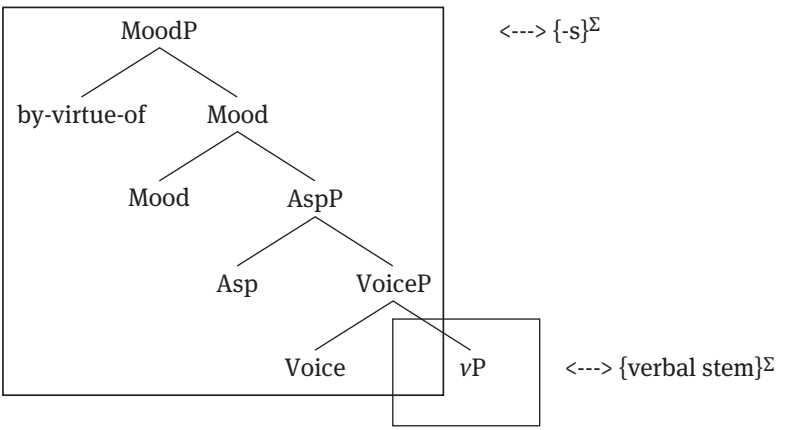
(43)



We will now slightly update this entry, proposing that the by-virtue-of modifier, when present, is placed in spec, MoodP. The maximal constituent lexicalized by the *s*-exponent in Norwegian is, therefore, (56).[8]

8 To be completely clear, note that we are not predicting that the *s*-passive or the *bli*-passive cannot combine with modal auxiliaries (in fact, see Laanemets 2012 for statistical data that show that both forms do combine with overt modals). In the case of the *bli*-exponent, note that its lexical entry does not presuppose that it cannot combine with modal verbs either in

(44)



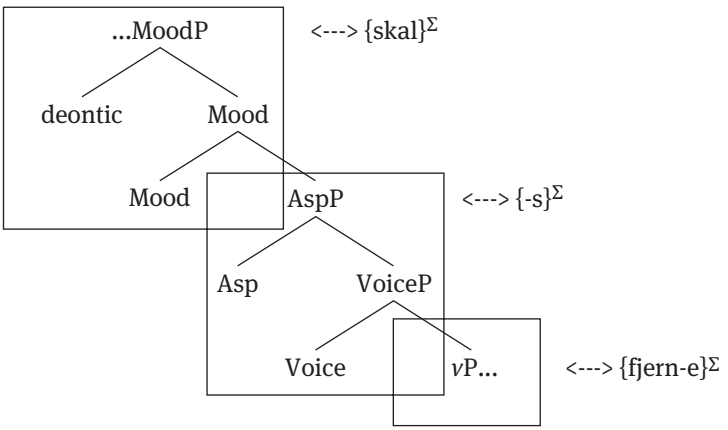
Note that above this projection specific modal auxiliaries can project, which are not included in the material spelled out by the *s*-exponent. Auxiliaries like *must* and *should* can combine with the s-form of the verb in their deontic interpretation:

(45) *Denne bandasjen {skal / må} fjerne-s lett fra huden.*
this bandage shall / must remove.PASS easy from skin.DEF
'This bandage must be removed gently from the skin.'

The structure corresponding to (45) is represented in (46): the modal auxiliaries are different instantiations of the modifier of Mood, which are not contained in the lexical entry of the *s*-exponent. Thus, the exponent shrinks to spell out the maximal amount of remaining material and the highest layer is materialized by the auxiliary.

Norwegian or in Swedish: it only makes the prediction that if it combines with a value for mood, the MoodP (and eventually, other mood related projections above it specifying the specific modal information) will have to be spelled out by another exponent. In the case of the s-exponent in Norwegian, that contains MoodP in its lexical entry, note that speakers that allow the use of that exponent for verbal middles include in the lexical entry the ascriptional operator, but not other operators involving for instance obligation or possibility. These other modal values, expressed through distinct operators, could also combine with an *s*-passive, but on the condition that they are spelled out by a distinct exponent, given that in its maximal expansion the *s*-exponent does not include any operator beyond the ascriptional one.

(46)



It has been argued in several places in the literature that deontic modals are merged in a lower position in the tree (Picallo 1990, Brennan 1993, Cinque 1999, Butler 2003) when compared with epistemic modals. This is in correlation with our proposal, where deontic auxiliaries are direct modifiers of MoodP.

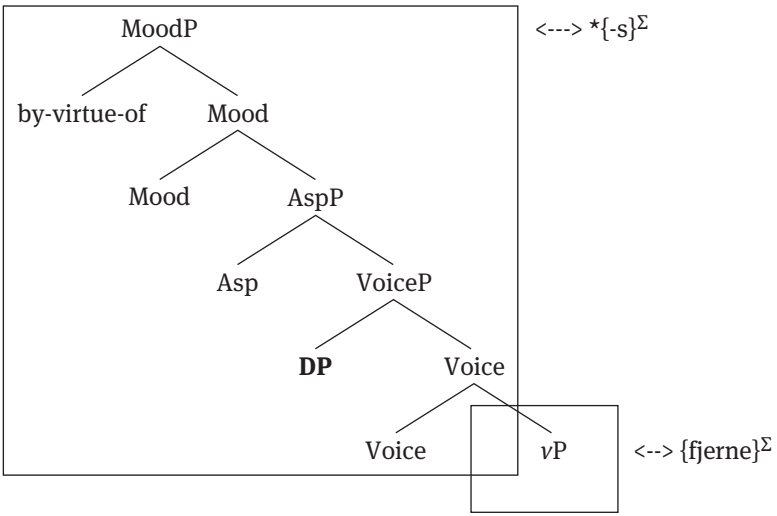
5.5.2 Agent PPs

A considerable part of the debate on the structure of middle voice is the place of project for the potential agent (i.e., whether the agent is projected or not inside this kind of structure) and whether this argument is actually best understood as an "agent". The variety of analyses proposed disagree in several key aspects, centrally among them whether the agent is suppressed from the verb's argument structure and conceptually inferred (Ackema & Schoorlemmer 1995) or whether it is present somehow in the structure and blocked from appearing overtly instantiated by independent mechanisms (such as the absence of eventivity in the verb's interpretation, Stroik 1999). The question is more complex and has wider implications than we can analyze here but note that there is some evidence in Norwegian middles that the structure should provide something related with eventivity. The crucial evidence is that some Norwegian speakers accept an overt *av*-phrase with an agent interpretation in the *s*-middles if the agent is generic. Here we repeat (27a) as (47) from earlier in the chapter to illustrate this point.

(47) *Denne typen hus gjen-opp-bygge-s lett av alle.*
this type house again-up-build.PASS easy of everyone
'This kind of house can easily be rebuilt by anyone.'

The proposal is then that verbal middles in Norwegian are nothing but s-passives with a by-virtue-of modal layer. Once this is in place, the fact that the internal argument is the one that must compulsorily be used in the structure follows: remember that agents can only be interpreted as such in two ways. Either they stay below the PP layer that assigns them the agent role in situ, or they move to Spec, VoiceP that assigns them the agent interpretation by default as the unmarked profiled constituent in the event. The second option is excluded in the presence of the *s*-exponent in Norwegian, because Spec, VoiceP is unavailable: at the moment when the *s*-exponent is used, a specifier of VoiceP would make insertion of the exponent impossible, because it breaks the constituent that the *s*-exponent lexicalizes.

(48)



Thus, the agent DP must stay *in situ*, which means that the internal argument is the only one that can be extracted, from the complement position of the verb. This produces what has been described as a passive construal. This does not mean that this evidence for Norwegian can be simply carried over to other languages. Contrast this with English, which does not use passive morphology to express the middle, allows for *for*-phrases with an agent flavor, but not *by*-phrases.

(49) a. This treatment of Norwegian middles reads easily for most linguists.
b. This car sells easily for talented salesmen.

(50) *This car sells easily by talented salesmen.

Some linguists, such as Stroik (1992, 1995, 1999, 2006), argue that the DP present in the *for*-phrases in (49a) and (49b) are in fact true agents, while others, such as Hoekstra and Roberts (1993), Lekakou (2005), and Klingvall (2007), maintain that rather than agent-interpretation, these DPs are better described as Experiencers. Under this view, the phrase for talented salesmen in sentence (49b) does not state that any talented salesman actually sold the car under discussion. Rather, what is stated here is that it is the car's general/generic property of being easily sold that holds for any talented salesman. As clarified by Klingvall (2007:134), "Agents are disallowed because they presuppose events, and, as stated, middles do not entail the existence of events. Although Agents are disallowed, Experiencers can be permitted. The Experiencer is the one for whom the property holds, and moreover corresponds to the potential Agent." As a result, the presence of for-phrases with verbal middle constructions can lead to ill-formedness on the part of some speakers (data from Lekakou 2005: 96, cited by Klingvall 2007: 135):

(51) a. This bread cuts easily when sober.
b. This wall paints easily when not half asleep.

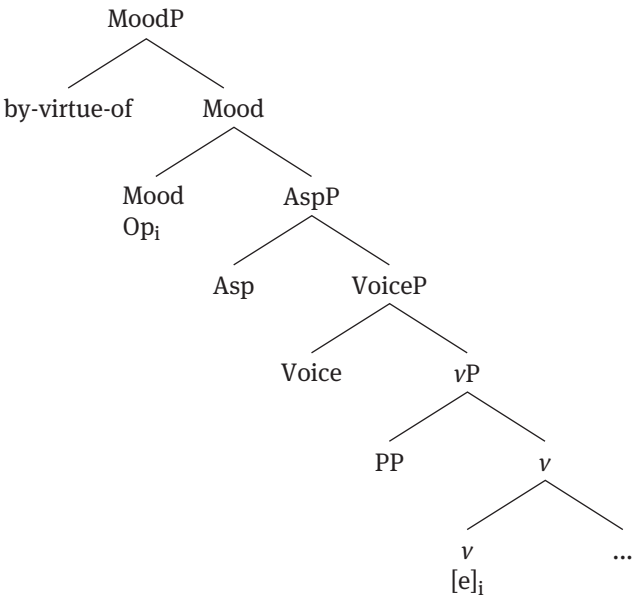
(52) *This bread cuts easily when drunk/tired/naked/sad/happy.

In examples (51a) and (51b), the secondary predicates specify when a particular property can be experienced. As such, these conditions are closely tied with the Experiencer. "This means, then, that a secondary predicate does not restrict the disposition itself, although one might get that impression at first glance" (Klingvall 2007: 135). In our analysis we also adopt the idea advanced by Hoekstra and Roberts (1993), Lekakou (2005), and Klingvall (2007) that DPs that appear in *for*-phrases (in English) are properly classified as experiencers rather than bona fide agents. The analysis of English middles has, obviously, other aspects to consider, but we will have to leave most of them outside the scope of this book.

5.5.3 Swedish vs. Norwegian

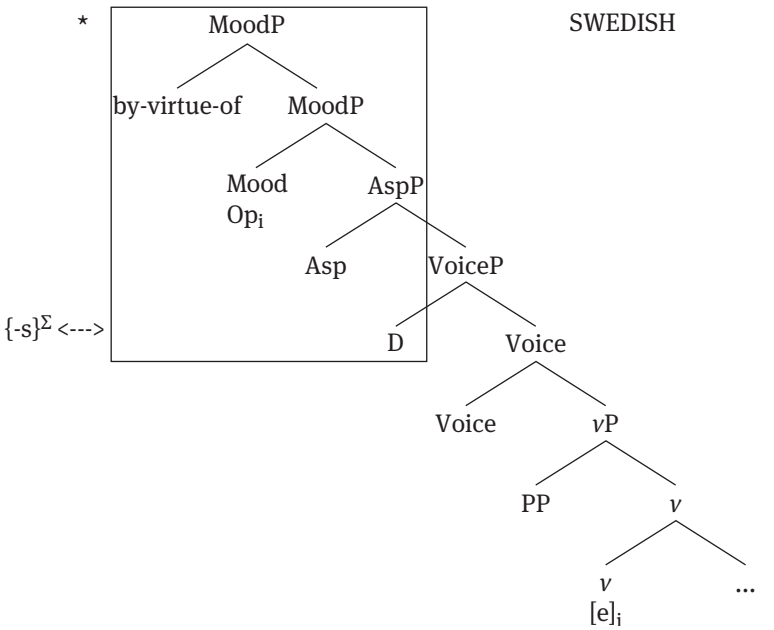
We are now in a position to present the whole structure of what we have argued to be a middle predicate. The tree in (53) contains a Voice projection unable to project a DP specifier and a *v*P-projection that contributes its event variable.

(53)



Given this structure, it now becomes clear in what way the Exhaustive Lexicalization Principle explains that Norwegian can use an *s*-exponent to express a middle statement, but Swedish cannot. The key difference is that the Norwegian *s*-exponent can spell out the operator, because it forms a constituent with Mood, but the Swedish one cannot, because it is a specifier in VoiceP that cannot form a constituent with Mood in the absence of the other elements.

(54) * SWEDISH



The Exhaustive Lexicalization Principle predicts correctly that this structure should be unavailable in this language. Swedish-*s* can spell out only the argument specifier of VoiceP, so it can appear in contexts where Voice is not dominated by Op; but these are contexts where tense locates the event, so they have to be interpreted as passives. As it is usual in passive construals, the internal argument rises to become the subject of the clause, but the PP-agent will have to remain in situ.

5.5.4 The modifier

The last element inside a middle statement that we must analyze is the adverbial modifier. Lekakou (2005: 141-161) convincingly argues that languages can be divided in two classes. The first class, exemplified by French or Spanish, makes use of passive morphology to codify a middle voice statement. This correlates with the fact that the adverb is not necessary to express a middle statement; it can be absent, and in such cases, pragmatics dictates whether the statement is informative enough without that modifier.

(55) *Le papier se recycle*.
the paper SE recycles
'The paper is recyclable.' [Fagan 1992]

The second class of languages consists of those that do not use passive morphology, such as English. These languages must have an adverbial in order to allow for a middle reading. Even with focalization of the verb, the sentence in (56) is ungrammatical as a middle: it can only be interpreted as a habitual statement with an implied object.

(56) #Bureaucrats BRIBE.
[Lekakou 2005: 148]

The reasons for this correlation is, according to Lekakou's analysis, that in order to interpret a statement as a middle, an agent distinct from the derived subject must be interpreted. The adverb is necessary in order to recover the agent when it is not activated syntactically: the intended experiencer of the property denoted by the adverb is identified with the agent. For instance, in *Such books read easily*, the experiencer of the easiness is identified as the agent of the potential reading event. Languages that use passive morphology do not need the adverb because they syntactically activate the agent –in our proposal, through a Voice projection–, but those that do not use passive morphology suppress the agent from the syntax, making the use of the adverb necessary to recover it.

Norwegian neatly falls in the same class as French and Spanish. The adverb is not necessary to obtain the middle reading. An adjunct *av*-phrase is already enough, provided it is interpreted as generic or arbitrary (once again, our infamous example repeated from (47) above).

(57) *Denne typen hus gjen-opp-bygge-s av alle*.
this type house again-up-build.PASS of everyone
'This type of house is rebuildable by everyone.'

Lekakou's analysis is consistent with the Norwegian data, and its contrast with English. Moreover, one straightforward prediction of our analysis, once we adopt Lekakou's take on the adverbial modifier, is that if the layer that introduces the agent (*v*P) is missing from the structure, the adverbial modifier will become compulsory. This is precisely what happens in the adjectival middles, which both languages use. Foreshadowing a bit to the next section, the crucial fact is that the middle interpretation of the participle cannot be obtained unless there is an additional modifier of the participle that can introduce conceptually an experiencer that can be identified with an intended agent. In correlation with this, we have a structure where the verbal projections *v* and Voice must be

absent in order to obtain a middle reading, with the result that the agent is not licensed syntactically. Consequently, the adverb is necessary in order to recover the agent.

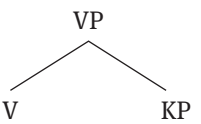
5.6 The syntactic structure of the adjectival middle

Let us now deal with the adjectival middle, which is the most frequent way of expressing a middle in both Swedish and Norwegian. Our claim is that here the non-episodicity that allows for a middle interpretation is obtained by different means than in the verbal middle.

The tests that we have used before show that there is evidence that two components are missing with respect to a more fledged verbal structure in the case of the adjectival middle: there is no event available and there is no agent. What this means in our proposal is that both *v*P and VoiceP, passive or active, are missing. This has severe consequences for the derivation. Given that *v*P is missing in the structure of adjectival middles, there is no event variable, and therefore, no danger that T will bind it and trigger a specific reading of the event. Consequently, no modal operator is necessary in the structure. In line with the previous work on middles in Swedish (cf. Josefsson 2005; Klingvall 2007, 2011), we adopt Klingvall's proposal that the middle voice construction in Swedish (and its Norwegian participial equivalents) consists of a past participle right-handed segment and a modifying left-handed segment. The left-handed segment of this compound unit, as we demonstrate below, is normally a bare root. There are subtle differences in the notational system that we employ compared to Klingvall's analysis. We discuss these in detail (when relevant) below.

Let us follow the derivation of the adjectival middle structure step by step. A big V combines with the internal argument.

(58)



Unlike the verbal structure, now *v*P is not introduced, so no event variable is present and there is no entailment that an event took place, explaining that this structure behaves as expected of an adjective, in the sense that it lacks an event variable and a full-fledged argument structure.

Note, however, a difference with Klingvall's analysis when compared with the ours set forth in this book. In line with Marantz (1997), Klingvall's uses a light-

headed projection *v* in order to determine the categorical status of the underspecified √ROOT. Under these assumptions, although the root in question here is initially merged under *v*, it must undergo head-movement to the adjectivalising head (for the sake of phi-feature incompatibility). For our analysis, the presence of a light verb head (*v*) is problematic, for in Klingvall's analysis it does not only serve the function of determining the categorical status of the underspecified root, but also stands as an event variable that can possibly be bound by T (which is obviously an unwanted situation for middle voice constructions). Therefore, we part ways with Klingvall's analysis with regard to this point and eliminate the presence of the verbal light head in our analysis, and for that matter of the root that it is supposed to verbalize. This means that a constituent can be verbal without introducing the agent, or, for that matter, any other projection. There is independent evidence for this claim. The main one has to do with the possible presence of overt verbalizer affixes inside object nominalizations and other structures without event meaning (see also Borer 2013).

(59) a. big calc-ific-ation-s
b. not-ific-ation-s
c. author-iz-ation-s
d. left-headed nomin-al-iz-ation-s

The presence of an overt verbalizer shows that we have, at least structurally, a verb, but the behavior of such nominalizations shows that there is no event variable. As noticed frequently in the literature (Grimshaw 1990, Alexiadou 2001) such nouns do not license aspectual modifiers.

(60) *We had in the pocket [two authorizations during two weeks].

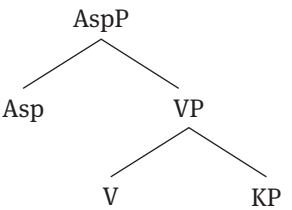
If the role of defining something as a verb was performed by the same head that introduces the event variable, then we would expect that overt verbalizers disappear in the object reading of the nominalizations, but this is not the case. Similarly, in adjectival middles, overt verbalizers can be present, but there is no event variable.

(61) *lätt-konstru-era-d*
easy-build-verb.PART

An additional difference between Klingvall's analysis and our own is that we propose that VP is dominated by an aspectual projection, which is lexicalized

as the participial morphology (in accordance with Schoorlemmer 1995, Embick 2004), as we also argued for in the previous chapter.

(62)



Compare this structure with Klingvall's. At this step in the derivation, Klingvall (2007: 144) analyzes the participles contained in adjectival middles as adjectival compounds whose head is the first (leftmost) constituent. In her proposal, an adjectival head lexicalized as the participial morphology would be merged (63a) with a structure involving a root. The root corresponding to *lätt* merges as an adjunct to the resulting AP (63b). The 'verbal' root would move to V^0 and the resulting set, to A^0, obtaining the right order.[9]

(63) a. $[_{AP}$ √ $[_{AP}$ A^0 $[_{VP}$ V^0 Root]]]
b. lätt- -t läs
easy Part read

Our proposed modification does not affect the central claims of Klingvall's proposal, as far as we understand them. The minimal difference is that the participle morphology is a manifestation of aspect, not of an adjectival head, which implies treating aspect as a cross-categorial property, a decision that we do not take as implausible and which furthermore allows us for a unified treatment of participles in middle construals and passives. This does not prevent an adjectival head

9 The exponent used to spell out the aspectual head is close to the one used to spell out the past information in *v* proposed in §5.4.3, although in our account these are two different heads. For instance, in the verb *läse* 'read', the past form is *läs-te* and the participle is *läs-t*. This similarity is intriguing and could potentially be interpreted as aspect being present also inside the past tense in Norwegian and Swedish, with aspect always spelling out as *-t-* (or *-d-*) and the *v* carrying past information spelling out as *-e-*; being absent from the participial construction, only *-t-/-d-* would be left. Although this is an intriguing proposal, other data suggest that despite their almost homophony, *-te* and *-t* should be treated as exponents for different heads. There is at least one Norwegian verb where *-te* is not used in the past, and still *-t* is present in the participle: *være* 'to be' has *var* as its past form, and *vær-t* as its participle. For this reason, in our analysis we keep the participle and the past exponents as separate units.

to merge over AspP, as Klingvall suggests. The modifier would be introduced in the projection, and we do not see any reason to reject her proposal that it is an adjunct. Being a root, Klingvall's approach can explain that agreement is blocked. In (64) we see that neuter gender is marked morphologically in Swedish when the adjective *svår* 'difficult' is introduced in a full-fledged adjectival environment.

(64) *Det här manifestet är {*svår / svår-t}* . Swedish
the here manifest is difficult

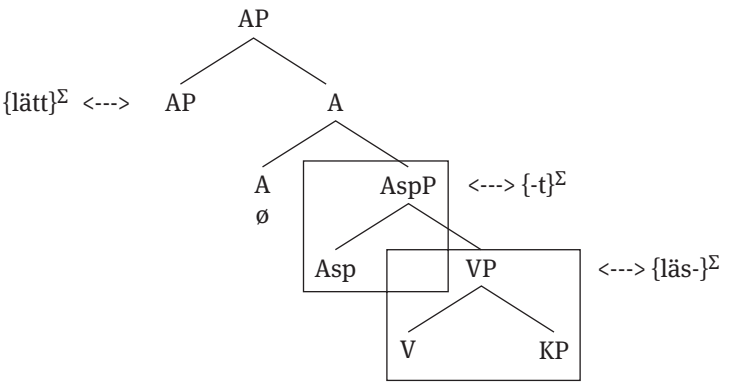
However, in the adjectival middle, this agreement is blocked:

(65) *Det här manifestet är {svår /*svår-t}-läst.*
the here manifest is difficult-read

The absence of agreement can be explained if the adjective does not project further functional structure, but there is another possibility compatible with Klingvall's analysis (and the aspects of it we adopt) that we would like to briefly present below. Assume, for the sake of the argument, that agreement is instantiated in the head of the only projection present here, A. In contrast with standard cases of adjective formation, however, the predicate corresponding to *lätt* is not introduced here as a complement, so it cannot undergo head movement to A^0. If the lexical items introduced to lexicalize agreement are morphophonologically weak and need to be supported by an exponent corresponding to an adjective, then in this syntactic configuration they would be unable to materialize phonologically, because the predicate cannot support them, being in the specifier position.

Leaving this orthogonal question aside, our proposed structure is the following:

(66)



Crucially for our purposes, the structure lacks an event variable. This means that introducing the modal is not necessary to prevent tense from binding this variable, which explains why the structure is available in Swedish (and in Norwegian).[10]

One important question is the role that the modifier plays in this structure. As we anticipated in the previous section, we assume Lekakou's analysis of the modifier as an element necessary to identify an agent. As *v* and Voice are absent in this structure, that modifier is expected to be compulsory to interpret the participle as a middle predicate. This hypothesis is confirmed. Removing the modifier forces a resultative passive reading (This manifest is already read).[11]

(67) *Det här manifestet är läst*.
the here manifest is read
'This manifest has been read.'

The modifiers are generally adverbs meaning 'easy', 'difficult', 'quick', 'slow', and others whose conceptual entry is a property of actions and events. This is expected if they need to conceptually recover an agent: they allow for the interpretation, at the conceptual level, of an event which has an intended agent identified with the experiencer of the property denoted.

Note that saying that these modifiers allow the recovery of an agent, and are restricted to those that can modify an event, is not the same thing as to say that they require an event in the syntactic structure they are introduced in. There are indeed examples that show that the adjectives do not need an event variable in their syntax; however, they trigger the interpretation that the modified element is somehow related to an event and there is an intended agent of such event. In example (68), they directly modify an object denoting noun, and the interpretation that there is some kind of event associated to this noun, and an agent that experiences the speed, is still triggered.

10 An alternative variation of Klingvall's structure would be to propose that the adjectival nature of the construction is not defined by the presence of an adjectivalizer but is obtained by default due to lack of information about events and agents in the structure. In that case, the modifier could be introduced as an adjunct of AspP. In order to decide between these two proposals, a thorough study of adjectival participles vs. verbal participles would be necessary.

11 Consider the following contrast in Norwegian: *lett-vasket* (easy-washed) can have a middle interpretation, but *ny-vasket* (newly-washed) does not. This contrast, which is also found in Swedish, is expected if the role of the modifier is to recover at the conceptual level a syntactically-absent agent which experiences the properties denoted by it. An agent would experience the easiness of the washing, but not – while being the agent – that it is newly washed.

(68) fast food

This is consistent with the variation on Klingvall's structure that we propose above in (66). In the adjectival middle, structurally, there is no event variable and no projection to license an agent in the syntax. The presence of the manner modifier is crucial to allow the interpretation of the participial adjective as involving some agent (an assumption that Klingvall's proposals also concur with). As in other cases where some syntactic structure is missing (Marantz 1997), the conceptual meaning of the roots involved in the construction can allow –not force– interpretations which are otherwise licensed by the structure. There is no position to introduce the agent in this structure, but this does not mean that an agent cannot be inferred from the conceptual entry that the root has. Speakers know that the action denoted by *läs-* 'read' is one that must be performed by a sentient and volitional entity, and therefore will infer – even in the absence of specific syntactic structure – that such agent exists. The agent will necessarily not refer to a specific individual, because it is left unspecified by the verbal projections; this is a second way in which an agent can become generic in a middle statement.

Given the proposed structure, the reason why both Swedish and Norwegian can express a middle statement with an adjectival participle is clear: Swedish cannot license the verb with a middle operator, but if the verbal structure is projected as a participle that lacks *v*, and thus an event variable, the middle operator is not necessary in order to express a disposition not instantiated in any particular situation. Even though Norwegian has an exponent that lexicalizes the middle operator, it can, as well, express a middle statement by suppressing the verbal event variable and the structure that carries it.

5.7 The Swedish absolute use of the *s*-exponent and why Norwegian cannot license it

Let us conclude this chapter by briefly discussing a construction that an anonymous reviewer has brought to our attention: the so-called absolute use of the *s*-exponent in Swedish (Telemann et al. 1999, Lyngfelt (2007). Norwegian does not license this use of the *s*-exponent.

(69) *Se upp, katten riv-s.*
look up, cat.the scratch.ABSOLUTE
'Beware, the cat might scratch you.'

(70) *Pojken reta-s.*
boy.the tease.ABSOLUTE
'The boy tends to tease (others).'

Note, to begin with, that there are both syntactic and semantic differences with the middle constructions in (57) and (58), although it is true that in both cases one seems to be predicating from the subject a set of properties that dispose it towards some particular event description, and the structure has a stative, non-episodic interpretation.

For starters, the argument promoted to the subject position is an agent, not a patient. The cat is the agent of the event of scratching, and the boy is the agent of the event of teasing. Second, that agent does not tend to be interpreted generically; we speak of a particular cat, not a class of cats, and of a particular boy, not a class of boys. That agent, in fact, must exist in the real world – unlike the subject of middle statements, which can be entities without any presupposition of existence whose intended properties would dispose them to behaving or acting in a particular way, if they happened to exist. Third, the felicitousness conditions of the statement are not identical to those found in middles. Imagine, for instance, that we own a cat that has never scratched anyone, but which belongs to a species that is otherwise known for being predisposed to scratching. In that context, *Katten rivs* would not be perceived as a fair characterization of the situation. For *Katten rivs* to be felicitous, we must have previously verified that the cat participates in (habitual) events of scratching others; this is not a condition for a middle description to work. Example (71) provides addition support for our analysis, showing that the *s*-exponent and the anaphor sig complete for the same structural position (example provided by Bjørn Lundquist, p.c.).

(71) *Det satta sig en katt på trappan.*
there set.PAST ANPH a cat on step.DEF
'There sat a cat on the steps.

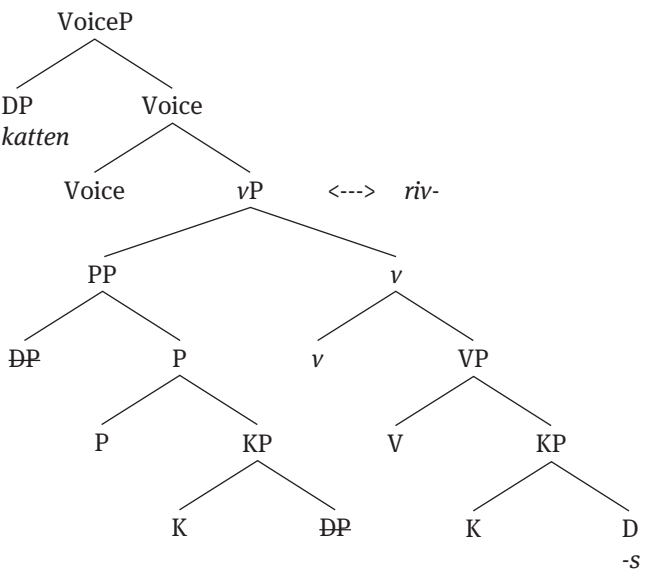
The absolute use of the *s*-exponent in Swedish is comparable to the so-called dispositional causation construction (Fara 2001) which is found in, among others, English and Spanish (Mangialavori Rasia 2018).

(72) a. Beware, the dog bites.
b. *Ciudado, el perro muerde.*
beware, the dog bites
'Beware, the dog bites'

Note that in the above examples, the stative non-episodic nature of the predicate is related to the absence of an overt object that expresses a specific patient of the event. Under standard assumptions, one could assume that in these examples the object is a generic, non-specific pronoun that lacks a phonological representation (see e.g. Rizzi 1986, Armstrong 2013). This is what triggers the non-episodic interpretation shared with middles, because the structure lacks a specific participant that undergoes the eventuality caused by the agent, just like in the English and Spanish equivalents. In the absence of a specific patient, the stative interpretation is triggered by the genericity of the internal argument, which forces an interpretation where the predicate describes a general type of event without naming specific instantiations of it in time and space.

What is special about Swedish is that, as we have argued, it has in its lexical repertoire a generic pronoun, the *s*-exponent. Because the *s*-exponent spells out an argument, this argument is in fact expected to be available not just as an element introduced in VoiceP, but also in argument positions. The absolute use is the instance of this where the generic pronoun is introduced in the internal argument position. In (73) we represent the VoiceP constituent in this use.

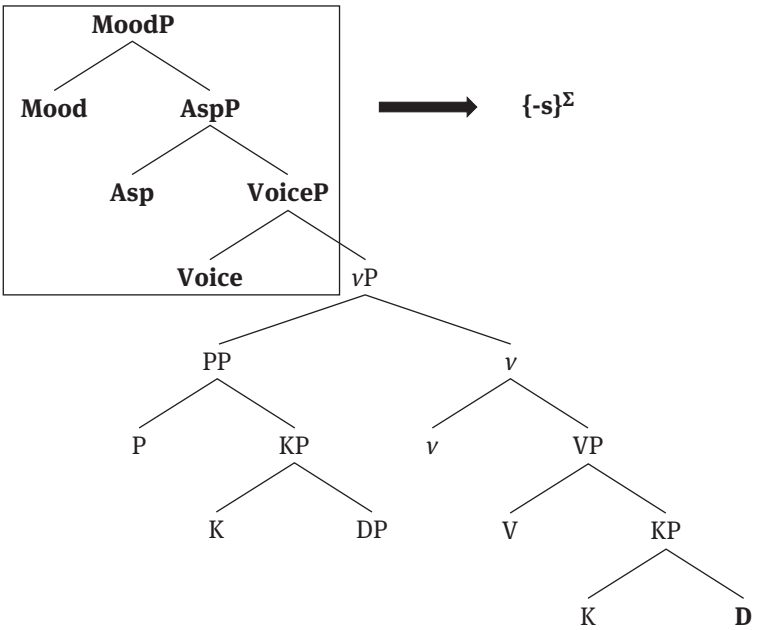
(73)



Thus, the absolute use of the *s*-exponent in Swedish is entirely compatible with the view that the exponent is in fact the spell out of a generic pronoun or clitic.

Consider now why the Norwegian *s*-exponent is absolutely excluded from this use. Remember that in Norwegian the *s*-exponent spells out a set of functional heads that range from MoodP to VoiceP. The problem is that in the representation in (73) above, the position occupied by the generic pronoun does not form a constituent with Voice (or Asp and Mood) to the exclusion of the lexical verb complex, *v*P and VP.

(74)



The only way in which the Norwegian *s*-exponent would be able to lexicalize an internal argument would be by also spelling out the whole lexical verb as part of its entry, in which case the *s*-exponent would not have a lexical verb exponent to combine with. Therefore, we correctly predict that the absolute interpretation will be unavailable for the Norwegian *s*-exponent, correlating then with the independent differences that this exponent and the Swedish *s*-exponent have in the passive and the middle.

6 Extensions: anticausatives, reciprocal uses, and additional properties of exponents

In the previous chapters we explored the finer details concerning the microvariation of lexical passives in Norwegian and Swedish. In our analysis, we have developed a generative model of syntactic composition in which: (i) the same principles responsible for the creation of syntactic structure also holds at the "lexical" level, and (ii) an addition level of structure, Σ-structure, which functions as an intermediary level between operations that take place in the narrow syntax and the inventory of vocabulary items available at the PF-interface. At the heart of our proposal is a shift in focus, one that promotes the unit of EXPONENT as the fundamental atomic unit in syntactic computation. Our model of exponency-based syntax presents an economical and simplified analysis of the properties of the s-exponent in Norwegian and Swedish. We conclude our investigation in this final chapter by taking a look at some of the more salient properties of anticausatives in Norwegian. Admittedly, here we only outline the initial steps towards a more detailed analysis of anticausatives; we leave a more detailed account for future research. In the latter half of this final chapter, we explore ontological extensions of our model of exponency-based syntax.

6.1 Anticausatives in Norwegian

Here we explore how we can extend our analysis of the *s*-exponent in Norwegian to cover anticausatives – reciprocal uses of the *s*-exponent will be discussed in §6.2. The properties and the typology of anti-causatives are far too complex to deal with in this final chapter; therefore, we postpone a more detailed, full treatment of these constructions for future research. As many have shown, anticausatives can receive different kinds of morphosyntactic marking in one language, often in ways that does not seem predictable by the Aktionsart or other properties of the verb (Steinbach 2002, Schäfer 2008, Vivanco 2016, among many others). As can perhaps be expected, Norwegian and Swedish are not exempt from these sorts of alternations.

Both Norwegian and Swedish can use several strategies for anticausative marking: a suppletive form (1), an *s*-marked verb (2), a verb accompanied by a weak pronominal reflexive, (3) and an unmarked form identical to the causative version (4).

(1) a. *kaste ~ falle* Norwegian
b. *kasta ~ falla* Swedish
'throw' ~ 'fall'

https://doi.org/10.1515/9783110670912-006

(2) a. *lukke ~ lukke-s* Norwegian
b. *stänga ~ stänga-s* Swedish
'close'

(3) a. *åpne ~ åpne seg* Norwegian
b. *öppna ~ öppna sig* Swedish
'open'

(4) a. *smelte* Norwegian
b. *smälta* Swedish
'melt'

To be clear once again, in this book we will not deal with this variation in the detail it ultimately deserves, interesting as it definitely is. Our goal in this section is rather modest; i.e., to show that our proposal for the Norwegian *s*-exponent predicts that it can be used to express anticausatives, while accounting for their specific properties.

This is, on the surface, a challenge, because the *s*-exponent in anticausatives displays a behavior that is not identical to the one associated with the *s*-passive. There are at least three notable differences: The first one is common to all anticausative construals: the agent cannot occur as the object of an adjunct *by*-phrase (*av*-phrase in Norwegian) as is common in eventive passives. If example (5) is understood as an anticausative, it is clear that the agent cannot project; note that an expression such as *av seg selv / by itself* is allowed in these constructions, marking that the same argument that undergoes the dynamic event is responsible for triggering it – or, in other words, that it is the internal properties of the patient what trigger the event.

(5) Dør-ene lukke-s {*av meg / av seg selv}.
Door.DEF.PL close.PASS {by me / by it self}
'The doors are closing {*by me / by itself}.'

The second contrast with the *s*-passive is that in anticausatives the event is clearly episodic. We do not refer to a habitual action, a potential action that follows some norm, or to a generic context: we refer to a specific action where the doors are closing in a particular time interval, in the actual world. The anticausative is thus not applied in modal contexts.

The third contrast is that Norwegian speakers do allow temporal and aspectual marking with anticausatives to a higher extent than in the lexical passive or the middle, where such additional modification is generally regarded to be

ungrammatical. The following sentences are marked, but still acceptable for consulted native speakers.

(6) ?*Den langsomme metalliske klirringen da portene* ***stengtes***,
the slow metalic clanking when door.DEF.PL closed.PASS
satte nervene mine i helspenn.
put.PAST nerves mine in complete-alert
'The slow metalic clanking when the doors closed put my nerves in alert.'
(from a book translation from English)

(7) ??TV-en ødela-s på grunn av storm-en.
tv.DEF broke.PASS by cause of storm.DEF
'The TV broke because of the storm.'

As we noted in chapter 5, Norwegian middles share properties with passives, which also allow the expression of an external agent or causer, sometimes even with the same preposition introducing them in both constructions. With respect to this property, both passives and middles (8) contrast with anticausatives, which generally do not allow the expression of an external trigger of the event (9).[1]

(8) a. The TV-set was broken (by Mary).
b. *La televisión fue destruida (por María).*
the TV-set was broken by María
c. *TV-en ble ødelag-t av Maria.*
TV.DEF was destroyed of María

(9) a. The TV-set broke (*by Mary).
b. *La televisión se rompió (#por María).*
the TV-set SE broke by Maria
c. *Døren lukke-s (#av noen).*
door.DEF close.PASS by someone

1 Not all scholars agree with respect to this property, at least in its broadest terms. Kallulli (2007) argues that the *from*-phrase in (i), from English, should be viewed as a prepositionally-introduced external causer of the event. In any case, note that this construction only introduces nouns that denote events, and both agents and other individuals are excluded from the structure, as Kallulli herself notices.

(i) a. The window cracked from the pressure.
b. *The window cracked from {John / the book}

Anticausatives are generally described as denoting change-of-state events that are internally-caused, triggered spontaneously by the properties of the patient, and not set in motion or controlled by any external participant. For this reason, they are inherently unable to express an external agent interpreted as the entity that triggers the event. There are several possible markers of this 'spontaneous' or 'non-externally controlled' change-of-state cross-linguistically. One candidate is *automatisk* 'automatically' in Norwegian: as (10) shows, it can be used with anticausatives, but not with passives, because this second group expresses events that are still caused and sometimes even controlled by an external participant:

(10) a. *Døren lukke-s automatisk.*
door.DEF closes.PASS automatically
b. *Døren ble lukket (??automatisk).*
door.DEF was closed automatically

In (10b) perhaps the adverb could be interpreted as the means of closing the door used by an external agent (electronically, rather than manually), but it cannot be interpreted as expressing that the event took place by itself, by the sheer capacity of the door to move to a closed state.

The table in (11) summarizes the initial contrast between passives, anticausatives, and middles.

(11) Overview of the main distinctions between the three constructions

	Passive	**Anticausative**	**Middle**
Agent expressed syntactically	Yes	No	Yes / No (depending on language)
Entailment of actual participation in the event	Yes	Yes	No

6.1.1 A brief overview of the problems related to anticausatives

The structure of anticausatives is one of the most debated issues in modern linguistics. In the case of passives and middles, the possibility (at least in some languages) of syntactically projecting the agent makes it clear that whatever process is behind them must be an operation that takes place on the active version. This is not uncontroversial in anticausatives. If we concentrate on a causative / anticausative pair like the one in (12), two main theories have been developed.

(12) *lukke ~ lukke-s* [Norwegian]
cause.close – become.closed

Levin and Rappaport (1995), Reinhart (2002) and Reinhart & Siloni (2005), among many others, have analyzed this pair as an ADCs: there is an operation that starts from the causative version and detransitivises it, demoting the external argument and turning the verb into an unaccusative (Levin & Rappaport 1995). This makes the operation essentially parallel to the passive (Reinhart & Siloni 2005), with the empirical differences that divide the two constructions stemming from the different level where the agent is demoted in each case: after the syntactic projection of the lexical argument in the passive, and before it can be projected syntactically in the case of anticausatives.

The alternative view is to treat the pair in (12) as the result of an operation that increases the number of arguments in the causative construction. Dowty (1979), Williams, (1981), and Ramchand (2008) are three examples of this family of theories. The intuition ultimately is that the verb itself – *lukke* – expresses an internally caused change of state, but a further operation –in the syntax or in the lexicon– defines above it a causative layer which introduces an additional argument, an agent / causer. The direction of the derivation is, therefore, radically different in each one of the two families of theories.

Theories in which the basic, underlying form is the causative also face a distinct problem concerning their morphosyntax, if we consider the data in Swedish and Norwegian. In these languages, the member that receives extra marking –if there is one– in any pair is always the anticausative one. While there are other languages where the causative form of the verb is built from the anticausative, adding some extra morphology (Nichols, Peterson & Barnes 2004, Plank & Lahiri 2015), the situation in Norwegian and Swedish goes in the opposite direction.

The problem for a theory that considers that the anticausative is always the basic, underlying form is, then, to explain the radical mismatch that takes place between the (proposed) lexical / syntactic operation and the morphological marking attested. We would have to assume that a basic form receives some marking while the operation that turns it into a causative involves the disappearance of this marking. The problem has been noted explicitly in Piñón (2001), Doron (2003), and Koontz-Garboden (2012), among others, and we will refer to it as 'the isomorphism problem': *ceteris paribus*, we expect syntactic operations to be marked in the morphology; marking is not expected if there is no operation representing that marking, and the most unexpected situation is one where an operation is marked, paradoxically, by removing morphological marking. This problem is well-known in morphology, where it is instantiated as the question of whether morphology can be substractive (involving the removal

of morphemes that were present in the base form) or back-derivations can exist. While the issue is not completely settled, the general agreement is that one can perhaps identify historical processes that have removed markings from complex forms, or that have created new basic words by reanalyzing (sometimes humorously) simple words with the superficial shape of complex ones (e.g., *gruntled*, from *disgruntled*, cf. Bauer 2008), but these processes do not represent the intuitions of one single group of speakers, but the superposition of the intuitions of a series of groups of speakers across time. There is agreement that a contemporary speaker that is aware of the existence of a pair of words like *gruntled-disgruntled* will represent the relation as deriving *disgruntled* by negative prefixation from *gruntled*.

Koontz-Garboden (2012) addresses this problem and proposes a version of the anticausative analysis that retains isomorphism in a radical form: marking does not only represent the application of an operation, but also the addition of new elements into the structure. By doing this, he notes that analyses that treat anticausativization as a process whereby the agent role is suppressed also fall in a (weaker) infraction of isomorphism: the marking represents the loss of an element, rather than the introduction of additional structure. In his strong version of isomorphism, additional marking represents additional structure, period. His proposal, formulated for Spanish, is that the marking is actually the spell out of a reflexivization operation whereby the agent and the patient theta roles are identified in the same participant, which gets at the same time the entailments that it undergoes a change of state and that it triggers it by itself, without the help of an external causer. Hence, the internally-caused change of state semantics of anticausatives is explained.

Therefore, there is a first complication in the unification of passives, middles, and anticausatives: analyses that simply present these as causative verbs that demote an agent must face problems with morphological marking in its relation to syntactic structure.

A second, related problem is the observation that the kind of marking that a causative-anticausative pair receives is not random, but associated to other effects, more specifically to properties of the lexical aspect of the anticausative form. Labelle (1992) and Folli (2002), for French and Italian, respectively, have argued that reflexive marking in anticausatives is associated to a compulsory telic meaning; Lagunilla and De Miguel (1999) for Spanish have arrived to a similar conclusion, claiming that the se-marking in this language focalises a result state associated to the verb's event. If this is true, then one expects verbs marked with *se* to be telic, verbs not marked with se to be atelic and verbs like those in (13), that can receive optional *se*-marking, to be telic in their marked version and atelic in their unmarked one.

(13) a. *reventar* Spanish
explode.CAUSE
b. *reventar, reventar-se*
explode.INCHOATIVE

The generalization is far from perfect, however, as noted in Schäfer (2008) and Vivanco (2016). Many verbs are telic without *se*-marking, and there is at least one systematic class that can express an atelic meaning with *se*-marking (degree achievements).

(14) a. *blanquear-se*
whiten
b. *cuajar-se*
curdle

While degree achievements have a very special aspectual behavior that might explain why they behave as systematic exceptions throughout the properties of their internal scales (cf. Hay, Kennedy & Levin 1999; Kennedy & McNally 2005), other generalizations about the presence vs. absence of marking have been volunteered in the literature. Labelle and Doron (2010) have related *se*-marking in French with the possibility of interpreting the change of state as strictly internally-caused or as triggered by an external entity:

(15) a. *Il vit le mouchoir. *(se) rougir. soudain.*
he saw the handkerchief SE redden suddenly
'He saw the handkerchief suddenly become red.'
b. *Jeanne (*se) rougit.*
Jeanne SE reddened
'Jeanne blushed/became red.'

In (15a), the handkerchief does not have the internal capacity to become red by itself, so the process has to be triggered externally: *se*-marking is compulsory. In (15b), Jeanne has the capacity to become red by herself, so *se*-marking is impossible.

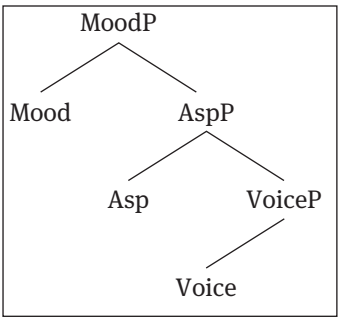
Schäfer (2008) treats the presence vs. absence of reflexive marking in German as a morphosyntactic phenomenon. He first notes that the two classes of anticausatives (marked and unmarked) in German behave differently with respect to the interpretation of a dative: while unmarked anticausatives allow a high dative participant to be interpreted as an affected argument (malefactive, benefactive) or as an unintentional causer, a *sich*-marked anticausative forces an unintentional

causer reading. He further explains the difference by proposing that *sich*-marking involves a different kind of VoiceP than absence of marking in German; specifically, *sich*-marking is associated to an expletive Voice that does not assign a theta-role to the subject, but contains a selectional requisite that a D-element must be merged in its specifier (hence, *sich* is merged to satisfy this requirement). However, Schäfer explicitly acknowledges that this proposal cannot be extended to other languages, like Italian and Spanish, so it is unclear how this proposal would account for a wider variety of data.

6.1.2 A sketch of a proposal

Here we explore how a working analysis of the anticausatives that are marked by the *s*-exponent in Norwegian can be generalized to be compatible for our are treatment of this exponent with other ACD-constructions. In (16) we summarize our analysis of the *s*-exponent that we have argued for in the previous chapters.

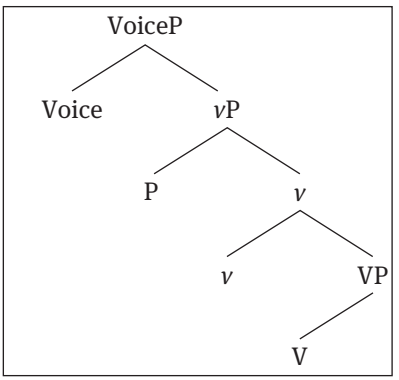
(16)



<----> $\{\text{-s}\}^{\Sigma}$

The structure in (16) represents the derivation unit (i.e., chunk) that is spelled out by the verbal stem in an agentive verb (i.e., the active voice). Crucially, the verbal stem consists of two ingredients that receive a phonological representation: (i) the P that introduces the agent (remember that the DP agent has evacuated to become the specifier of Voice) and, (ii) the Voice-head.

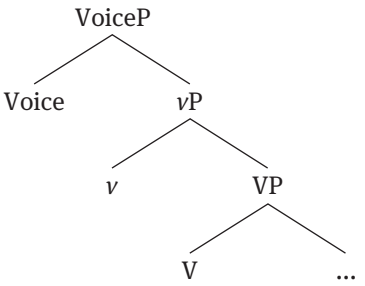
(17)



<----> {verbal stem}$^{\Sigma}$

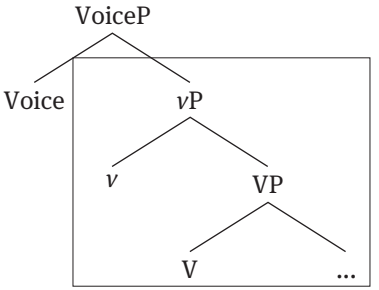
Here we argue that exponents can only lexicalize sub-constituents of the chunk represented in their lexical entry accounts for this pattern. In (17), the verbal exponent can lexicalize an active form; however, what happens if the agent P is not present in the structure, as in (18)?

(18)



As a result of the absent of an agentive P, the verbal exponent must now shrink: it can lexicalize the structure up to *v*P, but this unit cannot include Voice. This restriction is necessary due to the fact that in their lexical entry, *v*P and Voice do not form a constituent in the absence of the preposition P.

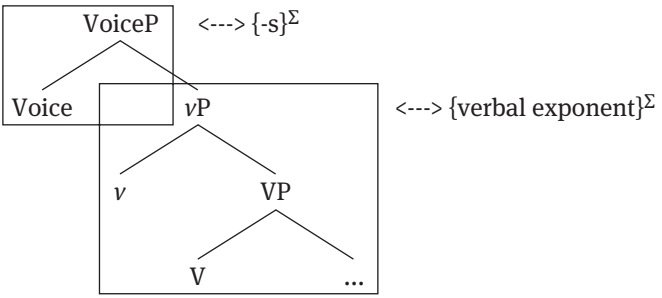
(19)



<----> {verbal exponent}$^{\Sigma}$

What then lexicalizes Voice in this context? Our working analysis is that Norwegian will use the *s*-exponent for this task, since the verbal exponent is unable to lexicalize beyond the *v*P-projection. This explains the presence of *s*-marking in anticausatives in Norwegian.

(20)



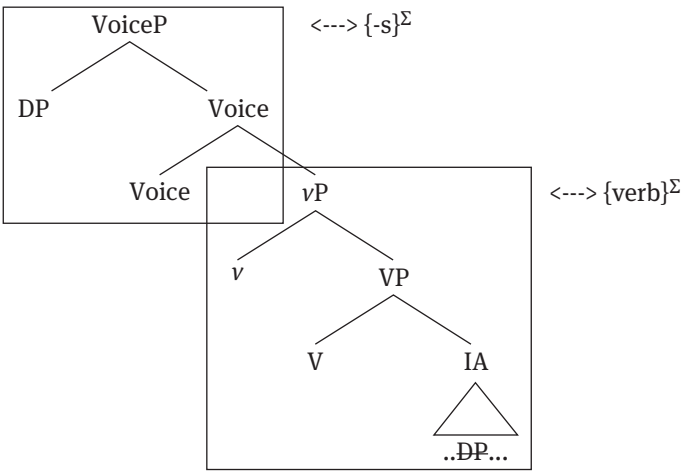
The main idea, then, is that anticausatives simply do not project an agent PP in the structure, in contrast to passives, where the agent can be present as an overt syntactic constituent. There is, of course, a traditional debate with respect to how this agent-suppression takes place. Reinhart and Siloni (2005) propose that the verb reduces its valency in a lexical component of grammar, while approaches such as Schäfer's (2008) argue that the projection otherwise responsible for introducing agents appears in such cases lacking a D-feature associated to the agent reading. Either way, the result is that no agent will be projected in Spec,*v*P, and therefore the preposition will be missing.

This is a context where the *s*-exponent is introduced with the purpose to lexicalize Voice, because the verbal exponent cannot. The habitual aspect and the ascriptional mood semantics are not projected in the structure. This has the following consequences:

a) First, we do expect that anticausatives can be marked with the *s*-exponent. Neither mood, nor habitual aspect is present, so the event variable can be bound at the TP-level, unlike what must occur in passives and middles.
b) Second, because the rest of the structure that the *s*-exponent can lexicalize is not present, the *s*-exponent simply lexicalizes the first layer of VoiceP, not forming a larger constituent with AspectP and MoodP. The consequence is that a specifier of VoiceP can be projected.

We can now flesh out this derivation in full form: The internal argument is merged in its usual position (as the complement of V) and is extracted from there. It moves to Spec,VoiceP (21), where it can stay without breaking the constituent in this derivation which is lexicalized by the *s*-exponent.

(21)

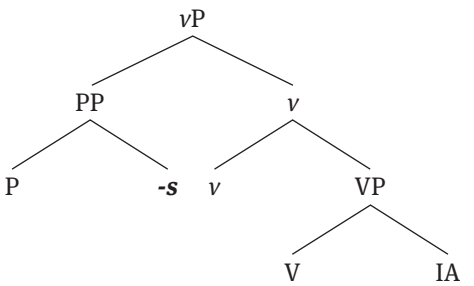


The verbal exponent lexicalizes up to the *v*P-projection, but it cannot go beyond it, because the P-layer is missing. At this point, the *s*-exponent is forced to lexicalize Voice; the final layer of this construction is lexicalized by the DP, which becomes the subject of the structure.

Of course, there are independent questions related to anticausatives that we do not concern ourselves with here. This caveat notwithstanding, our intention here was to show that our proposal, in fact, predicts that Norwegian should be able to use the *s*-exponent to mark anti-causatives (at least, in some contexts), and that our approach predicts that, under those circumstances, the verb should be able to inflect for tense.

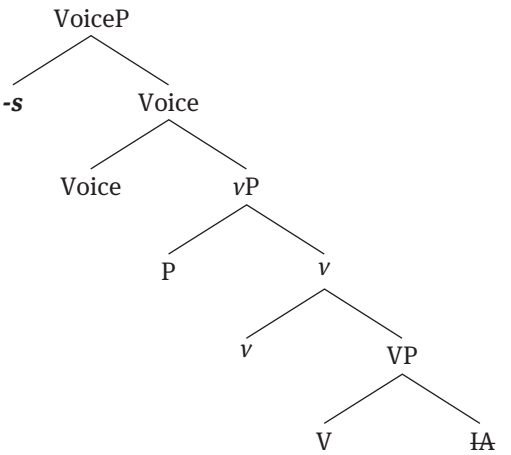
The situation in Swedish is much simpler than in Norwegian, because, according to proposal, the *s*-exponent is a clitic. Here it is much easier to show that our proposal can in principle explain that the exponent should also appear in anti-causative construals. One simple possibility is that the *v*P-projection introduces the agent, and the *s*-exponent materializes the agent argument:

(22)



When VoiceP is introduced into the derivation, the clitic spelled out as the *s*--exponent, which moves to its specifier, allowing the agent P to be materialized as a constituent in the absence of its complement. From this point, the derivation continues along the same lines as a lexical passive, and the verbal exponent can lexicalize up to the node that dominates the Voice-head.

(23)



6.2 Reciprocals in Norwegian

Now we consider reciprocal uses of the *s*-exponent in Norwegian. Again, the goal here is not to provide a full account of reciprocal constructions, but rather simply to demonstrate that our exponency-based account can provide a straightforward analysis of these structures.

The idea that the *s*-exponent in Norwegian does not correspond to a pronominal element, as we argued in the previous chapters, might seem challenged by its use as a reciprocal marker. In reciprocals, as in anticausatives, there are no modal or habitual semantics interpretations inherent to the construction. This means that the verb is able to show some forms of tense and aspect inflection because there is no operator that interrupts the relation between the verb and the higher functional domain. The example in (24) illustrates these relevant properties.

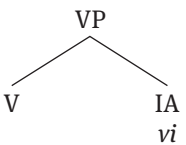
(24) *Vi så-s slett ikke.*
we saw.PASS at all not
'We didn't see each other at all.'

Here we show how this kind of structure can be lexicalized in Norwegian without proposing that the *s*-exponent spells out syntactic features of a pronoun. Of course, in Swedish, the proposal that the *s*-exponent corresponds to a clitic predicts that it should be usable as a reciprocal anyways, no matter how reciprocity is analyzed.

Let us start with what we consider a default theory of reciprocals; empirically, the overt pronoun *vi* 'we' in (24) receives two theta-roles: (i) the agent and (ii) the patient at the same time. We assume that reciprocals are reflexives where a condition of non-identity is imposed: if *vi* involves two participants, *x* and *y*, the condition is that the relation between *x* and *y* must be symmetric (whatever *x* does to *y*, *y* does to *x*), but *x* cannot hold the same relation to itself, and the same for *y*. Therefore, the appropriate description of (24) is that when *x* is the agent, *y* is the patient, and when *y* is the agent, *x* is the patient, but neither *x* nor *y* can be at the same time agent and patient.

How can we guarantee that *vi* is simultaneously the agent and the patient in the structure? The simplest proposal is that *vi* is internally merged as the internal argument (i.e., as the complement of VP), where it receives the entailments of a patient.

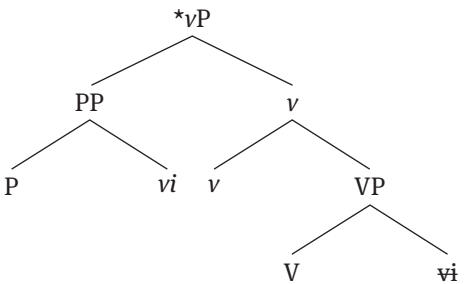
(25)



How now can this same argument become the agent? In our system, there are two ways of doing so: (i) either it appears as the complement of a P in Spec,*v*P or, (ii) it moves to Spec,VoiceP, where it receives the interpretation of agent by default (if no other constituent in the complement of Voice receives that interpretation).

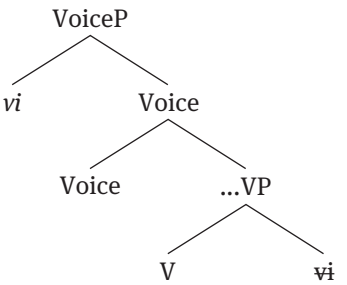
The first possibility is impossible to obtain by movement: it would involve an operation like (26), which is illegitimate.

(26)



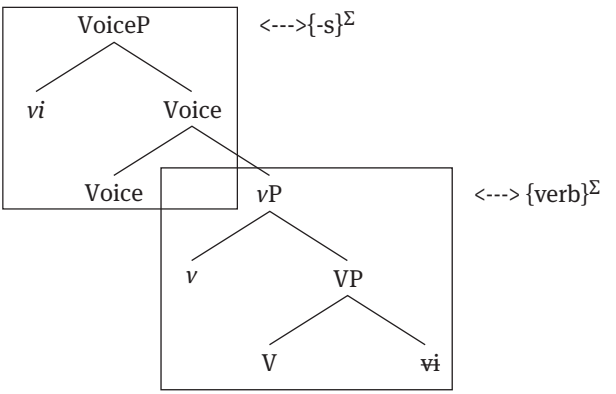
Thus, in line with the system we have proposed here, the way in which *vi* can be interpreted as the agent must involve the second possibility; namely, the option which does not violate the No Tampering Condition.

(27)



However, in order to be interpreted (and lexicalized) as the agent in the structure, it is crucial that no other element inside *v*P has received the agent theta-role. This implies that no element has been merged as an agent PP in that position (Spec, *v*P). This account is reminiscent of our working analysis of anticausitives, where the verbal exponent does lexicalize structure beyond the *v*P (thus excluding the PP) (see (28)).

(28)

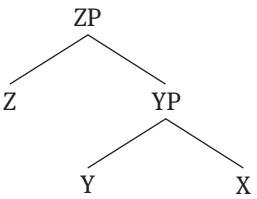


This concludes our brief treatment of the core properties anticausatives and reciprocal statements along the lines of the analysis developed for middles and passives in Norwegian and Swedish.

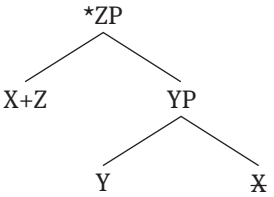
6.3 Σ-structure makes head movement unnecessary

In this section we will explore another advantage of our approach, which is that Σ-structure captures all the effects of head movement. Head movement is a problematic operation in the current theoretical universe, and we would argue also in previous approaches. Head movement was restricted in ways that other movement operations were not, and lacked the effects expected from other types of displacement. Travis (1984) noted the empirical generalization that head movement must be strictly local in the sense that it is limited to the immediately c-commanding head. In a configuration like (29a), X cannot move to Z directly, which bans (29b). If X and Z had to form a complex head, first X has to incorporate to Y and then the whole moves to Z (29c).

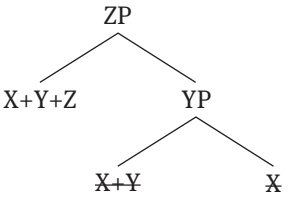
(29) a.



b.



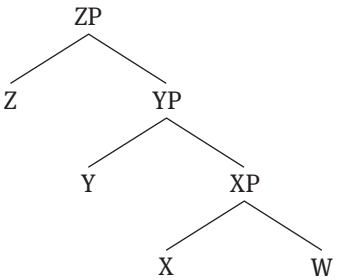
c.



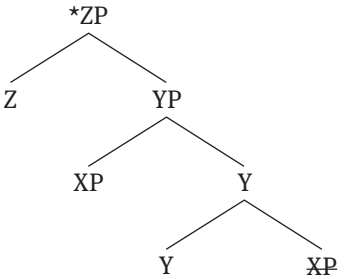
Other types of movement are not restricted in this way: phrasal movement does not stop at the specifier of the first c-commanding YP. In fact, this is impossible due to Anti-Locality (Abels 2003): if YP establishes a formal relation with XP by taking it as the complement, the operation that merges XP again in its specifier position would have no properties to check and would therefore be banned. In

this case, starting from (30a), (30b) is banned and (30c) is possible, right the opposite to standard movement operations.

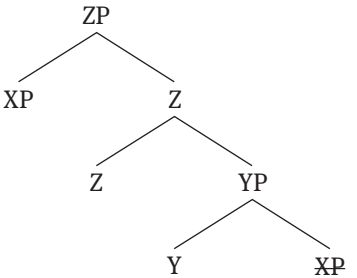
(30) a.



b.

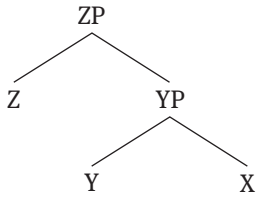


c.

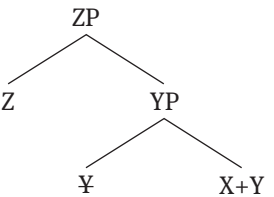


Moreover, head movement can involve lowering (Pollock 1989), which if we were to consider the possibility from a movement perspective, would imply that there are movement operations that target lower nodes in the tree, something that is not possible in standard phrasal movement.

(31) a.



b.

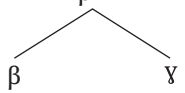


Given this situation, head movement is sensitive to linear adjacency more than to hierarchical c-commanding structure; i.e., it does not care about c-command as much as it cares about which head is linearly adjacent to which head.

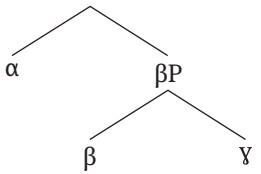
Second, head movement – unlike phrasal movement – lacks all kinds of semantic effects. For instance, the incorporation of V to T in French does not imply that the event variable contained in V takes scope above the existential operator introduced at the TP level. In the literature, several works have argued that head movement is not free for semantic effects (for instance, Roberts 2010), but Hall (2015) has shown in detail that these effects are at best questionable, and in most cases in fact proposing that the semantic difference is related to head movement makes the wrong empirical predictions. Thus, we would have a movement operation that not only is restricted in ways that better-established movement operations are not, and which has no effects at semantics.

Finally, in the current theoretical universe head movement violates the No Tampering Condition. Movement is Merge (Chomsky 2013), and all Merge operations involve set formation by building a new set over a previously formed set. If we take the objects α and β, the second itself complex, merge gives rise to a new object where projects its label.

(32) a. α + βP

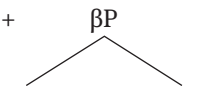


b. αP

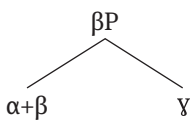


Merging a head with the previous structure extends the syntactic structure and the merged head projects its label to the new object. None of these two effects are related to head movement. In a head movement structure, merging the head with the structure tampers with the previously formed object rather than building a new layer of structure, and the merged head does not project its label – for instance, by changing the label of the XP to which it attached.

(33) a. α + βP



b. βP



All these asymmetries with standard movement operations – sensitivity to strict adjacency rather than linear order, absence of semantic effects, absence of syntactic projection – have prompted many scholars to treat head movement as an operation that takes place after the syntactic derivation has been performed, at PF (Chomsky 1995: 358, Brody 2000; Boeckx & Stepanovic 2001; Hale & Keyser 2002; Harley 2004; Schoorlemmer & Temmerman 2012). However, head movement cannot be a purely phonological operation either: the heads that move are sensitive to the grammatical category of the host. For instance, the subject inflection of the verb will combine with an adjacent verb in the sequence (34), not with any adjacent word in the sequence, irrespective of its grammatical label.

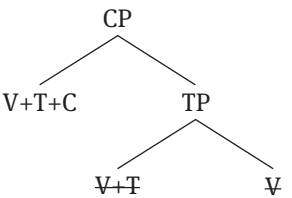
(34) a. -s [manage to sing]
b. manage-s to sing
c. *manage to sing-s

(35) a. -s [not manage to sing]
b. *not-s manage to sing
c. does not manage to sing

Σ-structure provides the appropriate level to account for the properties of 'head movement'. Given that Σ-structure is accessed after the syntactic derivation has been completed, any operation that takes place there lacks any semantic or syntactic effect, which explains both that 'head movement' does not project and that it is not accompanied by semantic effects. Because Σ-structure substitutes syntactic constituents by exponents, any operation that reorders those exponents will not be sensitive to structure building operations. Σ-structure introduces exponents and is thus sensitive to linear adjacency. Exponents containing information about the category label, 'head movement' will be sensitive to the label of the exponent that it attaches to.

Let us illustrate this step by step. There are two cases in which head movement has been invoked. The first one is apparent situations where a head contains features that have to be checked by other syntactic heads. If an imperative verb has to check force features in CP, the head movement operation was proposed in order to relate the verb in V with the features in C.

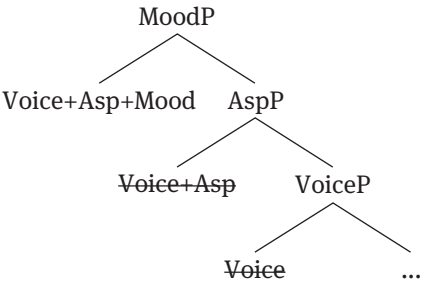
(36)



More abstractly, this first empirical situation involves positing (i) a head that contains features related to other heads, (ii) that the head is generated in the lowest position and (iii) that it moves head-to-head in order to check features, until all its features are checked.

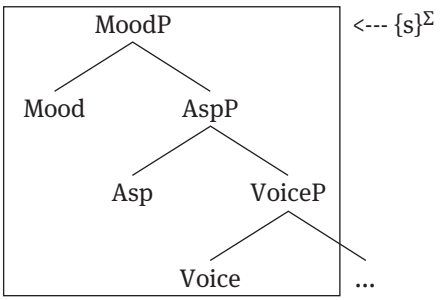
This is unnecessary given our proposal of Σ-structure. The *s*-exponent in Norwegian illustrates precisely the situation where an exponent contains features of three heads (for instance, in a middle construction): Voice, Aspect, and Mood. A traditional head movement account would have proposed the structure in (37), with the *s*-exponent standing for Voice.

(37)



Our account makes this operation unnecessary for such cases. Σ-structure transforms the syntactic tree in (38) into an exponent, {s}. The locality restriction on head-movement which basically makes it impossible that Mood and Voice involve the same 'head' to the exclusion of Asp derives automatically from the fact that Mood and Voice do not form a syntactic constituent to the exclusion of Asp.

(38)



The second situation where head movement has been invoked is cases of reordering between heads, which minimally differed from the previous situation in that in this case each 'head' was spelled out by a different element. Let us show how Σ-structure accounts for these cases.

At S-structure, the English inflectional *s*-morpheme is an exponent {s}. That exponent is contained in the lexical repertoire of English as substituting a set of features –presumably the set of features formed by {Tense[present], 3sg}, although this is orthogonal to our purposes. It is labelled as Tense, but it introduces a positional requirement that it must go to the left of an exponent labelled as Verb.

(39) $\}_{\text{Verb}}\{\text{-s}\}_{\text{Tense}}$

When the verbal complex below Tense has also been substituted by exponents, the linear sequence of exponents is the one in (40):

(40) $\{s\}_{Tense}\{manage\}_{Verb}\ \{to\}_{P}\ \{sing\}_{Verb}$

As a consequence of the requisite that {s} must have a verbal exponent to its left, we obtain the following ordering; {s} linearizes to the left of the closest verbal exponent.

(41) $\{manage\}_{Verb}\{s\}_{Tense}\ \{to\}_{P}\ \{sing\}_{Verb}$

Consider how this approach accounts for the order of exponents discussed in the appendix to Chapter 4 without using syntactic movement operations or head movement. If a Norwegian verbal structure contains a modal auxiliary and a past tense marker in a passive form, we obtain the following order:

(42) {må} {tte} {bli} {byg}{d} {av} {ham}
must past become build-part of him
'had to be built by him'

The syntactic base structure would predict the following order (ignoring the building of the specifier in AspP, *byg-d*).

(43) $\{tte\}_{Tense}\ \{må\}_{Aux/Modal\_Verb}\ \{bygd\}_{Asp}\ \{bli\}_{Verb}\ \{av\}_{P}\ \{ham\}_{Pron}$

In order to obtain the right order, first {bli} must linearize to the right of the first adjacent auxiliary verb exponent. The non-finite form {bli} (as opposed to *blir*)[2] can only be licensed if its closest verb to the right is an auxiliary, and we propose that this is captured by the following entry in Σ-structure.

(44) $\}_{Aux/Modal\_Verb}\ \{bli\}_{Verb}$

This means that the participle cannot intervene between the auxiliary and {bli} (45):

(45) $\{tte\}_{Tense}\ \{må\}_{Aux/Modal\_Verb}\ \{bli\}_{Verb}\ \{bygd\}_{Asp}\ \{av\}_{P}\ \{ham\}_{Pron}$

2 Empirically, auxiliary verbs should be seen as a subset of verbs, with some exponents requiring just a verbal host, while others specifically reject verbs marked as auxiliary. The approach forces treating {blir} as a single undecomposed exponent spelling out Tense and verbal layers, as it would also be the case of {ble}, which spells out past tense with verbal layers.

Second, {tte} has to be ordered to the right of the first adjacent verb.

(46) $\}_{\text{Verb}}\,\{\text{bli}\}_{\text{Verb}}$

This produces the right order:

(47) $\{\text{må}\}_{\text{Verb}}\,\{\text{tte}\}_{\text{Tense}}\,\{\text{bli}\}_{\text{Verb}}\,\{\text{bygd}\}_{\text{Asp}}\,\{\text{av}\}_{\text{P}}\,\{\text{ham}\}_{\text{Pron}}$

Consequently, Σ-structure subsumes all the effects of those attributed previously to head movement, and also minimizes semantically unmotivated movement operations in syntax.

6.4 On the word-affix distinction

The proposal that Σ-structure is a level of analysis where exponents are selected also allows for a direct account of the distinction between affixes, on the one hand, and words and clitics, on the other. In the example above, there is a difference between the properties of an exponent such as {tte} and an exponent such as {bli}: even though both exponents are sensitive to the linear ordering at the level of Σ-structure, the degree of cohesion that they have with respect to the other exponents is not the same. The exponent {tte} produces, when it appears to the right of a verb, what is generally treated in morphological studies as a 'word': there cannot be any reordering between {må} and {tte} and it is impossible to have other exponents appear between them.

We therefore propose that exponents can be tagged at Σ-structure with the diacritic W, for 'word', signaling that they define a word.

(48) $\}_{\text{V}}\{\text{tte}^{\text{W}}\}_{\text{Tense}}$

The effect of this diacritic is that the combination between the verb exponent and the tense exponent will result in a structure where the second defines the right boundary of a word.

(49) $\{\text{må}\}_{\text{V}}\{\text{tte}^{\text{W}}\}_{\text{Tense}}$

This feature is equivalent to Svenonius' (2016) 'w' diacritic, which is proposed to play a similar role in delimiting the syntactic material that belongs to the same word, by introducing boundaries that later PF interprets as landmarks to package the syntactic information into units. However, in contrast to Svenonius, we propose

that this diacritic is not represented in the syntax, but at Σ-structure. The reason is that the notion of word depends on the exponents used, not directly on the syntactic structure represented. Within the same language, it can be shown that the same syntactic features can be partitioned into one or several words, and this is reflected in the choice of exponents, but not obviously in the nature of the syntactic features used. Consider, for instance, the contrast between the synthetic and the analytic version of a verbal predicate (cf. Hale & Keyser 1993), illustrated here for Spanish:

(50) a. *da-r asc-o* Analytic
give.INF disgust.MASC
'to produce disgust'

b. *asqu-ea-r* Synthetic
disgust-Verbaliser.INF
'disgust'

In the first case, there are two independent words, while in the second there is only one word. The verbal meaning is identical, and all syntactic differences can be naturally derived from the fact that in (50a) two words are defined by the exponents: in (50a) it is possible to expand the nominal structure related to the object, while the object in (50b) forms a word with the verbal structure.

(51) *da-r un asc-o enorme*
give.INF a disgust.MASC huge
'to produce a great disgust'

The difference, we propose, between (50a) and (50b) is on the entry of the exponents involved. In (50a), the exponents involved are like (52):

(52) {da} {r}^{W} {asc} {o}^{W}

Both the infinitival {r} and the masculine {o} define the right boundary of a word. Therefore, at Σ-structure there are two words. In (50b), in contrast, there is no exponent {o}, so only one word is defined:

(53) {asc} {ea} {r}^{W}

Thus, by placing the diacritic at Σ-structure we make the correct prediction that whether a set of features is mapped into one word or more than one word is in principle relevant for PF, but not directly for syntax (see also Brody 2000). In our system, the unit at 'morphology' is the morpheme, represented as an exponent

that reads the syntactic constituency and maps it into objects that can be read by PF; however, these exponents define morphological words indirectly by introducing relevant boundaries that split the sequence of exponents into higher-level combinations.

In a sense, then, our Σ-structure does the job that in other theories morphology does; however, in contrast to other theories – both those that are primarily lexicalist and non-lexicalist – where morphology defines operations that directly modify the syntactic structure, our Σ-structure is directly constrained by the constituents built in and during syntactic computation. No exponent can be inserted unless its lexical entry contains at least the constituent built by syntax. Once the exponent is introduced, the only operations relate to reordering and the definition of words, in accordance with the properties contained within the specific exponent used.

6.5 Closing comments

In this book, we have proposed that Σ-structure, a level where syntactic constituents are identified with, and substituted by exponents, is an essential component of I-language in establishing cross-linguistic variation in a constrained and appealing way. Specifically, we have argued that the variation with respect to passive and middle constructions in Mainland Scandinavian, here Norwegian and Swedish, can be fully accounted for by the syntactic constituents that the exponent corresponding to the *s*-exponent identifies in each one of the languages. This account simplifies the syntactic representation of voice structures, specifically by making it unnecessary that Voice corresponds to a set of heads with distinct flavors represented by different endowments of morphosyntactic features. In our account, exactly the same Voice head used for active construals is also used for passive construals, with the caveat that the *bli*-passive involves an AspP head that –although not itself marked as passive– must move to Spec, VoiceP to satisfy interpretability.

Moreover, we have showed that Σ-structure allows for a simplification of the morphological component, at least in two senses. First, through *Phrasal Spell-Out*, the proposal bridges the gap between approaches based on words and approaches based on morphemes. Second, through the information carried by these exponents the proposal is a middle road between strictly lexicalist accounts and purely syntactic analysis of word formation: while word-level units are conditioned by the presence of syntactic constituents and no morphological operations can modify the constituency defined by syntax or ignore features contained in the syntactic representation, once the constituents are substituted by

exponents the information contained in them might alter the relative ordering between exponents and defines autonomously what counts as a word (see also Medívil-Giró (2019) for a non-lexicalist approach that advances similar arguments). While the analysis set forth here reduces to one single empirical domain where two (closely related) languages contrast, we hope to have been explicit enough in our proposal that the desiderata outlined here can be tested in other related and typologically-diverse languages. Thus, we hope that this approach encourages further scientific debate on the important issue of how the syntax and the (post-syntactic) lexicon interact to produce different externalized (micro)variation across languages and constructions.

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