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Parasitic semantics (or why Swedish can't lexicalize middle voice constructions)

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Abstract

In this squib we explore a strictly derivational explanation for the differences in possible middle voice constructions in Norwegian and Swedish. Whereas Norwegian allows by its lexical *s*-passive construction as well as a complex adjectival construction to stand in for middle semantics, only the latter option is available in Swedish. We argue that this contrast lies in the lexicalization of formal syntactico-semantic features and advance the claim that the failure to lexicalize all features in a derivational results in structures uninterpretable to the external interfaces (i.e., *Exhaustive Lexicalization*).

Parasitic semantics (or why Swedish can't lexicalize middle voice constructions)

Antonio Fábregas and Michael T. Putnam*

1. Introduction – The problem of language variation

In this squib we explore the core issue of how language variation is explained and how the unavailability of particular constructions in a language is best explained in generative theory. For the sake of our discussion, we adopt a Minimalist framework (Chomsky 1993, 1995 et seq.), although we believe that the concepts and ideas discussed in this squib can be extended to virtually any generative formalism. Here we submit the hypothesis that applying *Full Interpretation* to the lexicalization of formal syntactico-semantic features at PF has the consequence that failure to lexicalize all formal features in the course of a derivational results in a computational crash. We define this proposal as *Exhaustive Lexicalization*:

(1) Exhaustive *Lexicalization*

All formal *features* must be 'lexicalized' (i.e., receive some morphosyntactic realization, assign overt PF-content) in a derivation. Failure to lexicalize any and all features will result in a derivational crash.

In this respect, our grammar is crash-proof and strongly resembles current research in Nanosyntax and Survive-minimalism (see e.g., Stroik 2009 and Stroik and Putnam forthcoming).

Importantly, we argue in this squib that this approach to derivational morphosyntactic construction has the potential of providing a lucid explanation to puzzles surrounding cross-linguistic variation from a generative perspective. In line with guiding Minimalist theorizing, the study of cross-linguistic variation experienced some basic changes, which involved the implicit (or explicit; see Boeckx 2010) rejection of the way in which the Principles and Parameters model treated variation. If the Principles and Parameters system implies that Universal Grammar leaves underspecified some aspects of the Computational System—for instance, whether heads govern to the left or to the right—within the Minimalist Program, the Computational System is expected to be identical for every language (Chomsky 2005). This stance is forced by the very same design assumed in Minimalism for the language faculty: if the Computational System is a perfect solution to the problem of how to relate two external systems, i.e., the Sensory-Motor (SM) and the Conceptual-Intentional (C-I), imposed by the biological organization of human beings, to propose that there are internal differences manifest within the Computational System would presumably amount to assuming differences in the biological structure of speakers across languages, which is a position we hold to be implausible, or to assuming more than one possible 'perfect' solution to the same set of problems, which would raise the issue of how languages determine what is the solution that they will adopt. Therefore, we expect operations within the Computational System to be carried out in a well-designed, uniform manner across languages, with the same expectation holding also for economy of derivations and representations across the board.

This line of reasoning poses a significant challenge for explaining and modeling variation cross-linguistically, as now variation cannot be explained by independent properties of the Computational System. The (unexpected) empirical fact that languages vary on the surface has to find its explanation in other aspects of the human language capacity. The main current proposals to better understand variation in natural languages are, to the best of our knowledge, the following two: an account where variation is restricted to PF, and an account where at least some variation affects the kind of features that are available in the Computational System for different languages.

* We would like to thank the audience and fellow participants at the PLC 36 for their thoughtful comments and discussion of the ideas presented in this proposal. Earlier versions of this paper benefited greatly from comments and suggestions by Tom Stroik, Peter Svenonius, Tore Nessel, and Øystein Vangnes. All remaining faults rest on the shoulders of the authors.

The first approach has been recently instantiated in two ways. One is that the PF-interface varies from one language to the other on how universal phonological principles are met¹ (see Richards 2010, chapter 3). The second way is presented in Starke (2009, 2011). His proposal is that variation should be reduced to differences in the lexical exponents that each language uses in order to spell out the same syntactic structures. Regarding movement, this author claims that movement is a last-resort procedure that languages have to use when the lexical items that they have stored in their lexicon cannot lexicalize a syntactic structure. Movement redefines the syntactic constituents of a tree, so depending on what constituents each lexical item spells out, it might be necessary in a construction for language A, but not for language B.

The second approach bases at least some variation on the different feature-endowment of the units combined by the computational system. This strategy keeps the operations performed in the computational system invariable, but posits cross-linguistic differences on the content of the heads manipulated by these operations. The approach is perhaps best instantiated by Pollock's (1989) claim that verbs in English and French have different licensing conditions. This can be characterized as a lexical approach, by understanding the term *lexical* not as the morphophonological exponents (as in Starke's proposal) but the sets of abstract morphosyntactic features which constitute the building blocks of structures. Kayne (2005) and, from a slightly different perspective, Adger (forthcoming) are proponents of this same view: valued features are universally encoded, and variation is restricted to which heads are endowed with which unvalued features.

This squib attempts to advance one argument favoring the view that variation is reduced to PF: the exponents that a language has can have a direct influence on the availability of a syntactic construction in that language. Ockham's razor makes it more appealing to attempt to account for variation with a theory that attributes variation to the different lexical exponent inventory available in each language. This is so for one reason: linguistic variation in terms of different exponents – the fact that languages use different items to refer to the concept expressed in English with *table*– seems irreducible.

2. Norwegian vs. Swedish: availability of verbal *s*-passives

The empirical data upon which we will base our argument come from middle voice constructions in two closely related languages; namely, Norwegian and Swedish. Despite their typological proximity, Norwegian and Swedish contrast with one another in the way in which they express middle statements, that is, dispositional ascriptions of a grammatical subject (Lekakou 2005). Norwegian is able to express this via a verb in a particular morphological form, otherwise used for passives (the *s*-passive) (2).

- (2) *Denne bandasjen fjerner-se lett fra huden.*
 this bandage-DEF removes-PASS easily from skin-DEF.
 'This bandage is easy to remove from the skin'

Norwegian speakers –although with some language-internal variation– accept the sentence in (1) 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.

Swedish, although it has a verbal *-s* morpheme, which can also be used for passives, is unable to express the middle statement with this form of the verb. Example (3a) is only interpreted 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 a copulative sentence involving a participial adjective with an adverbial modifier and the verb *to be* is used (3b).

¹This stance of syntactic “perfection” with variation existing solely at the PF-interface is also true in most versions of OT-syntax.

- (3) a. #*Detta förband ta-s bort lätt från huden*
 this bandage take-PASS away easily from skin-DEF
 ‘This bandage is normally removed easily from the skin’
 b. *Den här bok-en är lätt-läst*
 this here book-DEF is easy-read
 ‘This book reads easily’

The sentence (3a) in Swedish is interpreted as a (habitual) passive. In contrast, the sentence in (2) in Norwegian allows, in addition to the habitual reading, a middle reading which does not imply that the bandage has ever been removed, or even existed as a real object.

Norwegian can also use the participle and the copulative verb to express a middle sentence. That is: for some Norwegian speakers, the middle statement can be made both with a verb in passive form and with a participle construction.²

- (4) *Denne boken er lett-lest*
 this book-DEF is easy-read
 ‘This book is easy to read’

Throughout this squib, 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 Swedish is restricted to an adjectival structure. The main goal of this paper is to give account of the differences between these two languages in the domain of middle statements and, in doing so, to test the descriptive and explanatory adequacy of a particular account of language variation that does not propose parametric distinctions inside the syntactic component of languages and reduces variation to differences between the morphophonological exponents available in each (variety of a) language.

Once we establish that at a minimum these exponents are subject to variation, methodological minimalism would favor an answer that reduces all significant variation among languages to the very same exponents that vary. In this squib we will argue that the unavailability of the verbal construction with *-s* to express a middle statement in Swedish is caused by a property of this lexical item: it cannot match mood features.

3. Analyzing the restriction

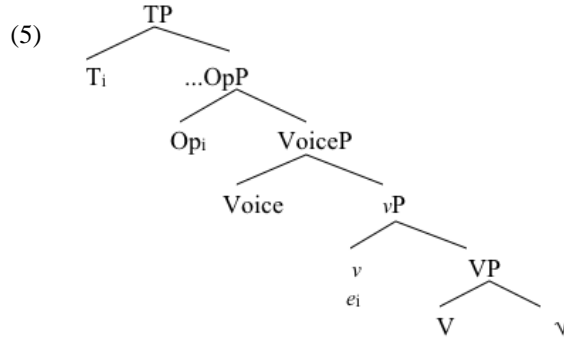
Following closely previous suggestions by Lekakou (2005), we argue that (5) is the structure of a verbal middle structure. Crucially, the head *v* is present. It introduces an event variable. Introduction of T over this head would imply that this variable becomes bound through existential closure, giving rise to a structure that at LF is interpreted as ‘there exists a specific event instantiated in some time interval’ (cf. van Hout and Roeper 1998 for a similar observation). This is an interpretation that middles must avoid, as they do not denote specific events and only denote generic statements of objects. Middles avoid this interpretation by merging an operator with a

²In 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) <i>Denne boken er let å lese</i> | NORWEGIAN |
| this book-def is easy to read | |
| (ii) <i>Denna bok är lätt att läsa</i> | SWEDISH |
| this book is easy to read | |

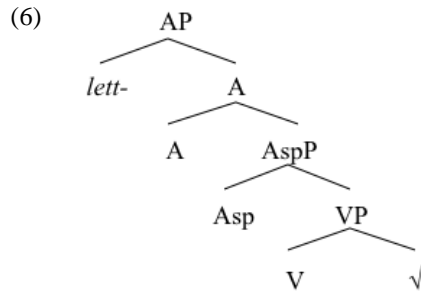
The three constructions are available in Norwegian. Despite their many differences, they share the interpretation that, even though they involve a verbal core, this event is not entailed to be instantiated in time (e.g., past, present or future), and the predicates are used to ascribe a set of properties to the grammatical subject. Reasons of space will preclude us from studying in detail *tough*-constructions.

generic semantics between T and v . The operator binds the event variable, making it unavailable for existential closure.



In this configuration, tense does not anchor the event to the utterance. Instead, the anchoring of the predicate is mood-based (Ritter and Wiltschko 2005, Amritavalli and Jayaseelan 2005): the modal component of the predicate, instantiated in Op(erator), defines an accessibility relation to worlds which are similar enough to the world where the utterance is made, so that the subject of the middle statement has the same relevant properties ascribed to it in the predicate.

One way to avoid a reading where the event is instantiated in a time interval without an Op is, obviously, to remove also v , the head that introduces the event variable. We propose that this is what happens in the adjectival middle structure. When v and the verbal structure above it is absent, we obtain an adjectival structure with middle semantics (6).



The previous structure is close to Klingvall's (2007) analysis of adjectival middle constructions. We differ from her proposal in two respects. The first is that we treat the participial morphology as an instantiation of aspect, following Embick (2004). Secondly, and crucially, the structure in (6) lacks a little v head, and thus an event variable, in our proposal. One crucial piece of evidence for the lack of this event variable is that it is not available for quantification. As Rothstein (1999, 2004) has shown, verbs—including stative verbs—have event variables that can be quantified over, in contrast to adjectives. Consider the minimal pair in (7).

- (7) a. The witch made her know Latvian three times.
 b. The witch made her clever three times.

In (7a), 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.

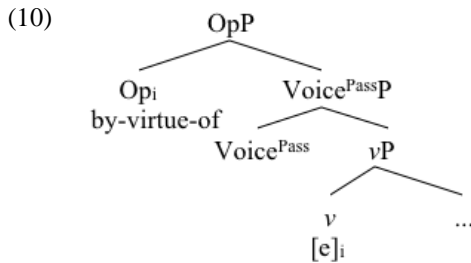
Consider, under the light of this test, the following contrast: Norwegian verbal middles allow for quantifiers over the event (8), but Swedish adjectival middles reject them (9).

- (8) *Denne typen produkt bruke-s med hell mange ganger før det må bli erstattet.*
 this type product use-PASS with success many times before it must be replaced
 ‘This kind of product can be used with success many times before it must be replaced.’
- (9) *Den här sortens produkt är (*mange ganger) lätt-använd.*
 this here type product is many times easy-used
 Intended ‘This type of product can be used several times’

This contrast suggests that whatever head is responsible for introducing the event variable in the verbal structure is absent from the adjectival one.

4. Why Swedish can’t lexicalize middles

Given the structure of a verbal middle, which is repeated here as (10), the crucial fact is that Norwegian can use this construction, but in Swedish for some reason it is not available. Already from a first examination, a syntactic-based explanation seems to be unlikely. If Swedish cannot generate a structure like (10) in the syntax, it can be due to two things: (i) either Swedish lacks a middle operator altogether, or (ii) there is some reason that makes it impossible that the Op combines with a verbal structure in this particular language. The first option would be a brute force stipulation, and it seems difficult to find a reason why Op should not be available in this context only in Swedish. If Op needs to take a variable, in principle verbal structures should be available in both languages that provide Op with an eventive variable.



One explanation suggests itself once we examine the behavior of passive *-s* in both languages. As noted by other authors (specially Engdahl 1999, 2006), even though both languages can use the passive *-s* to express generic events, Norwegian must have always a generic meaning associated to this exponent, while Swedish can use it to express specific eventualities—at least when the inception or the completion of the event are not in focus. The sentence in (11), from Swedish, expresses a single specific event, and its literal translation would be impossible in Norwegian, that must use a periphrastic passive construction to convey that meaning.

- (11) *Uppgiften lämnade-s in för sent*
 exercise-def handed-pass in too late
 ‘The exercise was handed in too late’,

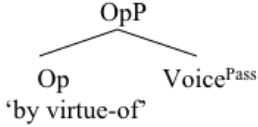
In fact, the passive *-s* form in Norwegian is generally not available with verbs in the past tense, or in the perfective form, while in Swedish this is quite frequent. Engdahl also notes that Norwegian *-s* is typically used in generic statements that express general rules and recommendations. Given that generic events cannot be directly perceived, the association between genericity and general normativeness in Norwegian makes that in this language, unlike in Swedish (12a), an *-s* form cannot be embedded under a perception verb (12b).

- (12) a. *Vi såg tavlan avtäckta-s.* SWEDISH
 we saw painting-DEF uncover-PASS
 ‘We saw the painting being uncovered’

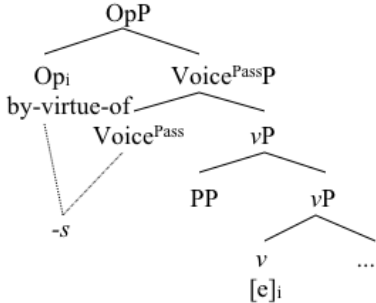
- b. ??*Vi så maleriet avdekke-s* NORWEGIAN
 we saw painting-DEF uncover-PASS
 Intended: ‘We saw the painting being uncovered’

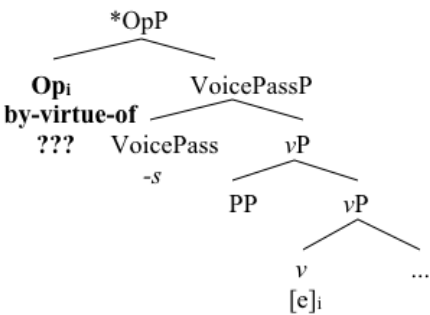
Engdahl (1999) captured this contrast by proposing that the Norwegian *-s* codifies a generic or modal meaning, while the Swedish *-s* is only compatible with this meaning, which can be inferred from the context, but not directly represented by this exponent. Observe that, as noted by Lekakou (2005) and many authors before her, genericity is a crucial component of the operator involved in the middle voice. What these data tell us is that Norwegian *-s* passive is closer to the middle meaning than the Swedish version of the same exponent.

The proposal that suggests itself is that the exponent *-s* in Norwegian is associated not only with a passive structure, but also with an operator with a generic flavor, while in Swedish *-s* directly expresses passive. We codify this with different lexical entries associated to each exponent, as in (13).

- (13) a. $-s^{\text{Nor}}$ → 
- b. $-s^{\text{Swe}}$ → $\text{Voice}^{\text{Pass}}$

Given these entries, and the structure that we have assumed for the verbal middle, it now becomes clear in what way the two interact to make the structure available in Norwegian but unavailable in Swedish: the *-s* in Swedish is unable to lexicalize the middle operator necessary to obtain the middle semantics, but the same exponent in Norwegian can do the job.

- (14) NORWEGIAN
- 

- (15) SWEDISH
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In summary, the derivational model of grammar we defend in this squib provide a clear-cut explanation as to why Swedish does not all the lexical *s*-passive to also pull double duty as a middle voice construction whereas this is possible in Norwegian under certain contexts. In line with our proposal of *Exhaustive Lexicalization* (cf. (1)), the Swedish cannot lexicalize the bound *s*-morpheme with the inclusion of a modality.

5. Conclusion and consequences of our proposal

Based on our analysis, the conclusion that emerges is that a language can only build a syntactic construction if it has the lexical means to identify each one of its features at PF. The reason why Norwegian can lexicalize a middle verbal structure with *-s* is that, given the independent behavior of this exponent in passive constructions, it can be lexically associated with a generic component in the form of an operator.

The proposal that every syntactic feature has to be identified by lexical exponents that have those features specified in their lexical entry has been adopted as a hypothesis in some constructionist approaches, such as Nanosyntax (Svenonius et al. 2009) and Survive-minimalism (Stroik 2009; Stroik and Putnam forthcoming), where it has been claimed that failure to identify a syntactic feature through an exponent—even if the exponent is phonologically null—results in a crash at the interfaces. This principle can be understood as an instance of *Exhaustive Lexicalization*, where every syntactic feature must be meaningful to the lexical component at PF.

Our analysis suggests that a principle of this kind is active in the distinctions that Norwegian and Swedish make in the expression of middle voice statements. Note that if we allow PF to possess an operation where syntactic features are allowed to be erased before lexical insertion—as in some versions of Distributed Morphology, such as Arregi and Nevins (2012)—the distinction between Norwegian and Swedish remains largely unexplained. We would expect, if such an operation was available, that Swedish could ignore Op at PF and use the *-s* exponent, just as Norwegian; we would have to stipulate that, somehow, Op cannot be obliterated at PF. Fortunately, this problem is completely avoided in our analysis, where any form of feature deletion is not possible.

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