Deriving OV Order in Finnish

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Abstract

It is claimed that head-final order is derived by movement of the complement of a head H to the Spec of H in a right-branching structure. The movement is triggered by selection, expressed syntactically as feature-movement from the selectee to the selector, pied-piping the selectee head or pied-piping nothing in the case of head-initial phrases, pied-piping the entire phrase hosting the selectee feature in the case of head-final phrases. In mixed order structures a head-final phrase may be embedded as a complement of a head-initial phrase, but not vice versa, universally. This generalization is explained by postulating that selection requires adjacency between selector and selectee, either the relevant features or the heads hosting these features. The theory is exemplified mainly by facts from Finnish, a mixed order language. The special condition on OV order in Finnish, that the sentence must have sentence-initial focus, is accounted for by postulating a focus head in IP, obligatory except when the sentence has initial focus, which takes VP as complement and (as a language particular property) attracts the verb, creating a head-initial phrase, blocking the derivation of higher head-final phrases.

1. Introduction

Finnish is standardly classified as an SVO language, based on the fact that SVO is the unmarked order in declarative sentences. Yet SOV order occurs as an optional variant in certain contexts. This word order variation is interesting for several reasons. To begin with, the conditions on SOV order are intriguing: SOV order occurs typically when the sentence has initial focus, as in a wh-question or a declarative sentence with a sentence-initial contrastively focused constituent.
The preverbal object cannot itself "convey the main news of the sentence", in the words of Vilku (1989). Another interesting fact about the mix of VO and OV which Finnish exhibits is the following: A verb, auxiliary or main, may precede or follow its complement whether it is a nonfinite clause, a DP, a PP, or a VP. However, if an auxiliary verb selects a VP headed by a verb V which itself takes a complement, call it O, then the selected VP can precede the auxiliary only if O precedes V. In other words, the orders Aux-V-O, Aux-O-V, O-V-Aux are permitted, but the order V-O-Aux is excluded. The same phenomenon has been observed in other mixed order languages; see Hróardadóttir (1999, this volume) on Old Icelandic. This is a special case of a more general pattern: In general, a language which is head-initial in VP is head-initial all the way up to CP, while a language which is head-final in VP need not be head-final all the way up. As will be shown, this is supported by observations concerning word order universals among the languages of the world, based on Dryer (1992). Cf. also Sigurðsson's (1988) suggestion that change of word order type from head-final to head-initial is always top-down: first IP-C changes to C-IP, then VP-I to I-VP, then OV to VO. The generalization which captures these facts can be expressed as follows:

(1) If a phrase α is head-initial, then the phrase β immediately dominating α is head initial. If α is head-final, β can be head-final or head-initial.

In this paper I will present the pertinent facts concerning the Finnish SOV construction, and propose a formal explanation of them. This explanation is based on a particular explanation of generalization (1), which in turn is based on a theory of OV order suggested in Kayne (1994) and elaborated in Julien (2000).

2. Properties of the Finnish OV construction

The unmarked word order in declarative finite sentences in Finnish is SVO, as in (2).

(2) a. Jussi kirjoitti romaanin. Jussi wrote (a) novel
b. *Jussi romaanin kirjoitti. Jussi novel wrote

SOV order occurs quite frequently, though, as a marked alternative. The condition can be formulated as follows; see Vilku (1989: 131).

(3) OV order in finite sentences is possible if and only if the O and V are embedded in a sentence headed by a focus-marked C.

So the word order in (2b) is, in fact, well formed under one condition, that is if the subject is (contrastive) focus. The analysis of (4a) is shown in (4a'): the focused subject is in the Spec of a C with a focus feature. (4b) is a question marked by a question particle on the focused, initial constituent, which in this case is the subject. (4c) is a wh-question, and (4d) has a focused, initial verb, with a focus particle attached to it. The analyses are given in (4b', c', d'), respectively.

(4) a. JUSSI romaanin kirjoitti. Jussi novel wrote
   'It was Jussi who wrote a novel.'

b. Jussiko romaanin kirjoitti?
   Jussi.Q novel wrote
   'Was it Jussi who wrote a novel?'

c. Milloin Jussi romaanin kirjoitti?
   when Jussi novel wrote
   'When did Jussi write a novel?'

d. Onpas Jussi romaanin kirjoittanut.
   has.POC Jussi novel written
   'Jussi HAS written a novel.'

(4') a'. [CP JUSSI [C [C [IP t ...]]]]
[POC]

b'. [CP Jussi [C [C [IP -ko] [[IP t ...]]]]
[Q]

c'. [CP Milloin [C [C [IP ...]]]]
[Q]

d'. [CP [C [C on [C [IP -pas] [[IP ...t ...]]]]]
[POC]

Taking Q to be a kind of focus feature, the generalization is that the sentence in each case has a focus feature in C which attracts a category to SpecCP (if the category is a phrase) or to C (if the category is a head). The analysis (4c') is uncontroversial; Finnish has a 'standard' form of wh-movement, with obligatory movement of one and only one wh-phrase to SpecCP. The analyses (4b', d'), too, are relatively uncontroversial: The question or focus particle attaches to the first constituent of the sentence, with the result that that constituent is focused, except in unmarked yes/no-questions, where the finite verb is moved to initial position to serve as host of the question particle. Compare (4b) with (5a-c), where (5c) shows that the question particle must attach to the first constituent.
(5) a. Romaaninko Jussi kirjoitti?
      novel.Q Jussi wrote
      "Was it a novel that Jussi wrote?"

b. Kirjoittiko Jussi romaanin?
      wrote.Q Jussi novel
      "Did Jussi write a novel?"

c. *Jussi kirjoittiko romaanin?
      Jussi wrote.Q novel
      This is accounted for if the question or focus particle is a realization of an
      affixal feature in C, attracting a focusable category to SpecCP (if it is a phrase)
      or C (if it is a head), with attraction of the closest head, namely the finite head
      (verb, auxiliary, or negation) as a last resort.² See Holmberg et al. (1993) on the
      syntax of IP in Finnish.

The analysis (4a') is less obviously correct. How can we tell that the initial
contrastively focused subject is in SpecCP rather than in the usual subject
position, say SpecIP? There are, in fact, strong indications that the subject has
moved to SpecCP in this case:

As discussed by Holmberg (1997), an epistemic adverb cannot precede a
phrase in SpecCP, for instance a fronted wh-phrase or a fronted, contrastively
focused object (in Finnish and a number of other languages).

(6) a. (*Oikeastaan) milloin sinä (oikeastaan) tulet takaisin?
      actually when you actually come back
      'When are you actually coming back?'

b. (*Ilmeisesti) tänään romaanin (ilmeisesti) Jussi (ilmeisesti)
      apparently this novel apparently Jussi apparently
      kirjoitti (ilmeisesti) jo muorena.
      wrote apparently already as young
      'This novel Jussi apparently wrote already as a young man.'

As shown by (6b), the epistemic adverb can precede the subject. As shown by
(7), an epistemic adverb cannot precede a contrastively focused subject, though,
most clearly so when the sentence exhibits OV order.

(7) (*Ilmeisesti) JUSSI (ilmeisesti) tänään romaanin (ilmeisesti) on
      apparently Jussi apparently this novel apparently has
      (ilmeisesti) kirjoittanut.
      apparently written
      This follows if the contrastively focused initial subject is in SpecCP. In addition,
      note that we can insert a resumptive pronoun between the contrastively focused
      initial subject and the finite verb.³

(8) JUSSI se tänään romaanin on kirjoittanut.
    Jussi he/it this novel has written
    The pronoun is presumably in SpecIP; see Holmberg & Nikanne (to appear).

I conclude that the cases of OV order in (4) all have a phrase or word
moved to the checking domain of C. See also Vilkuna (1989, 1995) for a
discussion of initial contrastive focus in Finnish.

The examples under (9) show that the focus licensing OV order has to be
sentence-initial. (9a) shows that contrastive focus can be indicated by intonation
alone, without (overt) movement.⁴ (9b) shows that this does not license OV order
between the direct object and the verb. (9c), finally, shows that movement of the
focused indirect object to initial position (SpecCP) does license OV order.

(9) a. Jussi sai sen kellon ANNALTA.
      Jussi got that watch from Anna.
      'It was from Anna that Jussi got that watch.'

b. *Jussi sen kellon sai ANNALTA.
      Jussi that watch got from Anna.

c. ANNALTA Jussi sen kellon sai.
      from Anna Jussi that watch got
      'It was from Anna Jussi got that watch.'

The examples under (10) show that the focused category and the verb undergoing
the VO-OV switch need not be in the same simplex clause. In (10a) the wh-
phrase fronted from a position in the main clause licenses OV in the embedded
clause, shown by the fact that the same structure without the wh-phrase is ill
formed with OV order.

(10) a. Mistä sinä kuultit [että Jussi romaanin kirjoittaa]?
      from where you heard that Jussi novel is writing

b. *Mistä kuullit [että Jussi romaanin kirjoittaa].
      I heard that Jussi novel is writing

As shown in (11) the complement in the OV construction can scramble. In this
example the object precedes the main verb, but the auxiliary olen (here in the
conditional form olin) and the modal verb voi (here in the participial form
voinut) each precede their complement. In this case the object can occur in any
of the indicated positions, with no discernible effect on the interpretation.
in the VP is obligatory in this case, that is when the VP is itself embedded as a preverbal complement. This is an instantiation of generalization (1), repeated here:

(1) If a phrase α is head-initial, then the phrase β immediately dominating α is head-initial. If α is head-final, β can be head-final or head-initial.

Furthermore, when there are two or more verbs taking verbal complements, each verbal complement may precede its selecting head. (15a) is consistently VO, while (15b) is consistently OV, with a sequence of sentence-final verbs mirroring the order in the VO sentence.

(15) a. Milloin Jussi olisi ehtinyt kirjoittaa romaanin?
    "When would Jussi have had time to write a novel?"

b. Milloin Jussi romaanin kirjoittaa ehtinyt olisi?
    "When Jussi would have written a novel" (propositionality)

c. Milloin Jussi romaanin kirjoittaa olisi ehtinyt?
    "When Jussi a novel write would have had time"

As shown in (15c) the order of the sentence final verb cluster need not be strictly OV in the sense that the highest verb is furthest to the right. The contrast between (15b–c) looks, on the face of it, like the contrast between German and Dutch: In (standard) German the sentence final verb cluster has OV order (except for the IPP construction). In (standard) Dutch, although nonverbal objects all precede their head, the order of the verbs is “VO”, i.e. the higher the verb, the further to the left. In most theories of German and Dutch this variation is accounted for under the heading of Verb Raising, an operation (or series of operations) which has the effect of creating a sentence final verbal cluster which cannot be broken up by intervening constituents; in this sense the verb cluster is wordlike. In Finnish, the sentence final verb cluster in (15b) is similar to its German counterpart in that it cannot be broken up by intervening material. As I will discuss in more detail below the claim is that it is derived essentially by the same process that derives the German verb cluster, that is successive movement of complement phrases leftwards: simplifying somewhat, first the infinitival clause moves to the Spec of the governing head ehtinyt ‘had time’, then the resulting constituent moves to the Spec of the auxiliary. The final verb sequence in (15c), on the other hand, does not form an opaque verb cluster. Consider the fact that an adverbial may intervene between the two final verbs in (15c), as shown in (16a), but not between the two final verbs in (15b), as shown in (16b).
3. Finnish as an OV language

3.1 The head-chain hypothesis of OV order

The properties of the Finnish OV construction, in particular its discourse-semantic properties, are discussed in Vilkuna (1989, 1995), who observes the connection between sentence initial focus and OV order. She does not actually propose any explanation of this connection, though. A kind of formal explanation is suggested in Holmberg (1997): The idea is that OV order is the result when V is not moved to I. Movement of V to I is otherwise obligatory, at least in finite clauses, but is optional when C contains a focus feature, because such a C somehow licenses an empty I. Let us refine this hypothesis, which I will refer to as the head-chain hypothesis, to see how far it will take us.

First, the hypothesis that OV order is the result of not moving the verb presupposes that Finnish is underlyingly an OV language, either in the sense that OV is a base-generated order, or in the sense that movement of O to a position preceding V in VP is an obligatory rule. Second, assume that the feature in I which triggers V-movement is a focusness feature (cf. Holmberg & Platzack 1995). Assume the focusness feature needs to be checked either by movement of the properly inflected verb to I, or by movement of the focus feature to C, which is possible if C contains a focus feature. That V-movement is associated with focusness is a familiar observation from the study of V2 languages. That there is a close connection between focus and finiteness is less often noted but probably true nonetheless; for example, there are languages where a focus particle serves as the only marker of finiteness (see Testelev 1997). So the present hypothesis has a certain initial plausibility.

If V-movement in Finnish is triggered by the need to check a focusness feature in I, the prediction is that we should find OV order in nonfinite clauses, independent of focus. This is partly true: OV order occurs not infrequently in infinitival clauses, even in the absence of any sentence-initial focus, as in (20a), in contrast with the finite clause (20b).

\[\begin{align*}
(20) & \quad \text{a. } \textit{Minä en osaa vielä [sitten kysymyksen vastata].} \\
& \quad \text{I can't yet that question answer} \\
& \quad \text{'I can't answer that question, yet.'} \\
& \quad \text{b. } \textit{Minä jo sitten kysymyksen vastasin.} \\
& \quad \text{I already that question answered}
\end{align*}\]

Matters are complicated by the fact that VO order is always an option, and often preferred or even obligatory in infinitival clauses, unless the matrix clause has initial focus. We would have to postulate other, optional, triggers for verb movement in addition to focusness.

However, there are other, stronger reasons for rejecting the head-chain hypothesis. To begin with, clearly OV order is not only the result of not moving the verb, since O moves as well in various constructions; cf. the example of scrambling shown in (12b), repeated here:

\[\begin{align*}
(12) & \quad \textit{Milloin olet Jussin kuullut ranskaa puhevan?} \\
& \quad \text{when you have Jussi GEN heard French speak}
\end{align*}\]
Here Jasmin is the subject of a small clause (a nominal participial small clause, hence the genitive case; see Koskinen 1998) which is selected by the verb kaullut 'heard'. Thus, excluding the possibility that the verb kaullut is lowered into the small clause, there is no way that the order in (12b) can be derived without movement of Jasmin leftwards, or (less plausibly) movement of the small clause predicate rightwards. This movement is conditional on the sentence initial focus.

Second, the relation between the triggering C and the verb's potential landing site is non-local.

(21) a. Miksi sinä pelkätät [että se palamaan syttyy]? (Vilkuna 1989)
   why you fear that it burning starts
   'Why are you afraid that it will catch fire?'
   b. *Minä pelkätän [että se palamaan syttyy].
   I fear that it burning starts

Here the licensing focus feature is in the matrix clause C, but the finite I licensed by the focus feature is in the embedded clause. (21b) shows that the order in the embedded clause is, indeed, conditional on the focus feature in the matrix clause. Under the head-chain hypothesis, and given standard assumptions about head-head relations, we would have to assume some kind of head-chain relation, linking the initial focus-marked C with the embedded finite I, via a chain of intervening heads. But this analysis is compromised by the fact that the structural restrictions on the intervening heads are not the ones we expect from a head-chain. Consider (22), which shows that the finite I licensed by the matrix focused C can be embedded in a relative clause. In (22a) the order in the relative clause is VO. (22b), with OV order, is clearly not well formed. (22c) is well formed (although somewhat stilted), due to the focused matrix clause subject, which, as discussed, is in SpecCP, checking a focus feature in C.

(22) a. Olen jo nänyt sen elokuvan josta ne puhui
   I have already seen the movie about which they talked
   on news

b. *Olen jo nänyt sen elokuvan josta ne uutisissa
   I have already seen the movie about which they on news
talked

(23) Miksi Jussi ROMAANIN kirjoitti? Miksei VÄITTÖSKIRJAA?
   why Jussi novel wrote why not dissertation
   'Why did Jussi write a NOVEL? Why not a dissertation?'

In some cases it is almost sufficient that a verb complement is old information, for OV order to be acceptable. In (24) and (25) the embedded finite clauses are factive, conveying just old information. OV order may be preferred to VO order in this case in the absence of initial focus, but not inconceivable.

(24) *Se pelotti minua [että se niin helposti palamaan syttyy].
   it frightened me that it so easily burning started
   'It frightened me that it caught fire so easily.'
(25) "[Se etta talo palaaan sytyi] ei merkitse etai siinii voisi it that house burning started not means that not in it you can entaa asua. anymore live.

"The fact that the house caught fire doesn’t mean that you can’t live in it anymore."

4. The universal validity of Generalization 1

One of the goals of the present paper is to propose an explanation of Generalization 1, repeated here:

(1) If a phrase \( \alpha \) is head-initial, then the phrase \( \beta \) immediately dominating \( \alpha \) is head-initial. If \( \alpha \) is head-final, \( \beta \) can be head-final or head-initial.

The idea is that once we have an account of this generalization, the Finnish word order facts discussed above will fall out, given some additional parameter distinguishing between Finnish and other languages which are also mixed VO/OV but do not exhibit exactly the same pattern as Finnish, with OV dependent on a focus-marked C. Besides, whatever we think about Finnish, a theory of word order which has no explanation of Generalization 1 cannot be the right theory.

How general is Generalization 1? We can get an idea by looking at the results of a large-scale cross-linguistic survey of head-complement order, such as Dryer (1992), the largest and most authoritative one to date. In this work Dryer tests a number of the word order universals proposed by Greenberg (1966) (and other generalizations in the same vein) against a much larger sample of languages than Greenberg’s, carefully sampled so as to avoid genetic and areal biases. Dryer’s total sample was 625 languages, or more correctly “genera”, where a genus is a group of closely related languages roughly of the order of the Germanic languages. What Dryer investigated was the correlation between V and O order and a the order of a number of other pairs of categories that have been claimed to be analogues of V and O, such as C and IP, Aux and VP, Article and NP, etc. One of the pairs he looked at is \( \text{Want} \) (a volition verb) and the main verb, the head of the complement of \( \text{Want} \). (I use capitalized ‘Want’ to refer to a lexical item expressing volition.) On the basis of Greenberg’s Universal 15 the expectation is that VO languages should strongly favour the order \( \text{Want} \ V \), while OV languages should favour \( \text{V Want} \). Dryer’s (1992) results are shown in (26). The table can be read as follows: Dryer found data concerning \( \text{Want} \) from 85 genera in his sample. Out of 46 VO languages/genera 42 had the expected order \( \text{Want} \ V \), and only 4 the order \( V \text{ Want} \). Out of 39 OV languages/genera 29 had the expected order \( \text{V Want} \), while 10 had the order \( \text{Want} \ V \).

(26)

\[
\begin{align*}
\text{Want} \ V & \ & \text{42 genera} \\
\text{Want} \ V & \ & \text{10 genera} \\
\text{V Want} & \ & \text{4 genera} \\
\text{V Want} & \ & \text{29 genera}
\end{align*}
\]

Dryer (1992) concludes that \( \text{Want} \) and \( V \) pattern like \( V \) and \( O \), as Greenberg (1966) had claimed. Consider Generalization 1: If it is correct, we should find the orders \( \text{Want}-V-O \), \( \text{Want}-O-V \), \( O-V-\text{Want} \), but not \( V-O-\text{Want} \). This is clearly the tendency in the table under (26). There are four potential counterexamples, though, the four \( V \text{ want} \) & \( VO \) languages. Do they, in fact, exhibit the order \( V-O-\text{Want} \)? Matthew Dryer has informed me that he now has seven languages/genera in his database exhibiting the pattern \( \text{V Want} \) & \( VO \). I have so far been able to check his sources for four of those languages (thanks to Matthew Dryer’s information). None of them contained any example of the word order \( V-O-\text{Want} \). Two of them (Luvale and Pero) did not, in fact, contain any examples of postverbal \( \text{Want} \). Two of them did: Yindjabarndi and Guajajara. However, in these examples the main verb was intransitive. Both of these languages allow \( VO \) as well as \( OV \) order. We are therefore not surprised to find that they allow the main verb, presumably heading a VP, preceding \( \text{Want} \). What we expect, given Generalization 1, is that when the main verb precedes \( \text{Want} \), the object, if there is one, will precede the main verb (\( O-V-\text{Want} \)) or possibly, will be found to the right of \( \text{Want} \) (\( V-\text{Want}-O \)), depending on other properties of the construction.

In fact, mixed order languages like Finnish and Old Icelandic, if they had been in Dryer’s (1992) sample, and if he had had access to rich enough data, would have appeared in the category \( V \text{ Want} \) & \( VO \), since they are generally classified as \( VO \), but do allow the main verb to precede \( \text{Want} \) along with other head-final constructions. However, they do not allow \( V-O-\text{Want} \).

A word order generalization which apparently is universal is that no \( VO \) languages have sentence-final complementizers (see Dryer 1992). This tallies well with Generalization 1: A VP with the order \( V-O \) cannot be embedded in a VP-I but only in an I-VP structure, and an I-VP structure can only be embedded in a C-IP structure.

Internal to Finnish we can test the validity of Generalization (1) in nominal as well as verbal projections. Finnish has the order N-Gen as well as Gen-N.

(27) a. *kuva Marjasta* picture of Marja
b. *Marja kaua
   Marja’s picture

Finnish also has postpositions as well as prepositions. There are even some adpositions which can be either.

(28) a. ilman kauaa
    without picture
b. kauaa ilman
    picture without

If an NP containing a Gen is embedded in such a PP, the permitted orders are P-N-Gen, P-Gen-N, Gen-N-P, but not N-Gen-P, in accordance with Generalization 1.

(29) a. ilman [kauaa Marja]
    without picture of Marja
b. ilman [Marja kauaa]
    without Marja’s picture
b. [Marja kauaa] ilman
    Marja’s picture without
d. *[kauaa Marja] ilman
    picture of Marja without

We conclude that Generalization 1 is valid over a wide spectrum of constructions across a wide spectrum of languages.

5. How to derive OV order

The theory is based on a set of more or less controversial assumptions. First, I assume that inflected forms are derived by movement in the syntax, as used to be widely assumed within GB theory; see for example Baker (1988). More recently this theory has fallen in disrepute, following Chomsky’s (1995) revival of the lexicalist theory of inflection. However, forthcoming work by Marit Julien shows that the incorporation theory of inflection is well motivated both empirically and theoretically.12 Another assumption is that all phrase structure is right-branching (following Kayne 1994; Haider 1992, 1997, this volume). I furthermore assume that the lower section of a transitive VP has the order OV universally, where I do not take a stand on whether the OV order is base-generated or derived by an obligatory O-movement operation.

Second, following a suggestion by Kayne (1994), developed by Julien (2000), I assume that head-final structures are derived by movement of the complement of a head H to SpecHP. The derivation of a structure with three heads is shown schematically in (30):

(30) a. Y [XP O X]
    b. [XP [O X] [Y t]]
    c. W [XP [O X] [Y t]]
    d. [XP [O X] [Y t] [W t]]

In (30a) Y is merged with XP (where the complement O already precedes X). In (30b) the XP [OX] has moved to the Spec of YP. In (30c) W is merged with YP, and in (30d) YP has moved to the Spec of WP. Successive application of complement movement in this fashion yields a structure which is effectively left-branching except for the trace of movement left in each complement position. The theoretical status of the trace is unclear. It is presumably not a site of reconstruction for example, so it may well be that the movement depicted in (30) leaves no trace in the sense of a phonetically empty copy or any kind of empty category — in which case the movement derives a truly left-branching structure. However, the way this theory is set up, it is crucial that the structure is in fact derived by movement.

Third, the trigger of complement movement is c-selection (Pesetsky 1982) or strict subcategorization (Chomsky 1965). Following Svenonius (1994) I assume that this relation always involves movement, as follows:

Every head selecting a complement has a feature specifying some syntactic feature(s) of its complement, essentially Chomsky’s (1965) subcategorization feature, here called a selection feature. The selection feature is an uninterpretable feature in the sense of Chomsky (1995: Ch. 4), and therefore has to be checked and erased in the course of the syntactic derivation. It does so by attracting the relevant feature(s) of the complement. That is to say, just Merge of a head with its complement is not sufficient to check the selection feature; the feature selected has to move to the checking domain of the selection feature. This movement can take three forms, listed under (31):

(31) a. Pure f(eature)-movement (i.e. overt movement; see Chomsky 1995: Ch. 4),
    b. head movement, i.e. f-movement pied-piping the minimal word
       containing the relevant feature,
    c. XP-movement, i.e. f-movement pied-piping the minimal maximal
       category containing the relevant feature.
Svenonius (1994) recognizes (31a) and (b) but not (c), but then Svenonius does not take OV languages into account. Following an idea suggested by Kayne (1994) I will assume that so-called VO languages are languages which prefer (a) and (b), while so-called OV languages are languages which prefer (c).

(32) is an example of the strategy (31a):

(32) [kC that] {} John has+1 ...

There is a selection feature in C attracting a feature of I. We may represent the feature as [k]. There appears to be no pied-piping/overlap movement involved in this case, so [k] appears to be checked by pure feature movement.\(^{15}\)

The strategy (31b) may be exemplified by (33a), and the strategy (31c) by (33b).

(33) a. Milloin Jussi olisi kirjoittanut romaanin?
   when Jussi would-have written a novel

b. Milloin Jussi olisi romaanin kirjoittanut?
   when Jussi would-have a novel written

Consider the derivations in detail. In both constructions the first step is forming the VP by merging the verb and its object, followed by movement of the object to a specifier position, let us say SpecVP; I omit taking the subject into account at this point, as well as any functional heads below the participle head labelled Proc.

The next step is that the participle head -nut is merged with the VP (the trace of the object will be represented as \(t_V\), the trace of the verb as \(t_V\), etc.).

(34) [\[\text{P} \text{nut} [\text{VP} \text{romaanin kirjoitata} \ t_V]]

This head has a selection feature [\(k\)] attracting the feature [\(V\)] of the head of the VP. Since -nut is an affix, the feature [\(V\)] has to pied-pipe (at least) the whole verb stem. At this point there are two options: (a) pied-pipe the minimal word dominating [\(V\)], and adjoin it to Proc, or (b) pied-pipe the minimal maximal phrase dominating [\(V\)], and place it in SpecProc. The result of applying option (a), the head movement option, is (35).

(35) [\[\text{P} \text{P} \text{kirjoitata-nut} [\text{VP} \text{romaanin} \ t_V \ t_V]]

The result of applying (b), the XP-movement option, is (36):

(36) [\[\text{P} \text{V} \text{romaanin kirjoitata-} \ t_V \ [\text{P} \text{P} \text{nut} \ t_V]]

As a result of the movement the verb stem and the participle affix are morphologically merged into a word. This is uncontroversial in the case of (35). Following Kayne (1994) and Julien (2000) I assume that the verb stem and the affix can be interpreted as a word in (36) as well, even though they do not form a syntactic constituent. The necessary and, by assumption, sufficient condition for the principles of the morphological component (henceforth called Morphological Structure, or MS, as in Halle and Marantz 1993) to interpret the stem and the affix as a word is that they are phonologically adjacent, which they are in (36), being separated only by a trace (which may in fact not be there). Thus (36) as well as (35) satisfies the requirements of both Syntax (feature checking) and Morphology (word formation). See Julien (2000) for plenty of supporting evidence that MS is sensitive strictly to adjacency, not to syntactic constituency.\(^{14}\)

In terms of economy of derivation the head-movement and the XP-movement option can be assumed to be equal. The head-movement option is more economical in the sense that it moves fewer features (cf. Chomsky 1995:Ch.4 for an elaboration of the Last Resort condition in terms of feature movement). On the other hand the XP that is a complement of a head H is structurally closer to H than the head X of XP, so XP-movement is technically shorter than head-movement.

Note that checking the selection feature of the participle head by VP-movement presupposes that the VP have OV format. If it had VO format, the object would block the morphological merger of the verb stem and the participle affix. The head movement strategy, on the other hand, is compatible with either a VO or an OV complement. This is the beginning of an explanation of Generalization (I). The generalization is that structures of the form \[\text{H}_2 \text{[H}_1 \text{X)} \text{H}_2\) where X is overt are not found. When the selecting head H2 is an affix, this structure is ruled out by conditions on word formation: the selector affix and the selectee head have to be phonologically adjacent. What happens when H2 is not an affix? It seems that the adjacency condition between the selector head and the selectee head is a condition even then. Consider for instance the German verb cluster, as in (37):

(37) dass er dieses Buch lesen können muss
    that he this book read can must
    'that he must be able to read this book'

Given that the verb cluster is a result of successive selection-triggered XP-movement, the structure is as in (38):

(38) [\[\text{V} \text{V} \text{dieses Buch lesen} \ t_V \text{ können} \ t_V \text{ muss} \ t_{\text{merk}}]]

As well known, there is a strict adjacency condition holding among the verbs in the verb cluster. No phonologically visible category is allowed to intervene. In this sense the verb cluster is word-like. Yet the constituent parts are not affixes, judging by the fact that they do occur as independent words in other contexts, in
particular, they undergo movement as independent heads under V2.

In the case of Finnish, the effect of the adjacency condition can be seen in (39): In (39b) the object intervenes between the fronted V and the auxiliary.

(39)  a. Milloin Jussi romaanin kirjoittanut olisi?
     when Jussi written would have
     *Milloin Jussi kirjoittanut romaanin olisi?

The examples in (40) and (41) show that while an adjunct may intervene at various places in a multi-verb structure, it may never intervene between two verbs in an OV structure.

(40)  a. Milloin Jussi (sinun mukaan) olisi (sinun
     when Jussi according to.you would have according
     mukaan) kirjoittanut (sinun mukaan) romaanin?
     to.you written according to.you novel

     ‘When would Jussi, according to you, have written a novel?’

b. Milloin Jussi (sinun mukaan) romaanin (sinun
     when Jussi according to.you novel
     mukaan) kirjoittanut (*sinun mukaan) olisi?
     to.you written according to.you would have

(41)  a. Ei Jussi tule (hänkään) hyväksymään (hänkään) sitä
     not Jussi come he.neither accept he.neither that
     ehdotusta.

     proposal
     ‘Jussi will surely not accept that proposal, either.’

b. Ei Jussi (hänkään) sitä ehdotusta (hänkään) hyväksymään
     not Jussi he.neither that proposal he.neither accept
     (*hänkään) tule.

     he.neither come

What this suggests is that Generalization 1 may be a special case of something more general: In a head-final structure the selector and selectee heads must be adjacent, regardless of structure.15

When the selector is an affix, the movement to check the selection feature must be overt. By assumption they have a feature [affix] which is checked by a phonological feature matrix, forcing pied-piping of a head or a phrase. Assume that not only “real affixes”, but various independent words as well have a feature which forces pied-piping of a head or a phrase with the selected feature(s). In terms of Chomsky (1995), the selector feature can be weak or strong, its strength being fixed independently for each head. Now stipulate (42).

(42) The selection feature F of a head α is checked by the selected feature F' of the head β if and only if either F' or β is adjacent to α.

If the selection feature F is weak, it is checked by pure feature movement of F'. F' ends up adjoined to α, satisfying (42). If F is strong, it is checked by overt movement. If it is head-movement, then β will end up adjoined to α, satisfying (42). If it is XP-movement, the head of β must end up adjacent to α, to satisfy (42).

A consequence of this is that while selection by XP-movement at step s in the derivation is compatible with selection by XP-movement or by f-movement or head-movement at step s + 1, selection by f-movement or head-movement at step s blocks selection by XP-movement at step s + 1. To illustrate, consider the derivations of (44a–b), where (44a) is a well-formed alternative to (33a–b) while (44b) is ill-formed, violating (42):

(44)  a. Milloin Jussi romaanin kirjoittanut olisi.
      when Jussi novel written would have

      when Jussi written novel would have

Take (36) and merge the auxiliary stem ol- ‘be’ with it:

(45)  [f [f [vp romaanin kirjoitta- t₃] [t₃ -nut tᵥ₃]]]

The auxiliary has a selection feature checked by a participle feature. There are two options: Pure f-movement or XP-movement. Head movement is ruled out in this case since (a) the participle head cannot move on its own since it is a suffix, and (b) the verb stem and participle suffix cannot move together since they do not form a constituent. Assume first that the selection feature of ol- is checked by pure f-movement. The next step in the derivation is Merge of T, here in the form of the conditional suffix -isi (see Holmberg et al. 1993 on the properties of the Finnish tense and mood system).

(46)  [f [f [f [vp romaanin kirjoitta- t₃] [t₃ -nut tᵥ₃]]]

The T-affix has a selection feature checked by [V]. There is only one option in this case, namely head movement, which yields the word order in (33b). Pure f-movement is not sufficient since T is an affix. XP-movement of AuxP, the result of which would be (47), is ruled out as a violation of the adjacency condition (42).

(47)  [f [f [f [vp romaanin kirjoitta- t₃] [t₃ -nut tᵥ₃]]] [t₄ -isi tᵥ₄]]}
The selector head and the selectee head do not end up adjacent to each other. The result in this case, where neither the selector nor the selectee head are independent words, is virtually a morphemic salad.

Now consider the option when XP-movement is applied to (45). The result is (48), satisfying (42), since the participle head and the selecting auxiliary end up adjacent.

\[
(48) \quad \text{[AuxP \ [prep \ [vp \ \text{o] \ \text{kirjoittaa} \ -t_s]] \ [\text{Fw} - \text{nut} \ t_	ext{VP}]] \ [\text{Aux} \ \text{ol} - t_	ext{prep}]}
\]

The next step is merging T, in the form of -\text{isi}.

\[
(49) \quad \text{[TP -isi \ [AuxP \ [prep \ [vp \ \text{o] \ \text{kirjoittaa} \ -t_s]] \ [\text{Fw} - \text{nut} \ t_	ext{VP}]] \ [\text{Aux} \ \text{ol} - t_	ext{prep}]]}
\]

There are two options for checking the selection feature of T: head-movement of the auxiliary stem, which would give the same word order (though not exactly the same structure) as head movement applied to (46). The other option is XP-movement, the result of which will be (50):

\[
(50) \quad \text{[TP \ [AuxP \ [prep \ [vp \ \text{o] \ \text{kirjoittaa} \ -t_o]] \ [\text{Fw} - \text{nut} \ t_	ext{VP}]] \ [\text{TP -isi} \ \text{[auxP]}]}
\]

The adjacency condition (42) is respected at every step, and the resulting string is (44a).

To derive the ungrammatical (44b) we start from (51a), merge the auxiliary as in (51b), move the participle head with the adjoined verb to SpecAuxP, as in (51c). Then merge T, as in (51d), and finally move the AuxP to SpecTP.

\[
(51) \quad \text{[prep \ [kirjoittaa \ -nud]] \ [vp \ \text{o] \ \text{kirjoittaa} \ -t_s]]}
\]

\[
(51a) \quad \text{[AuxP \ [prep \ [kirjoittaa \ -nud]] \ [vp \ \text{o] \ [\text{Fw} - \text{nut} \ t_	ext{VP}]]]
\]

\[
(51b) \quad \text{[AuxP \ [prep \ [kirjoittaa \ -nud]] \ [vp \ \text{o] \ [\text{Fw} - \text{nut} \ t_	ext{VP}]] \ [\text{Aux} \ \text{ol} - t_	ext{prep}]}
\]

\[
(51c) \quad \text{[TP -isi \ [AuxP \ [prep \ [kirjoittaa \ -nud]] \ [vp \ \text{o] \ [\text{Fw} - \text{nut} \ t_	ext{VP}]] \ [\text{Aux} \ \text{ol} - t_	ext{prep}]]}\]

\[
(51d) \quad \text{[TP \ [AuxP \ [prep \ [kirjoittaa \ -nud]] \ [vp \ \text{o] \ [\text{Fw} - \text{nut} \ t_	ext{VP}]] \ [\text{TP -isi} \ \text{[auxP]}}]
\]

The forbidden step in this derivation is the XP-movement resulting in (51c), forbidden because prior to it, at (51a), a selection feature was checked by head-movement, resulting in a head-initial phrase, and hence a violation of (42). The only way the derivation can proceed to a convergent result after (51a) is by checking selection by head-movement or \text{f-movement}.

6. The initial focus condition

So the derivation of an OV structure presupposes selection by XP-movement all the way. If at any point in the derivation selection is accomplished by pure \text{f-movement} or head movement, selection by XP-movement cannot be applied after that. The explanation I will now propose of the initial focus condition on OV order in Finnish makes use of this generalization. The idea is that any finite clause except those where focus is initial has verb movement at an early stage of the derivation, blocking any later applications of selection by XP-movement.

It is a common observation that the focus in the sense of 'the news' of a finite sentence in the unmarked case is contained in VP, while the old or presupposed information is found outside, preceding VP. A prominent exception is when the focus is sentence-initial, as in wh-questions (in languages with wh-movement) or clefts, or declaratives with a contrastively focused initial constituent. I propose the following formal account: Among the categories provided by UG there is a functional head which I label New, hosting a [focus] feature, projecting NewP and taking VP as its complement. The semantic contribution of New is that of defining VP as the domain of new information. I leave open a number of questions concerning the formal properties of New. The properties which are most directly relevant for Finnish sentential word order are listed under (52):

\[
(52) \quad \text{a. Universally every independent (or root) sentence must contain at least one instance of the feature [focus]; an independent sentence without focus is filtered out at LF as uninterpretable. That is to say, an independent sentence cannot be all presupposition; some part of the sentence must be interpretable as focus/new information.}
\]

\[
(52b) \quad \text{b. The focus features which appear in C, including Q and Contrast, count as instances of the feature [focus]. Therefore a wh-question or a sentence with a fronted contrastively focused constituent need not contain the head New, although they may do so, in which case the sentence has two foci.}
\]

\[
(52c) \quad \text{c. A parametrized property of Finnish is that New always attracts the verb. In present terms, the selection feature of New can only be checked by head movement.}
\]

Property (52c) explains why only sentences with initial focus permit OV order in Finnish. All independent sentences which do not have a focus feature in C have the head New next to VP, attracting V. Thus all such sentences go through a stage like (53) in the derivation:
(53) \([\text{New}_p \ V \ + \text{New} \ [\text{VP} \ \text{Obj} \ t]]\)

As discussed in the previous section, once head movement is applied at any stage in the derivation, this blocks subsequent selection by XP-movement. Consequently OV sentences cannot be derived in Finnish, in the presence of New.

So the reason why (2b), repeated here as (54), is out is that New attracts V, which precludes any subsequent selection by XP-movement. There is no way to derive (54) from (55), provided that the object cannot scramble from its position in VP to a position preceding T (a point which I will return to below).

(54) *Jussi romaani kirjoitti.
Jussi novel wrote

(55) \([\text{TP} \ -i \ [\text{New}_p \ \text{kirjoittaa} + \text{New} \ [\text{VP} \ \text{romaani} \ t]]]\)

The string \(\text{Jussi romaani kirjoitti}\) is, however, well formed if the sentence is analyzed as having a C containing a focus feature attracting the subject, endowed with a feature [contrastive], to SpecCP. In this case there need be no head New in IP attracting V. Consequently nothing prevents checking the selection feature of T by VP-movement. The result is (56a), analyzed as (56b) (still ignoring the IPinternal position(s) of the subject).

(56) a. \(\text{JUSSI romaani kirjoitti.}\)
   Jussi novel wrote
   'It was Jussi who wrote a novel.'

b. \([\text{CP} \ \text{Jussi} \ [\sim C \ [\text{TP} \ [\text{VP} \ \text{romaani} \ \text{kirjoitta-} \ [-i \ t]]]]]\)

This is consistent with the facts discussed in Section 3.2: If the object conveys new information, OV order is out even if the sentence has initial focus. One of the examples was the sentence (57) (= (22Bii)), uttered as an answer to the question ‘What are you going to give the kids for Christmas?’, in which context the sentence is totally inappropriate.

(57) \(\#\text{JUSSLILE minä KIRJAN annan.}\)
   to.Jussi I a.book give

In this context the expected answer has a VP which contains new information. This entails presence of New taking VP as complement. This triggers V-movement to New, and this rules out the possibility of a preverbal object.

The (somewhat marginal) possibility of OV order in factive clauses follows if they do not have New; presumably a defining characteristic of factive clauses. That OV order in those cases is somewhat marginal falls under the more general observation that OV order is never obligatory: even in cases where VP is clearly not new information VO is always an option. This follows if the choice between head-movement, f-movement, or XP-movement to check selection is always optional in Finnish, except where other properties of the derivation disallow one option or the other.

One of the problems posed by the Finnish SOV construction is the apparent nonlocality of the “OV rule”. In Vilkuna’s words, on the face of it “a switch at the end of the sentence has an effect on the first constituent” (Vilkuna 1989:131), the two positions being in principle infinitely far apart. The problem disappears in the present theory as no direct relation is postulated between the initial focus and the OV structure. OV order is made possible by the absence of sentence-final focus, in the form of the category New, which has two effects: (a) in the absence of a functional head triggering early head movement, selection of VP by means of XP-movement is possible, resulting in OV order, and (b) it makes a higher focus mandatory, since the sentence must have a focus somewhere.16

7. Typological predictions

In general, in any language where selection by head movement or pure f-movement applies at stage s in a derivation D, OV order (or more generally, head-final order) cannot be derived in D at any stage subsequent to s. In these terms, what is characteristic of rigid or consistent VO languages is that they have a head merged at an early stage of the derivation which can only select by head-movement or pure f-movement. This is all it takes. Characteristic of a mixed language such as Finnish is that the head specified to select by head movement is an optional one (in this case optional in the sense that the feature it hosts can be realized higher up in the sentence).

The present theory predicts that languages with [IP C] order have [VP I] order in IP (particles or auxiliary verbs encoding tense, mood, aspect etc. occurring to the right of the verb), and that languages with [VP I] order have OV order. Consequently languages with sentence-final complementizers have OV order.17 The converse implication is not predicted: [VP I] does not imply [IP C], and OV does not imply [VP I] or [IP C]. The predictions are by and large correct. As mentioned in Section 4 there are said to be no VO languages with sentence-final complementizers. As also discussed in Section 4 there are very few if any languages with the order V-O-Want, while the other 'mixed order' Want-O-V appeared to be fairly common.18 With regard to other sentential functional categories such as tense and aspect particles and the negation the situation is less clear. For instance, apparently there are languages of the VO type
with sentence-final tense or aspect particles, presumably indicative of the position of I relative to VP, or with a sentence-final negation particle; see Dryer (1992). If these languages actually allow the order VO in construction with a sentence-final tense or aspect particle they are potentially counterexamples to the present theory.

Certain other well known word order correlations, observed by Greenberg (1966) and corroborated in Dryer (1992) also follow from the theory outlined here, at least in part. Consider for example the correlation between postpositions and OV order: Typically a VP containing a PP complement has the form [VP [DP P] V] in an OV language. In the case where the PP is selected by the verb, this is a consequence of the adjacency condition on selection expressed in (42) above. The fact that adjuncts have the same order in the PP does not follow directly, though. Furthermore, there are well known cases of OV languages which have prepositions (for instance German). I leave it an open question here how to account for such cases.19

Sigursson (1988) suggested, partly on the basis of a conceptual argument, partly on the basis of the history of Germanic, that diachronic change of sentential word order from head-final to head-initial (OV to VO) and vice versa, always proceeds top-down.20 We can now conclude that Sigursson is right with regard to change from OV to VO but wrong with regard to change from VO to OV, as evidenced, for example, by the absence of SVO languages with sentence-final complementizers, and more generally by facts discussed here in support of generalization (1). If this generalization holds universally, change from VO to OV must be bottom-up.

8. Remaining problems: Scrambling and mixed order

So far the theory accounts for the cases of "pure OV" and "pure VO" order, where all complements of a head H are on the same side of H. More has to be said about constructions where some complements follow and others precede H. More needs to be said as well about scrambling (also called object shift), where the complement of H turns up in the specifier position of a higher head H'. Consider first scrambling; (59) is a case in point.

(59) JUSSI romaalin on kirjoittanut.
    Jussi a novel has written
    'It's Jussi who has written a novel'

The object of the verb has moved to the specifier position of the auxiliary. The construction is possible only when the sentence has initial focus. A priori the object could have moved to its surface position directly from the complement-of-V position. However, this would undermine the connection we have argued for between OV order and initial focus. Instead we must assume roughly the analysis (60) of (59):

(60) [CP JUSSI C [IP t, romaalin on [VP t, kirjoittanut] [vp - nut t,]]]

In the absence of New, Prc has selected VP by XP-movement. The sentence focus is realized in C, attracting the subject in this case. Following VP-movement to specPrcP, the object has moved to a higher Spec or adjunct position. What we have to say, in fact, is that such scrambling or object shift is possible only from a phrase which itself has moved to a specifier position, since otherwise we have no explanation for the absence of scrambling when the sentence lacks initial focus (and thus must have New generated outside VP). This is at odds with standard GB-theoretic assumptions about subject-object asymmetries, according to which complements (especially of lexical categories) are transparent while specifiers are islands: cf. Huang's (1982) CED, and Chomsky's (1986) Barriers theory. See also Haider (this volume). What we have to say is that the island conditions were wrongly formulated in those works. While movement out of certain specifiers is impossible or highly restricted, for example out of sentential subjects, movement is by no means excluded out of specifiers across the board. In fact, any theory which assumes that head-final structures are derived by movement of complements must assume that various types of movement are possible out of these moved complements, including wh-movement and verb movement (for instance in V2 languages).21 Note that if scrambling can only take place from specifiers, we have the beginning of an explanation of the observation that scrambling is typically found in OV languages rather than VO languages. Note also that the condition may fall under some version of 'Holmbäck's Generalization' (cf. Holmberg 1999). Consider (61a), where the verb has moved and adjoined to the participial head: Here the verb will block scrambling/object shift.

(61) a. Jussi on [Prc kirjoittanut [VP romaalin t,]]
   b. Jussi on [Prc [VP romaalin kirjoittanut] [-nut t,]]

In (61b), where the VP has moved to check the selection feature of the participial head, the object precedes the verb, and is free to scramble/object shift.

As for "mixed" constructions, where some complements of H precede, while others follow H, there are at least three cases to consider. One case can be exemplified by (62).
(62) Milloin Jussi sinulle kertoi etä hän on lähössä? Parisin?
when Jussi to you told that he is on his way to Paris?

Here the conditions are met for OV order, as shown by the fact that the goal object is preverbal, yet the CP complement is postverbal, and must be postverbal, since finite clauses are excluded in preverbal position. A possible analysis is that the finite clause has first been extracted from the complement XP to the Spec of an abstract functional head prior to selection of XP (now containing only the goal object) by the verb. Assuming only leftwards movement, (62) would have an intermediate structure like (63), where F is the abstract functional category attracting the finite embedded clause and PP is the goal object.

(63) [VP V [IP CP [F PP X t]]]

This presupposes that the syntactic category FP is transparent for selection, since V selects XP, not FP. This may not be an unproblematic assumption. Another case can be exemplified by (64) = (13a):

(64) Minkä takia sinä pullat panit jätäkaappiin (mikset leipäläastilskoon)?
what for you buns put in fridge why not in bread box?

This word order is natural with contrastive focus on the postverbal constituent, prompted in the example by the continuation in parentheses. Again a possible analysis, along the lines of Kayne’s (1998) analysis of postverbal focus, is that the focused constituent jätäkaappiin has first moved out of the complement of the verb, by assumption a form of small clause (SC), to the specifier of a Focus head. Subsequently the SC, selected by the verb, has moved to SpecVP.

(64) [VP [SC pullat X t]] [panit [FocP jätäkaappiin [Foc t]]]

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Notes

1. See also Vainikka (1989: 9ff.).

2. A complication which I will ignore here is that the question particle attaches either to the first constituent of the sentence or to the first word of that constituent, as shown in (i):

   (i) a. Sinun autonko ne varasti?
      your car.Q they stole
   b. Sinuksen auton ne varasti?
      your car they stole
   "Was it your car that they stole?"

   This means that simple phonological realization of a particle in C to a constituent in SpecCP is insufficient as an account of the morphology of question and focus particles in Finnish. See Halpern 1995.

3. The 3rd person pronoun se can refer to human as well as nonhuman entities.

4. Alternatively, in the framework of Kayne (1998), it is overt movement of the focused constituent to a lower focus position, followed by remnant VP-movement to a higher position.

5. See for example Kroch and Santorini (1991). The following examples exemplify this contrast in verb sequencing:

   (i) dass er das Buch lesen kömme muss, that he the book read can.DE agree must (German)
   (ii) dat is het boek moet kunnen lezen, that he the book must can.DE read (Dutch)

6. See Holmberg et al. (1993) on the properties of the Finnish negation; it is an auxiliary-like element in the sense that it is inflected for subject agreement.

7. Anne Vainikka (1989: 94ff.) has observed the contrast shown in (i).

   (i) a. Kuka tahdet kahvia?
       who wants coffee
   b. Kuka kahvia tahdet?
       who wants coffee

While (ii) is a conventional way of offering coffee to a group of visitors, (iii), although grammatical, is totally inappropriate in that context, being most readily read as a rhetorical question with ‘nobody’ as implied answer. Why that should be the case is an interesting question which I have no answer for.

8. Counting genre instead of languages is a way of avoiding genetic bias: The sample contains no closely related languages.


11. In Wordick (1982) on Yindjiambirdi there is only one example (p. 163), where the verb is intransitive. Apparently the word meaning ‘want’ is a noun rather than a verb (see footnote on p. 204)., so its inclusion in the table (26) is questionable (Dyner, personal communication). In Guajak there are several morphemes expressing volition. One belongs to a class of ‘post-verbal’, including a causative, a future, and a negation particle, among other elements (pp. 92–95). The example with Wati (p. 95) has an intransitive verb. There is only one example with a post-verbal which also contains an object, the causative construction (i). As soon as the object(s) follow(s) the causative particle.

   (i) a-zeka kar [tare ame pe]
   I-kill CAUS pig man to
   'I made the man kill a pig.'