VERB-VERB AGREEMENT IN SWEDISH

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1. Introduction

1.1 In addition to ordinary infinitival and participial complements to verbs, Swedish has a wide range of "agreeing" complements to verbs, complements where the verbal head agrees in verb form (morphological category) with the matrix verb. This is illustrated in (1)-(3) below.\(^1\) The examples in (1) all have participle and infinitival complements. The sentences in (2) are paraphrases of the corresponding sentences in (1), with agreeing complements instead of participle and infinitival complements. The ungrammatical sentences in (3) show that complements like those in (2) can only occur with a verb of the same morphological type as the complement.

(1) a. Hon gick tiggande omkring
    She go-PAST beg-PRESPART around
    'She went around begging.'

   b. Jag har en flaska vin stående i skåpet
      I have-PRES a bottle wine stand-PRESPART in cupboard-DEF
      'I have a bottle of wine standing in the cupboard.'

   c. Jag har länge velat göra det
      I have-PRES for-a-long-time want-SUP do it
      'I have for a long time wanted to do it.'

   d. Våga våga dig!
      Dare-IMP weigh-INF yourself
      'Dare to weigh yourself'

(2) a. Hon gick omkring och tiggde
    She go-PAST around and beg-PAST
    'She went around and begged.'

   b. Jag har en flaska vin står i skåpet
      I have-PRES a bottle wine stand-PRES in cupboard-DEF
      Lit. 'I have a bottle of wine stands in the cupboard.'

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\(^1\) The following abbreviations are used: def = definite; IMP = imperative; INF = infinitive; PRES = present; PRESPART = present participle; SUP = supine.
(3) a. *Hon går omkring och tittade
   She go-PRES around and look-PAST
   'She goes around and looked.'
b. *Jag har en flaska vin stod i skåpet
   I have-PRES a bottle wine stand-PAST in cupboard-DEF
   'I have a bottle of wine stood in the cupboard.'
c. *Jag vill gjort det
   I want-PRES do-SUP it
   'I want to done it.'
d. *Jag skulle aldrig våga våg mig
   I will-PAST never dare-INF weigh-IMP myself
   'I would never dare weigh myself.'

The sentence types exemplified in (2) do not all have the same status in Swedish. Sentences like (2a) are completely unproblematic Swedish sentences, attested at least since the Middle Ages (Östergren, 1901). Sentences like (2b), on the other hand, are possible only in a few Central Swedish dialects and never appear in written Swedish (Nordberg, 1977). Sentences like (2c), double supine sentences, are common in spoken Swedish (Ljunggren, 1934), but are stigmatized in written Swedish.²

Sentences such as (2d) have escaped the notice of normative grammarians, and do not appear in written Swedish. As far as I have been able to determine, people may accept sentences like (2c) without accepting sentences like (2d), but the reverse is never the case. Thus, if double supine sentences are stigmatized, sentences like (2d) would be expected to be so as well.

What this means is that a description of agreeing complements in Swedish must deal with several varieties of Swedish. I am aware of the following varieties (where each variety is characterized by the types it allows):

² Cf. the following quotation from Weillander (1939: 277), the most influential normative grammar of Swedish: "I skriftspråket är denna ologiska konstruktion otillåtet." (In written language, this illogical construction is not permissible).
Swedish A: (2a)
Swedish B: (2a), (2c)
Swedish C: (2a), (2c), (2d)
Swedish D: (2a), (2c), (2d), (2b)

However, I would not be surprised if there were more; my own idiolect conforms to Swedish D.

1.2 Swedish has a moderately rich system of verbal inflections with five traditional conjugations, conjugations 1, 2, 3, 4a, and 4b (c1, c2, c3, c4a, c4b). A Swedish verb form consists of a stem followed by a tense/mood/aspect (TMA) suffix and an optional suffix -s, which normally has a passive interpretation, but which can also have an unaccusative, antipassive, or reciprocal interpretation (Ejerhed, 1977; Anward, 1981: 88-93). Past participles do not take -s and present participles allow -s only in a few ill-understood cases. Otherwise, the -s suffix is completely general.

The TMA categories of Swedish are:

INFITIVE: Suffix -a if the stem ends in a consonant (c2, c4); otherwise no suffix (c1, c3).

IMPERATIVE: No suffix.

PRESENT: Suffix -r in c1 and c3; otherwise suffix -er.

PAST: Suffix -de in c1, c2, c3; stem vowel shortening in c3; stem vowel change in c4.

SUPINE: Suffix -t in c1, c2, c3; suffix -ft in c4; stem vowel shortening in c3; stem vowel change in c4b.

PAST PARTICIPLE: Agrees in number (singular, plural) and gender (neuter, non-neuter) with its subject. Thus, there are three forms of the past participle: non-neuter singular (us), neuter singular (ns) and plural (pl):

Suffixes -d (us), -t (ns), -de (pl) in c1;
Suffixes -d (us), -t (ns), -da (pl) in c2, c3;
stem vowel shortening in c3;
Suffixes -en (us), -et (ns), -na (pl) in c4;
stem vowel shortening in c4b.
PRESENT PARTICIPLE: Suffix -nde in c1; suffix -ende in c3; suffix -ande in c2, c4.

Sample paradigms, for the verbs kalla ‘call’ (c1), böja ‘bend’ (c2), tro ‘think’ (c3), gripa ‘grasp’ (c4a), and binda ‘bind’ (c4b), are given below in (4) - (8). The forms are given in the order infinitive, imperative, present, past, supine, past participle non-neuter singular, past participle neuter singular, past participle plural, and present participle.

(4) c1 - kalla; kalla; kalla-r; kalla-de; kalla-t; kalla-d; kalla-t; kalla-de; kalla-nde.

(5) c2 - böj-a; böj; böj-er; böj-de; böj-t; böj-d; böj-t; böj-da; böj-ande.

(6) c3 - tro; tro; tro-r; tro-dde; tro-td; tro-dd; tro-td; tro-ende.

(7) c4 - grip-a; grip; grip-er; grep; grip-it; grip-en; grip-et; grip-na; grip-ande.

(8) c5 - bind-a; bind; bind-er; band; bund-it; bund-en; bund-et; bund-na; bind-ande.

There is nothing remarkable about the Swedish verb system, but two things deserve to be mentioned: the imperative is distinct from the infinitive (distinct forms in c2 and c4, -s on an imperative cannot have a passive interpretation, but -s on an infinitive can), and the supine, the form which together with the verb ha ‘have’ forms the Swedish perfect, is distinct from the past participle (distinct forms in c4, the supine shows no agreement, -s occurs on supines, but not on past participles).

2. Agreeing VP Complements

2.1 There is fairly strong evidence that the emphasized constituents of the sentences below are in fact complements to the matrix verbs of these sentences, and not just ordinary conjuncts:

(9) a. Hon gick omkring och tiggde.
   ‘She went around begging.’

   b. Han är och handlar mat.
   Lit. ‘He is and shops food.’
   ‘He is away buying food.’
c. Dörren står och slår.
   'The door stands and slams.'
   'The door keeps slamming.'
d. Han satt och läste en roman.
   'He sat and read a novel.'
   'He was in the process of reading a novel.'
e. Han sprang och skaffade sig en biljett.
   'He ran and got himself a ticket.'
   'He went and got himself a ticket.'
f. Hon gick och gifte sig med en norrmän.
   'She went and married a Norwegian.'
   'She ended up marrying a Norwegian.'
g. Han tog och städade sitt skrivbord.
   'He took and cleaned his desk.'
   'He got around to cleaning his desk.'

One piece of evidence, based on Ross (1967/1986: 103-105), is that extraction is possible out of such constituents:

(10) a. Tiggde gick hon omkring och gjorde e.
   'Begged, went she around and e.'
b. Mat är han och handlar e.
   'Food, is he away and buys e.'
c. Slår står dörren och gör e.
   'Slams, stands the-door and does e.'
d. En roman satt han och läste e.
   'A novel, sat he and read e.'
e. En biljett sprang han och skaffade sig e.
   'A ticket, ran he and got himself e.'
f. En norrmän gick hon och gifte sig med e.
   'A Norwegian, went she and married e.'
g. Sitt skrivbord tog han och städade e.
   'His desk, took he and cleaned e.'

Another piece of evidence, based on Schmerling (1975: 220-221), is semantic: whereas a sentence with a conjoined VP normally can be paraphrased by a conjoined sentence, sentences of the type exemplified in (9) cannot be paraphrased in that way. Consider just the putative paraphrases of (9b), (9e) and (9g):

(11) a. Han är och han handlar mat.
    'He is and he buys food.'
b. Han sprang och han skaffade sig en biljett.
   'He ran and he got himself a ticket.'

c. Han tog och han städade sitt skrivbord.
   'He took and he cleaned his desk.'

What is lacking in these sentences is precisely the semantic roles assigned to the complements in (9b), (9e) and (9g): Location in (9b), and Goal in (9e) and (9g). Obviously, a conjunct cannot assign a semantic role to another conjunct, while a matrix verb can assign a semantic role to a complement. The specific interpretations of the emphasized constituents in (9) thus clearly support the analysis of these constituents as complements.

A related fact, also noted by Schmerling (1975: 222), is that sentences of the type exemplified in (9) do not retain their interpretations when både ‘both’ is added to them. Thus if både is added to (9b), (9e), and (9g), the resulting sentences are not paraphrases of the sentences. They are, however, paraphrases of the corresponding sentences in (11).

(12) a. Han både är och handlar mat.
   'He both is and buys food.'

   b. Han både sprang och skaffade sig en biljett.
   'He both ran and got himself a ticket.'

   c. Han både tog och städade sitt skrivbord.
   'He both took and cleaned his desk.'

2.2 The emphasized constituents in (9) are therefore complements, but what kind of complements are they, S or VP? The verbs in these complements cannot be construed with sentence adverbials, such as faktiskt ‘actually’, inte ‘not’, or äntligen ‘finally’:

(13) a. *Han är och faktiskt handlar mat.
   'He is and actually shops food.'

   b. *Han är och handlar faktiskt mat.
   'He is and actually buys food.'

   c. *Han sprang och äntligen skaffade sig en biljett.
   'He ran and finally got himself a ticket.'

   d. *Han sprang och skaffade sig äntligen en biljett.
   'He ran and got himself finally a ticket.'

   e. *Han tog och inte städade sitt skrivbord.
   'He took and not cleaned his desk.'

   f. *Han tog och städade inte sitt skrivbord.
   'He took and cleaned not his desk.'
As the following examples show, infinitives, imperatives and finite verbs can be construed with sentence adverbials, but supines (under *ha*) and participles cannot.

(14) a. Han bad mig att inte sjunga.
    Lit. 'He asked me to not sing.'

b. *Sjung inte.
   Sing not
   'Don’t sing!'

c. Han sjunger/sjöng inte.
   'He sings/does not sing.'

d. *Han kan ha inte sjungit.
   'He may have not sung.'

e. *Den kan vara inte repeterad.
   Lit. 'It may be not rehearsed.'

f. *Man kan gå inte seende genom huvet.
   'One may pass not seeing through life.'

We can account for the contrast between (14a-c) on the one hand, and (14d-f) on the other hand in the following way: either sentence adverbials are adjoined to S or they are adjoined to VP, but must have scope over S. In either case, only verb forms that project to S can be construed with sentence adverbials. If a verb form cannot be construed with sentence adverbials, then we assume that that verb form can project only to VP (in that particular context).

We would then have to say that infinitives, imperatives, and finite verbs project to S, while supines (under *ha*) and participles project to VP. And by the same logic, we conclude that the emphasized constituents in (9) are VP complements.

3. **Agreeing Complements in GPSG**

Generalized Phrase Structure Grammar (GPSG; Gazdar et al., 1985) permits a straightforward description of agreeing VP complements. The following phrase structure rule would suffice:

(15) \[ VP <α> \rightarrow H<48> VP<CONJ och; α> \]

A particular convention, the Head Feature Convention (HFC), will ensure that the features on the mother VP percolate to its head (H), and the feature <48> on the head (actually the value of the feature SUBCAT) keeps track of the verbs that
can take agreeing VP complements. The variable «» on the mother VP and the
daughter VP ensures that the features of the mother percolate to the daughter.

However, rule (15) is more problematic than it would seem. The crucial
problem is that the feature percolation from the mother VP to the daughter VP has
to be stipulated. In GPSG, all instances of feature percolation should follow from
general principles: the HFC, the Control Agreement Principle (which allows
percolation of features from an argument to a functor, roughly) and the Foot
Feature Principle (which allows percolation of features involved in long-distance
dependencies).

An alternative to (15), which appears to avoid the problem, is the rule in
(16), adapted from Gazdar et al. (1985: 176) (see also Sag et al., 1985: 149-152).

(16) \[ VP \rightarrow H<48> H<CONJ och> \]

In (16), HFC ensures that the features of the mother VP percolate both to
the head and to the daughter VP. Among the features that percolate from
the mother to the daughter VP is the feature determining the bar level, <BAR 2>. That
feature does not percolate to the head however, since the head is specified as
<SUBCAT 48> and <SUBCAT> is not compatible with <BAR 2>.

The percolation that was stipulated in (15) is thus assimilated to the HFC in
(16). However, that assimilation is not really a happy one. The HFC covers three
distinct cases: percolation between mother and head in head-complement
constructions, percolation between mother and head in head-modifier
constructions, and percolation between mother and conjuncts in a coordination. Of
these, coordinations retain bar level (all conjuncts are heads on the same bar level
as the mother) and so do head-modifier constructions (Andrews, 1983). Head-
complement constructions on the other hand, change bar level. Furthermore, as in
Categorial Grammar (see e.g. Dowty, 1982a, 1982b), heads are predicates in head-
complement constructions, but arguments (or 'augmented' predicates, see below)
in head-modifier constructions. In coordinations, conjuncts are neither predicates
nor arguments. Now, what (16) creates is essentially a new type of construction,
which changes bar level with respect to one head, but not with respect to the
other head, and where one head is predicate and the other head is argument.
However, postulating a new construction type may be a more radical move than is
really needed. Note that if the agreeing VP complement is not regarded as the head
of the mother VP, then the construction will be an ordinary head-complement
construction, which exemplifies an unusual mode of percolation. Thus, a simpler
analysis is possible: agreeing VP complements do not exemplify a new type of
construction, but a new mode of percolation.
Note that verb-verb agreement is different from ordinary agreement too, in that it is the argument that agrees with the predicate, rather than the other way around. Thus the percolation involved in verb-verb agreement cannot be assimilated to the Control Agreement Principle (CAP) either. This holds even if we view ordinary agreement as a kind of categorial selection (c-selection; Chomsky, 1986a: 86), since ordinary agreement, viewed as c-selection, works in the following way: a lexical item with the feature specifications \(<F1>\) takes an affix with the feature specifications \(<F2>\). This complex item then c-selects a phrase with the feature specifications \(<F2>\). This mode of selection obtains even when the head and the phrase are of the same category. Thus, in the Finnish NP in (17), it is the features of the suffix, \(<+1; -\text{PL}>\) that determine c-selection, not the features of the stem, \(<-1; -\text{II}; -\text{PL}>\):

(17) Minun poika-nl
     'My boy-1p+sg+poss'

While (17) and (18a) are grammatical, (18b) is irreparably ungrammatical.

(18) a. Hänen poika-nsa
     'His/her boy-3p+poss'

     b. *Hänen poika-nl
     'His boy-1p+sg+poss

However, this mode of selection does not operate in verb-verb agreement. Here we have no affix that determines c-selection, just a lexical item with the feature specifications \(<F1>\) that c-selects a phrase with the same feature specifications.

Thus verb-verb agreement assimilates neither with ordinary projection, nor with ordinary agreement. Nevertheless I think that the intuition behind the rule in (16), that the percolation found in verb-verb agreement most resembles ordinary projection, is essentially sound. But to develop that intuition into a working analysis, we must reculer pour mieux sauter.

4. Constructions

4.1 The following program is, I believe, a natural extension of the results achieved by Chomsky (1986b) and Koster (1984): well-formedness conditions on syntactic representations all take the form:

(19) A relates to B in D(A)
where 'A relates to B' abbreviates a small list of basic relations, perhaps just:

\[(20) \quad \begin{align*}
  & \text{a. } \text{A projects to B} \\
  & \text{b. } \text{A governs B} \\
  & \text{c. } \text{A precedes B} \\
  & \text{d. } \text{A is predicated of B} \\
  & \text{e. } \text{A is bound by B}
\end{align*}\]

and D abbreviates a small list of possible domains, where a domain is defined with respect to the dependent element E of a syntactic relation, and is identified in two steps: first, we identify the 'maximal strip' (Ross, 1967/1966: 283–288) of E, i.e. all nodes that either dominate E or c-command E; secondly, we identify a bounding node G, which is the first node of that type above E that dominates both E and some 'opacity factor' (Koster, 1984). The domain of E is then that substrip of the maximal strip of E that has G as upper bound.

Well-formedness conditions of this kind are to be interpreted as conditions on the single tree that represents the syntactic structure of an expression. Such a tree is accepted by a grammar if and only if its constituents are all sanctioned, or licensed (Chomsky, 1986a: 93), by the conditions that make up the grammar. In particular every constituent, except the root, must either project or be governed, and every maximal projection, except the root, must be involved in a predication.

4.2 A program like this is valid to the extent that the conceptual apparatus it allows 'suffice[s] to derive the consequences of elaborate and language-specific rule systems' (Chomsky, 1986a:145). Our immediate task here is to characterize the three constructions that were discussed in Section 3: head-complement constructions, head-modifier constructions, and coordinations, in terms of the basic relations in (20).

What we need first are three modes of projection:

\[(21) \quad \begin{align*}
  & \text{a. } x^I \text{ projects to } x^{I+1} \\
  & \text{b. } x^I \text{ projects to } x^I \\
  & \text{c. } x^I_1, x^I_2, ..., x^I_n \text{ project to } x^I
\end{align*}\]

The first mode, proper projection, is that involved in complementation; the second mode, adjunction, is that involved in modification; and the third mode, complex projection, is that involved in coordination.

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3 This is in keeping with the Categorial Grammar – GPSG tradition; but see also Williams (1986).
Secondly, we need government:

(22) $x^1$ governs $y_{max}$

The notion of government that I am using here is simpler than most other current notions of government. A head governs a non-head that is a sister to it. Since a head is either construed with a non-head (or any number of non-heads) as in complementation and modification, or with a number of other heads, as in coordination, but not with non-heads and other heads simultaneously, government is only compatible with proper projection and adjunction.

Finally we need predication. To begin with, we can distinguish the following two types of predication, where $x$ represents a head, and $y$ a non-head:

(23) a. $x^1$ is predicated of $y_{max}$
    b. $y_{max}$ is predicated of $x^1$

Examples (23a) and (23b) represent the two traditional modes of predication in Categorial Grammar, corresponding to complementation and modification, respectively. Thus, heads are predicated of their complements, and modifiers are predicated of their heads\(^4\). I differ from Categorial Grammar, though, in treating some modifiers as added arguments, along the lines proposed by McConnell-Ginet (1982). Thus, while an AP that modifies a noun or an ADVP that modifies a verb or adjective may well be regarded as being predicated of the heads they modify, PP modifiers and predicate AP modifiers of verbs are better treated as added arguments of the heads they modify. In such cases then, a head is predicated of a modifier.

Taking our lead from Marantz (1984, ch.2.1), we can explicate predication in terms of semantic role assignment. Where $A$ is predicated of $B$ and $B$ is a true argument, $A$ assigns a semantic role to $B$. Where $A$ is predicated of $B$ and $B$ is an added argument, $A$ does not assign a semantic role to $B$. Instead, $B$ has an inherent semantic role, and $A$ combines with $B$ in that semantic role. Thus, in the first case, a predicate with an empty role slot is combined with a filler, while in the

\(^4\) Incidentally, this distinction goes back to the Modistae. Thus, Thomas of Erfurt distinguishes in each type of construction dependent and terminant, on the one hand, and primum and secundum constructibile, on the other hand (Covington 1979:471-479). In a head–complement construction, such as verb–object, the head is dependent and primum constructibile; in a head–modifier construction, such as noun–adjective, the head is terminant and primum constructibile. Now, if we equate primum constructibile and dependent with head and predicate, respectively, we get precisely the Categorial Grammar distinction between complementation and modification.
second case, a predicate is combined with both a slot and a filler. Obviously the slot must be compatible with the predicate in the second case.

If A assigns a semantic role, we say that A is a Predicate. If A has a semantic role, we say that A is an Argument. All we need to say then is that a head may be a Predicate, while a non-head may be a Predicate or an Argument:

(24) a. $X^1$ is a Predicate
b. $Y^\text{max}$ is a Predicate
c. $Y^\text{max}$ is an Argument

The assumption that predication relations hold between heads and non-heads makes predication compatible with proper projection and adjunction, but incompatible with complex projection. As for the varieties of predication allowed by (23) and (24), proper projection is compatible with (23a) and (24a), while adjunction is compatible with (23a), (23b), (24b), and (24c).

We arrive then at the following characterization of the three constructions:

Complementation: proper projection, government, the head is Predicate;
Modification: adjunction, government, the non-head is Predicate or Argument;
Coordination: complex projection, no government, no predication.

4.3 These three constructions do not exhaust the range of constructions found in natural languages. To begin with, Complementizer + S and Article + NP exemplify a type of construction that is neither complementation, modification, nor coordination.

Let us look at C(omplementizer) + S constructions. At first, one is inclined to regard these as head-complement constructions, with C as head and S as complement. However, C is not predicated of S; nor is S predicated of C. Furthermore, since the node above C and S has features emanating from both constituents, we would like to say that both C and S project to that node\(^5\) Yet, C + S is not a coordination: the two constituents are not on the same bar level, and they are often specialized in the sense that certain features of the mother node can only come from one of the constituents. I propose that C + S is an instance of a particular type of construction, Composition, which is characterized by a distinct mode of projection, (25):

\(^5\) This possibility is explicitly provided for in Lexical-Functional Grammar, where features percolate both from heads to mothers, and from 'minor categories' to mothers (see e.g. Zaenen 1983:476).
(25) $X^0$ and $Y^1$ project to $XY^16$

The mode of projection in (25) is a kind of complex projection, which means that composition can involve neither government or predication.

Composition is somehow intermediate between coordination and complementation/modification. A composition construction can profitably be regarded as a reduced head-complement/modifier construction, in which the former head neither governs nor projects beyond the 0-level. The existence of composition would then depend on the existence of a class of grammatical morphemes, or 'grams' (Bybee and Dahl, forthcoming), with just these properties.

Example (25) is very close to Jackendoff’s Deverbalizing Rule Schema (Jackendoff, 1977: 221):

(26) $X^1 \rightarrow \alpha\theta - Y^1$

Jackendoff explicitly analyses C as a kind of affix adjoined to $V^3$ (Jackendoff, 1977: 224-226). However, Jackendoff is vague about how features actually percolate in a construction that conforms to (26). Later analyses of affixation, e.g. Lieber (1983), have treated affixes as heads, but that analysis is open to the same kind of objections as the analysis of C as head is. I would like to suggest that the cases covered by (26) are all instances of composition.

We must be cautious here though: a 'constructible' in a construction may be a phrase, a word, a clitic or an affix (on the proper ways of distinguishing the last three kinds of units, see Zwicky and Pullum, 1983; Zwicky, 1985), and that distinction cuts across the typology of constructions. Thus a complement may be a phrase, a word (as in noun-incorporation), a clitic or an affix, and a modifier may likewise be a phrase, a word, a clitic, or an affix (for examples of the last two cases, see Schachter, 1985). This means that we cannot say that composition is the only mode of construction associated with affixation.

4.4. A fifth type of construction is subject-predicate, or Nexus, to use Jespersen’s term (Jespersen, 1924: 114-144). In a nexus, a head projects to $S$.

The relevant mode of projection is the following one:

(27) $X^1$ projects to $S$
I thus make the distinction between ordinary proper projection and proper projection to S, which means that I regard a nexus as an exocentric construction in the sense that the S-hood of a particular projection of a head does not follow from any property of that head. In this way, we can unite the notions of S and SC (small clause), without having to posit abstract verbs or abstract INFLs in small clauses. This means, of course, that S cannot be equated with VP or IP, although we may think of an S projection of XP as XP' <+S>, so that S above VP is VP' <+S> and S above INFL would be IP' <+S>. I should point out, though, that INFL is not part of the present framework. Since affixes may be composed with their stems, we may say that <+tense>, for example, projects to S, without having to put <+tense> in a separate daughter node of S. Moreover, INFL + VP is not a simple construction, since TENSE + VP is an instance of composition, while AGR + VP is an instance of complementation, with VP as head and AGR as complement.

Since the mode of projection in (27) is an instance of proper projection, \( X^1 \) may also govern in S, and predication is allowed, with \( X^1 \) as Predicate. There are also cases that suggest that the head may be Predicate and Argument at the same time. Consider sentences like the following (the Russian example in (28a) is from Kayne, 1984: 135):

(28) a. U Ivana krasivye glaza
    By Ivan pretty eyes
    'Ivan has pretty eyes.'
b. Skridskorna i isskåpet!
    The-skates in the-icebox
    'The skates should be in the icebox!'

I think we can view the heads in (28) (the NP \textit{krasivye glaza} in (28a) and the PP \textit{i isskåpet} in (28b)) as constituents that simultaneously have a role (Theme in (28a) and Location in (28b)) and assign a role to their complements (Possessive Location in (28a) and Theme (28b)). We must then recognize the following possibility:

(29) \( X^1 \) is an Argument

Proper projection to S would then be compatible with (23a), (24a) and (29).

4.5 The resulting typology of constructions is then as follows:

\textit{Nexus}: proper projection to S, government, the head is Predicate or both Argument and Predicate;
**Completion**: proper projection, government, the head is Predicate;  
**Modification**: adjunction, government, the non-head is Predicate or Argument;  
**Coordination**: complex projection, no government, no predication;  
**Composition**: complex projection (25), no government, no predication.

As I pointed out in footnote 4, the distinction between completion and modification has a long history. In the 20th century this distinction has been reaffirmed by Jespersen, as the distinction between nexus and junction (Jespersen, 1924:114-144), by Bloomfield, as the distinction between exocentric and subordinative endocentric constructions (Bloomfield, 1933: 194-196; see also Hockett, 1958: 183-208) and by Categorial Grammar. The distinction is not universally recognized, however. It is typically slighted in Dependency Grammar and related approaches, as well as in many versions of X-bar theory, e.g. Jackendoff (1977).

Bloomfield also recognized the distinction between modification (his subordinative endocentric constructions) and coordination (his coordinative endocentric constructions), and coordination is treated as a distinct type of construction in Jackendoff's version of X-bar theory (Jackendoff, 1977: 50-51) and in GPSG as well. Dependency Grammar on the other hand, has always had trouble with coordination. See Dahl (1980a) as well as Farkas and Ojeda (1983) for a review of the basic problems, and Tesnière (1959: 321-358) and Hudson (1984: 211-240) for valiant attempts to come to grips with some of them.

The distinction between completion/modification and composition was formally recognized only with Jackendoff's postulation of a separate Deverbalizing Rule Schema (Jackendoff, 1977: 221). The discussion of the status of affixes has been extensive during the last decade, and cannot be easily summarized. I shall simply note that a mode of construction equivalent to composition is by no means universally recognized.

The distinction between nexus in the narrow sense used here and completion, finally, should come as no surprise. Yet it has proved hard to find any formal recognition of this distinction. However, all frameworks that recognize the category of Small Clause (SC) do in fact recognize the existence of a traditionally exocentric phrase which, unlike other traditionally exocentric phrases such as VP and PP, lacks a characteristic head. Needless to say, though, the existence of SC is controversial, as is the identification of S and SC proposed here.
The typology of constructions assumed here thus covers as much ground as, or even more ground than, other available typologies, and certainly makes more distinctions than are usually made. Nevertheless, the typology allows only a narrow range of constructions.

The following conditions are possible conditions on the terms of a construction:

- X is construed with \( X^* / Y \)
- (X governs Y)
- X is predicated of Y / Y is predicated of X
- (X/Y is a Predicate)
- (X/Y is an Argument)
- (X projects properly)

And these conditions combine in the following ways (where A+B means that condition B is added to condition A):

- X is construed with Y (\(+ X\) governs Y)
- X governs Y + X is predicated of Y, or Y is predicated of X
- X is predicated of Y + X is a Predicate, or Y is an Argument
- Y is predicated of X + Y is a Predicate
- X is a Predicate + X is an Argument
- X is a Predicate + X projects properly
- X is an Argument + X projects properly to S

In Section 4.1, I stated two basic conditions on syntactic representations: each constituent (except the root) must either project or be governed, and each maximal projection (except the root) must be involved in a predication. In later sections I added the condition that the head must not be construed with both a non-head and another head, and the condition that predication must involve a non-head. A head is a constituent that projects but is not governed, and a non-head is a constituent that is governed but does not project. Most of these conditions are subsumed under the first two combinatorial conditions above. What remains to be separately stated is only convention C1 below.

**C1:** Any C1, except the root, that is neither governed nor properly projected, projects to C1.

Note that the properties of composition can more or less be derived now. If a gram, which does not govern and does not project beyond O, is construed with Y1, then neither of these constituents IS governed, and neither projects properly (the
4.6 Case marking and agreement fit in this framework in the following way: case-marking conditions form part of government conditions, just as in traditional grammar. We thus get conditions of the following kind:

(30) a. \( \text{V^0} \) governs NP \(<\text{accusative}>\)
    b. \( \text{p^0} \), \( \text{mit} \) governs NP \(<\text{dative}>\)

Accusative case-marking results when VP governs NP \(<\text{u case}>\), i.e. an unmarked NP, and V governs NP \(<\text{m case}>\); ergative case marking results when both VP and V govern NP \(<\text{u case}>\), and VP also governs NP \(<\text{m case}>\).

Agreement is reducible to predication. We have already seen that an agreement affix plays a crucial role in agreement, and that an affix may serve as the complement of a head. It is, then, natural to assume that in agreement the agreement affix is a complement of the stem. Thus, verb agreement involves a stem \( \text{V}^{-1} \) that projects to \( \text{V} \) on the word level, governs a nominal affix \(<\text{NP}>\), and is predicated of \(<\text{NP}>\).

As I argued above, a constituent is a Predicate if it assigns a semantic role, i.e. if it has a role slot which an argument expression can fill. Let \( x \) and \( y \) stand for role slots, such that an intransitive verb is \( \text{V}\langle x \rangle \) and a transitive verb \( \text{V}\langle x; y \rangle \). Furthermore, let the result of predicating \( \text{V}\langle y \rangle \) of NP in VP be \( \text{VP}\langle y; \text{NP} \rangle \). The predication involved in subject-verb agreement is then of the following kind:

(31) \( \text{V}^{-1}\langle x \rangle \) is predicated of \( <\text{NP}> \)

and the result is \( \text{V}\langle x; <\text{NP}> \rangle \).

\( \text{V} \) projects to VP and VP is predicated of the subject NP, subject to either (32a) or (32b):

(32) a. \( \text{VP}\langle x; <\text{NP}> \rangle \) is predicated of NP
    b. \( \text{VP}\langle x \rangle \) is predicated of NP

If (32a) obtains, we have Latin type subject-verb agreement where agreement is compatible with a lexical subject. The result of predicating \( \text{VP}\langle x; <\text{NP}> \rangle \) of NP is \( \text{VP}\langle x; \text{NP}; <\text{NP}> \rangle \), where \( <\text{NP}> \) is the unification of NP and \(<\text{NP}>\). If (32b) obtains, we have Breton type subject-verb agreement (Anderson, 1982: 575-584), where agreement and government are in complementary distribution.
Latin type subject-verb agreement, where an affix suffices to saturate a predicate, must of course be distinguished from English type subject-verb agreement, where both agreement and a lexical subject are required. We might, of course, say that (32a) is obligatory for English and optional for Latin, but there is another more elegant solution available.

Let us make a distinction between saturated and unsaturated role slots. An unsaturated role slot is one which accepts a further filler; a saturated slot is one which does not. The difference can be expressed in the following way: \( \text{x}, \text{x]<\text{NP}> \), etc. denote unsaturated slots while \( \text{x}', \text{x}<\text{NP>}' \) denote saturated slots. Now, when \( V^{-1} \) is predicated of \( <\text{NP}> \), we either get (33a) or (33b).

\[
\begin{align*}
(33) \ a. & \ V<\text{x};<\text{NP}> \\
 & \ b. \ V<\text{x};<\text{NP}> \\
\end{align*}
\]

English has only (33a), Latin has both (33a) and (33b), and Breton has only (33b).

To express the distinction between (33a) and (33b) directly in predication conditions, we adopt the convention that a filler which saturates a slot is followed by \( ' \), while a filler that does not saturate a slot is followed by \( ':' \). We then get the following conditions instead of those in (31) and (32):

\[
\begin{align*}
(34) \ a. & \ V^{-1}<\text{x}> \text{ is predicated of } <\text{NP}>. \\
 & \ b. \ V^{-1}<\text{x}> \text{ is predicated of } <\text{NP}>: \\
(35) & \ VP<\text{x}> \text{ is predicated of NP}. \\
\end{align*}
\]

Situation (34a) obtains in Breton and Latin, (34b) in Latin and English, and (35) in Breton, Latin and English. A distinction analogous to that between (34a) and (34b) can, of course, also be made for clitics.

---

7 Note that 'x,' is a simple notation for an implicit argument.

8 The present analysis of agreement is parallel to Rizzi's account of the Null-Subject Parameter (Rizzi, 1982) in that both analyses crucially rely on the status of the agreement element (the agreement affix here, and the AGR part of INFL in Rizzi's case) to describe the differences between English/French, and Latin/Italian/Spanish. Rizzi argues that AGR may have the status of a pronoun in languages like Italian and Spanish (and Latin), but not in languages like English and French (for Breton, Rizzi would have to say that AGR is optional and always pronominal).

The extension of Rizzi's analysis proposed by Platzack (1987), where COMP in Germanic V/2 languages may have the status of a pronoun in certain languages, but not in other languages, cannot be adapted to the present framework, though, since nothing can ever be predicated of COMP.
Agreement is consequently a particular combination of predication at the word level and predication at some phrase level. Thus X agrees with YP only if X is predicated of YP.

5. The Agreeing VP Construction

Let us now return to the agreeing VP construction. In Section 2 I argued that agreeing VPs are complements. However, given the typology of constructions developed in Section 4, we can now see that the arguments presented here do not really establish that agreeing VPs are complements rather than modifiers of the added argument type. In both cases, agreeing VPs would get semantic roles. What is decisive is whether these roles are assigned by the matrix verbs or are inherent roles of the agreeing VPs. I do not believe that the matrix verbs actually assign semantic roles to the agreeing VPs, which means that these VPs must have inherent semantic roles (in this context, at least). The roles are presumably Circumstantial, Location, and Goal (Jackendoff, 1978: 223-226), i.e. agreeing VPs specify situations in which the Themes of the matrix verbs are protagonists.

If agreeing VPs have inherent semantic roles, i.e. are Arguments, they must be adjoined to either V or VP. Since agreeing VPs can appear in existential sentences in Swedish (see (36) below), V + Agreeing VP can be predicated of both subjects and objects9, which makes it natural to assume that agreeing VPs are adjoined to V.

(36) a. Det gick omkring en kvinna och tiggede i trakten
   Lit. 'There went around a woman and begged in the neighborhood.'
   'A woman went around the neighbourhood, begging,'
   b. Det står en dörr och slår
   Lit. 'There stands a door and slams.'
   'A door keeps slamming.'
   c. Det satt en man och läste en roman på bänken
   Lit. 'There sat a man and read a novel on the bench.'
   'There was a man, sitting on the bench and reading a novel.'

The agreeing VP construction thus has the following properties:

(37) a. V projects to V
b. V governs VP

---

9 On the object status of the logical subject in Swedish existential sentences, see e.g. Platzeck (1983).
c. V is predicated of VP

d. VP is an Argument

Given the typology of constructions developed in Section 4, the conclusions of Section 3 follow directly from (37). Rule (16) is excluded since a condition such as 'VP projects to V', besides being rather dubious in itself, is clearly incompatible with the conditions in (37): a head would govern a head, and a head would be predicated of another head. Agreement is excluded since VP is not predicated of V. A priori, nothing prevents V from agreeing with VP. However, that is factually inaccurate: the form of V + VP is clearly determined by V, not by VP. For example, we can only say that VP is imperative when embedded under an imperative V, not that V is imperative when construed with an imperative VP, since an embedded VP can never be imperative by itself.

6. Domains

6.1 So far I have said nothing concrete about possible domains. Let me now present a number of domains in which the basic relations may hold. Like the several variants of governing category discussed in Manzini and Wexler (1987), these domains will form a series D1, ..., Dn, where for any pair of domains D1 and Dj (j > i), it is the case that

\[
A \text{ relates to } B \text{ in } D_i(A)
\] entail

\[
A \text{ relates to } B \text{ in } D_j(A)
\]

This means that the choice of the domain for a particular relation should be subject to the Subset Principle developed by Manzini and Wexler. The gist of this principle is the idea that a language learner selects the grammar that generates the smallest possible language compatible with the data, i.e. in this case, the grammar with the most restrictive domain possible. Unlike Manzini and Wexler however, I will not regard D1, ..., Dn as variants of the same domain, but as different domains which may coexist in a grammar.

Recall that a domain is defined as that substrip of the maximal strip of a node that has a certain bounding node G as upper bound. The properties used here to identify G are fairly traditional (see also Vikner, 1985) as are the domains defined, with one exception. I will use the following bounding nodes:

G1: The first node above A that dominates A.
G2: The first node above A that is a maximal projection, and dominates A (where a maximal projection is an XP that is not directly dominated by XP or S, an S that is not directly dominated by S or S', or an S' that is not directly dominated by S').

G3: The first node above A that is a maximal projection, has a subject, and dominates A.

G4: The first node above A that is a maximal projection, has a subject distinct from A and dominates A.

If the bounding node is G1, then the domain is a Local Domain (LD), the same domain as the Local Tree defined by Gazdar et al. (1985: 45): "A local tree is a tree of depth one, that is, a tree in which every node other than the root is the daughter of the root."

If the bounding node is G2, then the domain is a Maximal Projection Domain (MPD), the same domain as the Domain defined by Chomsky (1986a: 162): "The domain of A is the least maximal projection containing A."

The next domain corresponds fairly closely to Chomsky's Governing Category, defined in this way in Chomsky, 1986a: 169: "... a governing category is a maximal projection containing both a subject and a lexical category governing A (hence containing A), except that, somewhat paradoxically, the property 'containing a lexical category governing A' plays no role in its definition. The bounding node for this domain is G3, if G3 is S<+finite> or a projection of S<+finite>. Otherwise the bounding node is G4. Following Chomsky (1986a) I will call a domain of this kind a Complete Functional Domain.

Finally, a fourth and previously undefined domain whose bounding node is the second G3 above A if the first G3 is S<+finite>, and otherwise the bounding node for the CFD of A. A domain of this kind will be called an Extended Functional Domain (EFD).

6.2 Conditions on government, projection and predication are normally conditions on what must obtain in the Local Domain of the dependent item in these relations. In fact, this is what we would come to expect from the Subset Principle. However, we have already come into contact with non-local conditions on projection, namely the conditions briefly stated in Section 2.2 that infinitives, imperatives, and finite verbs project to S, while supines and participles project only to VP. The relevant domain for these conditions is clearly not the Local Domain of the verb form in question, but the Maximal Projection Domain of that

---

10 A subject in this sense is not only an NP directly dominated by S, but also a genitive NP directly dominated by NP.
verb form. As I briefly suggested in Section 4.3, we may in fact link such conditions both to major categories and to inflectional categories that are composed with these major categories.

The description of Swedish verb forms in Section 1.2 can now be summarized in more formal terms. First we use the distinctive features <participle>, <tense>, <past>, <supine>, and <imperative> to define a number of TMA suffixes:

(38) Infinitive: <-participle; -tense; -supine; -imperative>
    Imperative: <-participle; -tense; -supine; +imperative>
    Present: <-participle; +tense; -past>
    Past: <-participle; +tense; +past>
    Supine: <-participle; -tense; +supine>
    Past Participle: <+participle; +past>
    Present Participle: <+participle; -past>

Then we allow verb stems to compose with a TMA suffix, and certain of the resulting categories to govern a further affix (either -s or an agreement affix):

(39) a. <TMA> and V^{-1} project to V<TMA>-1
    b. V<participle>-1 may govern -s
    c. V<+participle; +past>-1 governs <+/-plural; +/-utre>

The relevant conditions on projection will then be:

(40) a. V projects to VP or S in its MPD
    b. <+tense> projects to S in its MPD
    c. <+supine> projects to S in its MPD
    d. <+supine> projects to VP in its MPD
    e. <+participle> projects to VP in its MPD

6.3 In the unmarked case, conditions on (A-)binding make reference to the CFD of the bound item. However, as is well known, very few languages have only the unmarked case. Reflexive pronouns in Swedish illustrate this nicely.\textsuperscript{13}

\textsuperscript{11} <-utre> is neuter; <+utre> is non-neuter.
\textsuperscript{12} Both (39b) and (39c) have corresponding predication conditions. V^{-1}<x>, in the passive case, and V^{-1<y>}, in the antipassive and reciprocal cases, are predicated of -s, and V^{-1<y>} is predicated of <+/-plural; +/-utre>. Cf. Jørggøli (1986) for a similar analysis of passives.
\textsuperscript{13} For a more detailed description of Swedish reflexives, see Anward (1974), Dahl (1980b), and (Ried) 1988.
Reflexive pronouns in Swedish have the same distribution as objective and possessive pronouns, i.e. they occur everywhere except as the subject of S:

(41) a. HAN kritiserade SIG själv
    'He criticized (him)self.'
b. HAN kritiserade SIN handledare
    'He criticized self's supervisor.'
c. HAN hittade den bakom SIG
    'He found it behind self.'
d. HAN hittade den under SIN hatt
    'He found it under self's hat.'

(Reflexive pronouns and their binders are in capital letters.)

However, reflexive pronouns must, of course, be bound. As I have defined CFD, the reflexives in (41) are all bound in their CFD, as are the reflexives in (42).

(42) a. HAN hittade några bilder på SIG själv
    'He found some pictures of self.'
b. HAN hittade några bilder på SINA barn
    'He found some pictures of self's children.'

In (42a), the NP above the reflexive does not have a subject, and thus can not constitute a bounding node for CFD. In (42b), the first NP above the reflexive does not have a subject, but that is not distinct from the reflexive, so that NP cannot be a bounding node for CFD. Nor can the second NP above the reflexive in (42b) be a bounding node for CFD, since it does not have a subject.

In the following cases on the other hand, the reflexive pronouns are not bound in their CFD:

(43) a. HAN bad mig raka SIG
    'He asked me to shave self.'
b. HAN bad mig raka SIN far
    'He asked me to shave self's father.'
c. *HAN sa att SIG hade träffat dig
    'He said that self had met you.'
d. *HAN sa att SIN far hade träffat dig
    'He said that self's father had met you.'
e. *HAN sa att du hade träffat SIG
    'He said that you had met self.'
f. *HAN sa att du hade träffat SIN far
    'He said that you had met self's father.'
In all sentences in (43), the first S node above the reflexive pronoun has a subject and thus constitutes a bounding node for CFD. In (43c)-(43f), that S node is S<+finite>, so it does not matter that the subject is not distinct from the reflexive in (43c) and (43d). In (43a) and (43b), the subject is PRO, which in this framework is governed by VP<+finite>. Since this subject is distinct from the reflexive, the first S node above the reflexive in (43a) and (43b) is also a bounding node for CFD.

However, (43a) and (43b) are well-formed, while (43c)-(43f) are ill-formed. I suggest that this contrast is due to the fact that the embedded S nodes above the reflexives in (43a) and (43b) are not bounding nodes for EFD, since they are the first G3 above the reflexive and <+finite>, while the embedded S nodes above the reflexives in (43c)-(43f) are bounding nodes for EFD, since they are <+finite>. In other words, Swedish reflexive pronouns must be bound in their EFD, but not in their CFD.

6.4 All the four domains described in 6.1. are thus independently available in Swedish. Let us now use this result to construct a principled account of agreeing VPs.

Consider first (37b), repeated here in (44), in relation to the projection conditions in (40), repeated in (45).

(44)  V governs VP

(45)  a. V projects to VP or S in its MPD
      b. <+tense> projects to S in its MPD
      c. <-supine> projects to S in its MPD
      d. <+supine> projects to VP in its MPD
      e. <+participle> projects to VP in its MPD

Suppose V<TMA> is the head of the governed VP. What are then the possible values of TMA? Since both V and <TMA> project to VP, but not to S, in their MPD (the governed VP being the G2 of its head), the only possible candidates are <+participle> and <+supine>. However, VP<-supine> is not a generally available complement or modifier. Only the Aa of the perfect construction may govern VP<-supine>. We may conceive of this restriction in the following way: government conditions do not normally refer to specific lexical items, only to categories.

---

T4 Actually, this is an oversimplification. It is only reflexives with subject antecedents that are bound in their EFD. Reflexives with object or genitive antecedents are bound in their CFD. Furthermore, object and genitive antecedents do not bind into modifiers, while subject antecedents do.
Subcategorization is effected by the predicate form of heads and predication conditions mentioning specific lexical items. However, whenever a lexical item is construed with a complement or modifier that belongs to a particular, not generally available, inflectional category, we must have a government condition that mentions that lexical item (cf. the government condition on \textit{mit} in (30b)). Thus, the government condition referring to \texttt{VP++supine} must mention \textit{ha}:

\begin{equation}
(46) \text{V: ha governs } \texttt{VP++supine}
\end{equation}

In other words, whenever \texttt{VP++supine} must be governed, it must be governed by \textit{ha}. (46) consequently excludes \texttt{V++supine} as head of the governed \texttt{VP} in (44). The only value of TMA consistent with (45) is thus \texttt{<+participle>}

Now, how can we change the conditions in (45) so that they sanction agreeing VPs? In particular, we want to change them in such a way that sentences like those in (47), where agreement involves infinitive, imperative, present, past, and supine, are accepted, but sentences like those in (48), where agreement involves past participle and present participle, are not.

\begin{enumerate}
\item[(47)] a. Han ska gå och köpa öl
   \begin{quote}
   'He will go and buy beer.'
   \end{quote}
   b. Gå och köp öl!
   \begin{quote}
   'Go and buy beer!'
   \end{quote}
   c. Han går och köper öl
   \begin{quote}
   'He goes and buys beer.'
   \end{quote}
   d. Han gick och köpte öl
   \begin{quote}
   'He went and bought beer.'
   \end{quote}
   e. Han har gått och köpt öl
   \begin{quote}
   'He has gone and bought beer.'
   \end{quote}
\end{enumerate}

\begin{enumerate}
\item[(48)] a. *Han är gången och avsvimmad
   \begin{quote}
   'He is gone and fainted.'
   \end{quote}
   b. *Han blev liggande och gnyende
   \begin{quote}
   'He remained lying and whining.'
   \end{quote}
\end{enumerate}

(47a) and (47b) have the structure shown in (49), and (47e) has the structure shown in (50).
Suppose we substitute (51a) and (51b) for (45c) and (45d), respectively.

51a. `<supine>` projects to S in its CFD
51b. `<supine>` projects to VP in its CFD

In both (49) and (50), S is the bounding node for the CFD of VI. Thus, if we could say that the `<supine>` on VI projects to S in (49), condition (51a) would be satisfied, and (47a) and (47b) would be accepted. Likewise, if we could say that the `<supine>` on VI projects to VP2 in (50), every `<supine>` except the one on VP2 would project, and thus would not need to be governed (recall that a constituent must either project or be governed). Thus, for VP1 `<supine>`, it would be the case that VP is governed by V2, while `<supine>` projects to VP2 where it is governed by `ha` and thus satisfies both (46) and (51b). (47e) would then be accepted.
The following convention allows us to say these things:

C2. If \([X Y \langle F\rangle]\) is a local tree, 'X governs Y' is a government condition, and \(Y\langle F\rangle\) is a subcategory of Y (or extension of Y, in the sense of Gazdar et al., 1985: 26–27), then both \([X Y \langle F\rangle]\) and simple \([X Y]\) are accepted by the government condition.

When simple \([X Y]\) is accepted, \(\langle F\rangle\) must also be sanctioned in some other way, i.e. it must project in accordance with the convention C1. However, this further projection must of course also be sanctioned. If \(\langle F\rangle\) is constrained to project to VP in its MPD, then it cannot project any further (a specified domain indicates the maximal domain in which a relation holds). Thus, \(\langle F\rangle\) can only be interpreted as ungoverned in its MPD if there are conditions like (51a) and (51b) that sanction its further projection.

Consequently, I would argue that what makes agreeing VPs acceptable in Swedish is a more inclusive domain specification for the projection conditions of the Swedish TMA categories. This is how I want to make precise the intuition expressed in Section 3 that agreeing VPs exemplify a particular mode of percolation which, however, most resembles ordinary projection.

7. Verb–Verb Agreement: An Analysis

In Section 1.1., I presented four verb–verb agreement constructions: \(V \text{ och } VP\), as in (2a); \(ha \text{ NP } VP\), as in (2b); double supine, as in (2c); and double imperative, as in (2d). I have already shown, in Section 2, that the agreeing constituent is a VP in the first construction. Using the same test, i.e. the occurrence of sentence adverbials, we can show that the agreeing constituent is VP in the second construction, but S in the double supine and double imperative constructions:

\(\text{(52) a. *Han har bilen inte står i garaget} \)  
  'He has the car not stands in the garage.'

\(\text{b. *Han har bilen står inte i garaget} \)  
  'He has the car stands not in the garage.'

\(\text{c. Han hade klarat av å inte sagt något}\)  
  'He had managed to not said anything.'

Lit.  'He managed not to say anything.'

\(à\) is the so-called infinitive marker in spoken Swedish corresponding to \(aff\) in written Swedish. Since double supines and double imperatives are stigmatized in writing, the use of \(aff\) in them results in a stylistic clash.
d. Börja å verkligen skriv något!
Lit. 'Start to really write-IMP something!'

To account for these constructions, we must first formulate more specific projection conditions for the various TMA categories of Swedish:

(53) a. <<tense>> projects to S<<finite>> in its CFD
b. <<imperative>> projects to root S<<finite>> in its CFD
c. <<imperative>> projects to S<<finite>> in its CFD
d. <<supine>> projects to VP or S in its CFD
e. <<participle>> projects to VP in its CFD

The only unexpected thing in these conditions is the presence of S in (53d). Letting <<supine>> optionally project to S accounts for 'ha-deletion' cases like the following (from Hedlund, 1987):

(54) a. Jag kunde lika gärna gjort det själv
Lit. 'I could as well done it myself.'
   'I could just as well have done it myself.'
b. Han anser sig bli vit illa behandlad
Lit. 'He considers himself been badly treated.'
   'He considers himself to have been badly treated.'
c. De verkar inte tagit ställning i den frågan
Lit. 'They seem not taken a-stand on this issue.'
   'They do not seem to have taken a stand on this issue.'
d. Han tyckte att han varit snäll
Lit. 'He thought that he been nice.'
e. Han såg att de hissat alla seglen
Lit. 'He saw that they hoisted all the-sails.'

Note that double supines cannot be reduced to 'ha-deletion', as the contrast between (2c) and (3c), and between (52c) and (55), clearly demonstrates.

(55) *Han klarade av å inte sagt något
   'He managed to not said anything.'

Note also that the conditions in (53) define co-occurrence restrictions on TMA features and S<<finite>>/S<<finite>>/VP. <TMA> and X co-occur only if <TMA> projects to X (if <TMA> projects to S, it also projects to VP, of course).

Secondly, we must state relevant government conditions that interact with the projection conditions in the right way. For agreeing och VP, I have already
stated the condition (44). To account for the presence of the conjunction, and to exclude participles from such VPs, I propose to replace (44) with the more specific condition (56).

(56) \( \text{V governs VP} \langle \text{CONJ och}, \text{-participle} \rangle \)

In accordance with convention C2, \(<\text{tense}>\), \(<\text{imperative}>\), \(<\text{-imperative}>\), and \(<\text{supine}>\) on the agreeing VP may be unguarded and can therefore project further up the tree. Note that the restriction to \(<\text{-participle}>\) VPs makes it unnecessary to use a more restricted domain, i.e. MPD, for the projection of \(<\text{-participle}>\).

For the \(<\text{ha}>\text{NP}\text{ VP}\) construction, we need the following condition:

(57) \( \text{V}: \text{ha}^{-}\text{governs} \text{VP}<\text{-participle}> \)

(where the \(-\) indicates that this is not the same \(<\text{ha}>\) as in (46)).

This construction is, as was noted in Section 1, restricted to a few Swedish dialects. Thus, a grammar may include either (56) alone or both (56) and (57). One might wonder why this construction is so restricted and why \(<\text{ha}>\) alone is construed with a bare agreeing VP. Part of the answer might lie in the fact that the same verb can be construed with agreeing \(\text{VP}<\text{och}>\),\(^{16}\) which, however, has a different meaning from the bare agreeing VP:

58) Han har den kniven och skär bröd med
     He has that knife and slices bread with
     'He uses that knife to slice bread with.'

The agreeing constituent in (58) is predicated of both the subject and the object, and has the meaning of Goal, while the agreeing constituent in (2b) is predicated only of the object, and has the meaning of location. A bare agreeing VP can then be interpreted as a possible choice, only if a verb has already 'used up' agreeing \(\text{VP}<\text{och}>\).

As for double supine and double imperative constructions, we just need the following government condition:

(59) \( \text{V governs S}<\text{finite}> \)

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\(^{16}\) Or possibly \(\text{S}<\text{och}>\).
Convention C2 allows «imperative», «-imperative», and «supine» (the TMA values that can co-occur with S<-finite>) to be ungoverned, but nothing allows these features to project, since the S<-finite> node is a bounding node for the CFD of these features. However, we saw earlier that EFD is an available domain in Swedish, and the first S<-finite> above a <TMA> is not a bounding node for the EFD of that <TMA>. Thus, if we replace CFD in (53a)-(53d) with EFD, double supines at least become possible. Note that we do not get double pasts or double presents, since the first S<-finite> above a <TMA> is a bounding node for the EFD of that <TMA>.

What about imperatives then? Since «imperative» only projects to root S<-finite>, it cannot co-occur with an embedded S<-finite>. However, we can describe the distribution of imperatives in another way. Suppose we replace 'root S<-finite>' in (53b) with just 'S<-finite>', and instead add the condition that «imperative» must not be governed. That would achieve the same effect as the original (53b). With CFD replaced by EFD, double Imperatives become acceptable, since «imperative» is never governed if it projects to the root S in its EFD.

We thus arrive at the following projection conditions ((53b) and (53c) can be collapsed, once the reference to root S is removed):

(60) a. +tense> projects to S<-finite> in its EFD
   b. +supine> projects to S<-finite> in its EFD
   c. +supine> projects to VP or S in its EFD
   d. +participle> projects to VP in its EFD

How, then, do we account for the contrast between Swedish A, which allows neither double supines nor double imperatives, Swedish B, which allows double supines but not double imperatives, and Swedish C and D, which allow both double supines and double imperatives? Different versions of (59) will accomplish that. If we just have (59) then V may be construed with «imperative», «imperative>, and +supine>. «imperative» must not be governed, but the other two may be. Thus infinitives may project or be governed, and the same goes for supines, but imperatives can only project. Thus we get double infinitives, double supines, and double imperatives, as well as governed infinitives and supines. There is no real difference between the lower S of a double infinitive and a governed infinitive, and there are no verbs that take double infinitives but not governed infinitives, or vice versa. There are, however, as we have seen, verbs or verb forms which allow double supines but not governed supines. I suggest that that has to do with predication. When V governs S+supine>, V is also predicated of S+supine>. However when V governs S but not +supine>, V is just predicated of S. Thus verbs which do not allow 'backwards-looking' complements would not allow governed supines, but they would allow double supines. In the case of infinitives,
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<imperative> does not contribute anything to the meaning of S, so there is really no difference between S alone and S<imperative>.

If we have (61) instead of (59), then V cannot be construed with <+imperative> and we do not get double imperatives. But we do get double supines and governed supines.

(61) V governs S<finite; -imperative>

If we have (62) instead of (59), then neither double imperatives nor double supines nor governed supines are allowed.

(62) V governs S<finite; -supine; -imperative>

Thus Swedish A has (62), Swedish B has (61) and Swedish C and D have (59). But Swedish D alone has (57).

References


Östergren, O. 1901: 'Är sammanfallet af 'och' och 'att' att hänföra till fornsvensk tid?' *Språk och Stil* 1: 82-108.


