# *Verb movement and VSO-VOS alternations**

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**Abstract**

This paper discusses an approach to syntax that offers a new perspective on verb-initial languages that allow both VSO and VOS orders. A central assumption is that word order is not rigidly determined by structure. The predictions of this model are discussed in the context of St'át'imcets, Chamorro and Tongan. A comparison with several alternative analyses of VSO-VOS alternations shows that this model is the only one that predicts that a language should display such a word order alternation. In the alternative models, one of the two orders is basic and the other is derived by a special rule.

## 1 Introduction

This paper discusses an approach to syntax that may shed new light on the structure of certain verb-initial languages that allow clauses to alternate more or less freely between VSO and VOS order. A central feature of this approach is the assumption that word order is not rigidly determined by phrase structure and that instead a single structure may be linearised in different, well-defined ways. After introducing this model, its predictions are discussed in the context of three languages that display VSO-VOS alternations, St'át'imcets, Chamorro and Tongan. A comparison of the model with several alternative analyses of VSO-VOS alternations shows that one feature sets it apart from these alternatives: this model is the only one that predicts that a language should display such a word order alternation. In the alternative models discussed here one of the two orders is basic and the other order is derived by a special rule.

Section 2 provides the theoretical background. This paper loosely follows up on an earlier proposal (cf. Bury 2005) and this section reviews the relevant features of that proposal. Section 3 explain why this model could be of interest for the analysis of languages with a VSO-VOS alternation and explores how well this model's predictions are realised in St'át'imcets, Chamorro and Tongan, three languages that

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display a VSO-VOS alternation. Section 4 summarises three alternative analyses of VSO-VOS alternations and contrasts these analyses with the one proposed here. Section 5 concludes the paper with some comments on the status of verb movement in the analysis of verb-initial languages and a summary.

## 2 Theoretical background

### 2.1 Structure and order

The model proposed in Bury 2005 assumes that word order is not fully determined by phrase structure. Linearisation is only constrained by constituent boundaries. The same structure can then be linearised in multiple, but restricted, ways. For example, an unordered structure like *[ Subj [ Obj V ] ]* can be linearised in four different way, namely *Subj Obj V*, *Subj V Obj*, *Obj V Subj*, and *V Obj Subj*. The orders **V Subj Obj* and **Obj Subj V* are excluded because here the constituent containing *Obj* and *V* would be interrupted by *Subj*. This approach to linearisation is familiar, among others, from standard versions of X-bar theory from the mid-1980s onwards and from more recent work that does not adopt Kayne's antisymmetry hypothesis.[1]

For the discussion of verb-initial languages, two points should be noted. First, VOS order is compatible with any proposal that assumes that the verb forms a constituent with the object that excludes the subject. Second, VSO order can only be derived from such an underlying structure if something moves; a common analysis of VSO order involves movement of the verb to the left of the subject (see section 4 for a discussion of various alternatives).

A further important consequence of this approach to linearisation is that linear order does not necessarily affect the c-command relations in a structure. Thus, the different linearisations of *[ Subj [ Obj V ] ]* given above all correspond to the same structure in which *Subj* c-commands *Obj* – regardless of the order in which they are pronounced.

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[1] Following Brody 2000, Bury 2005 assumes that there is no categorial projection. Consequently linearisation and other details differ somewhat from conventional approaches to constituent structure. See Bury 2003, Bury & Uchida 2007 for more discussion.

## 2.2 Verb movement and preverbal particles[2]

Bury 2005 assumes that clause structure is not universal and that as a consequence learnability imposes strict limits on the availability of empty clausal heads (cf. Iatridou 1990, among many others). While this does not mean that there can be no empty heads, it does imply that clausal heads will typically be associated with overt lexical material. For example, English modal verbs can be argued to form a paradigm that licenses an empty T head in clauses without modals (Koeneman 2000); in contrast, the complementizer *that* does not have an empty counterpart, i.e. English finite complement clauses without *that* are not CPs headed by an empty C (cf. Bury 2003).

Following Brody 2000, Bury 2005 assumes that head movement involves the pronounciation of a head's phonological matrix in the PF position of a different head. However, unlike Brody, Bury 2005 assumes that (leftward) head movement of $H_1$ to $H_2$, where both heads contain phonological material, is (usually) linearised as $H_2\ H_1$, not as $H_1\ H_2$, as it would on a standard head adjunction view.

Since, as discussed, VSO order cannot be generated without movement, Bury 2005 argues that these assumptions about clause structure and verb movement can be used to derive the generalisation that verb-initial languages typically have preverbal particles, at least for those languages in which the verb (head-)moves to the left: If clausal heads typically contain overt material, a head that is pronounced in the position of a different head (i.e. a head that is moved) will usually be adjacent to the phonological material of the other head. Thus, a moved verb will usually be pronounced next to the phonological material of the head targeted by the moved verb. Such a derivation of a VSO clause will then involve at least a constituent that contains subject, verb and object, a head H that occurs to the left of this constituent, and verb movement, i.e. the pronunciation of V in the position of H, and adjacent to any phonological material already contained in H:

(1) a. Structure (not linearised): [ H [S [V O]] ]
b. Pronunciation of (1a) H+V S O

[2] The assumptions discussed here are to some extent independent of the assumptions about linearisation just discussed. This means that the main arguments made below about the analysis of VSO-VOS alternations are also compatible with theories that make different assumptions about clause structure and verb movement. However, the connection between preverbal particles and verb-initial orders discussed here and below would likely be lost.

## 3 A possible analysis of VSO-VOS alternations

The previous section outlined a proposal that derives the generalisation that verb-initial languages (with VSO order) tend to have preverbal particles. This section suggests that the same model could also be useful for the analysis of languages in which both VSO and VOS clauses are found.

### 3.1 The structure of VSO and VOS

Recall the assumption that phrase structure does not determine word order. From this perspective, it is clear that the structure in (1a) above is not only compatible with VSO order but also with VOS. As noted earlier, a structure containing a subject and a constituent with a verb and an object can be linearised with the subject to the left or to the right of the verb-object constituent. There is no reason to assume that this freedom of linearisation should be affected by movement of the verb out of the subject-verb-object constituent. Consequently, (1a) could also be pronounced as (2):

(2) Alternative pronunciation of (1a): H+V O S

The combination of verb movement and flexible linearisation then offer a straightforward derivation for both VSO and VOS orders. Moreover, since both orders are linearisations of the same structure, this proposal implies that, unless there are independent constraints on word order in a given language, both VSO and VOS clauses should be possible in the same language. For ease of reference, I call this approach a FLEXIBLE LINEARISATION (FL) APPROACH.

### 3.2 When does word order flexibility surface?

Before considering the further implications of this type of analysis, it is worth to point out that constituent structure is not the only source for constraints on word order. Instead, we can think of the structural constraint on linearisation as imposing an upper limit on the possible linearisations of a given structure. Additional constraints may then impose further restrictions. For example, it has been argued that constraints on parsing explain the overwhelming preference for leftward movement across languages (cf. Abels and Neeleman 2006). If a moved constituent must precede its trace, the presence of a movement chain will further restrict the linearisation options for a structure. Moreover word order is often used, alongside other devices like agreement morphology and case marking, to mark grammatical functions. Thus, Welsh allows only VSO orders because the subject is marked under adjacency with the initial verb (cf. Sproat 1985). The more a language relies

on word order to mark grammatical functions, the less likely it will display effects of flexible linearisation.

### 3.3 Patterns predicted by the flexible linearisation model

We saw that the FL model can account for an alternation between VSO and VOS order in a simple way. Indeed, if there are no further word order constraints in a language, this pattern is expected to be the default in verb-initial languages with verb movement. Note that beside the VSO-VOS alternation and verb movement, a language that fits such an analysis is predicted to have three additional properties. First, since VSO and VOS are linearisations of the same structure, it is predicted that in either order, the subject c-commands the object. Second, since the analysis relies on verb movement, the language is predicted to have preverbal particles that could provide a landing site for verb movement. Finally, since flexible linearisation effects are expected to surface only in the absence of other word order restrictions, word order is expected not to play a major role in the marking of grammatical functions; therefore a rich agreement and / or case system is likely.

We'll now consider relevant data from St'át'imcets, Chamorro, and Tongan to see to what extent they are compatible with these predictions.

*3.3.1 St'át'imcets (Lillooet Salish).* St'át'imcets is a Salish language spoken in Southwest Interior British Columbia. Davis 2005 reports that St'át'imcets has two dialects, whose basic orders are VOS and VSO respectively, but that in both dialects the alternative order is also available. This pattern of flexible verb-initiality appears to be common among the Salish languages (cf. Kroeber 1999: 36–41) although there are exceptions like Bella Coola (H. Davis, p. c., Beck 2000). The following examples illustrate VOS and VSO clauses from the Lower Dialect of St'át'imcets.

(3) (Examples from Davis 2005: 36)

a. ts‘aw‘-an(-Ø)-as=ha ti=snúk‘wa7-sw=a
*wash-DIR(3OBJ)-3ERG=ynq DET=friend-2SG.POSS=EXIS*
ti=káoh-sw=a
*DET=car-2SG.POSS=EXIS*
‘Did your friend wash your car?’ (preferred)

b. ts‘aw‘-an(-Ø)-as=ha ti=káoh-sw=a
*wash-DIR(3OBJ)-3ERG=YNQ DET=car-2SG.POSS=EXIS*
ti=snúk‘wa7-sw=a
*DET=friend-2SG.POSS=EXIS*
‘Did your friend wash your car?’ (possible)

Moreover, Davis describes some binding facts that demonstrate that the subject c-commands the object in both VSO and VOS clauses:

(4) (Examples from Davis 2005: 40)

a. wa7 xwey-s-twitas i=kwekw7-i=ha
*IMPF dear-CAUS-3PL.ERG PL.DET=grandmother-3PL.POSS=EXIS*
takem i=sqaycw=a
*all PL.DET=man=EXIS*
(i) 'All the men$_i$ love their$_{i/j}$ grandmothers.'
(ii) 'Their$_{*i/j}$ grandmothers love all the men$_i$.'

b. wa7 xwey-s-twitas takem i=sqaycw=a
*IMPF dear-CAUS-3PL.ERG all PL.DET=man=EXIS*
i=kwekw7-i=ha
*PL.DET=grandmother-3PL.POSS=EXIS*
(i) 'All the men$_i$ love their$_{i/j}$ grandmothers.'
(ii) 'Their$_{*i/j}$ grandmothers love all the men$_i$.'

St'át'imcets has a range of aspectual markers (cf. Davis 2004) like the imperfective particle above that could possibly be argued to function as landing sites for verb movement in terms of the analysis suggested here –but see the comments on verb movement at the end of this subsection.

Finally, Davis (2005: 33) describes St'át'imcets as a 'radically head-marking' language: 'Arguments of a predicate (subject and primary object) are obligatorily marked on the head by agreement morphology, in the form of either clitics or affixes, sometimes null.'

Thus, St'át'imcets has most of the properties that the model outlined above predicts. However, the situation is less clear with regard to verb movement in the Salish languages. While Wiltschko (2003: 678) argues that 'there is significant evidence that verbs in Salish undergo movement to a functional head position which is at least higher than *v*P,' Davis 2004 argues on the basis of VP ellipsis data that there is no verb movement in St'at'imcets.

*3.3.2 Chamorro.* Chamorro is an Austronesian language spoken in the Mariana Islands in the Western Pacific (Chung 1998). Like St'át'imcets, Chamorro allows both VSO and VOS clauses although 'when the clause contains a transitive verb followed by two noun phrases, either of which would be syntactically licensed and pragmatically plausible as the subject, then for most speakers the VSO interpretation is forced' (Chung 1998: 22).

(5) (Examples from Chung 1998: 150f)

a. Ha-pula' i näna$_i$ i patgon-ň *pro*$_i$.
*AGR-undress the mother the child-AGR*
'The mother$_i$ undressed her$_i$ child.'
b. Ha-pula' i patgon-ň *pro*$_i$ i näna$_i$.
*AGR-undress the child-AGR the mother*
'The mother$_i$ undressed her$_i$ child.'

These examples and the following ones also illustrate that the subject c-commands the object in either order.

(6) (Examples from Chung 1998: 150f)

a. Mämaigu' käda patgun$_i$ gi mismu kattre-ň *pro*$_i$.
*AGR.sleep.PROG each child LOC same bed-AGR*
'Each child$_i$ is sleeping in his$_i$ own bed.'
b. ?Mämaigu' gi mismu kattre-ň *pro*$_i$ käda patgun$_i$.
*AGR.sleep.PROG LOC same bed-AGR each child*
'Each child$_i$ is sleeping in his$_i$ own bed.'

Chung (1998: 151f) reports that in (6b) the VOS order is only accepted by some speakers and judged marginal or ungrammatical by others. She explains this contrast in terms of a constraint that requires a quantified noun phrase to precede a pronoun that it binds.

Chamorro has a complex agreement system and makes extensive use of null anaphora (Chung 1998: 26–32). Moreover, Chamorro has a class of elements expressing finitess and tense-mood-aspect that Chung (1998: 25) argues realise I(nflection). At first, it appears as if these elements could serve as the possible landing sites for verb movement. However, these inflectional elements do not have to be adjacent to the verb. This is illustrated below where the future marker *pära* is separated from the verb by the adverb *käna* 'almost':

(7) (Example from Chung 1998: 131)

Pära käna ha‘ u-matmus, maolik na hu-li‘I‘.
*FUT almost EMP AGR-drown good COMP AGR-see*
‘He'd been about to almost drown; good thing I saw him.’

It is not clear how this pattern could be understood in terms of the model proposed above.

While some of the other arguments that Chung advances against verb movement in Chamorro do not apply to the model outlined here because they only apply to proposals that assume a fixed underlying SVO order, there does not appear to be any obvious independent support for verb movement here.

*3.3.3 Tongan.* Tongan is a Polynesian of the South Pacific with an ergative case system for full noun phrases and an accusative system for pronouns. According to Otsuka (2005: 73f), the unmarked word order in Tongan is VSO but VOS order is also possible, and ‘native speakers generally do not recognize any semantic difference between the two when used in isolation.’ The two orders are illustrated here:

(8) (Examples from Otsuka 2005: 73)

a. Na‘e kai ‘a e ika ‘e Sione.
*PST eat ABS the fish ERG Sione*
‘Sione are the fish.’
b. Na‘e fili ‘a Pila ‘e Sione.
*PST choose ABS Pila ERG Sione*
‘Sione chose Pila.’

Otsuka 2006 argues that the alternation is a result of scrambling of the object from a (derived) VSO structure. She proposes that movement of the object to the specifier of TP is triggered by an EPP feature and an information focus feature and provides a number of arguments to show that VOS structures have properties of A-movement rather than A-bar movement structures (see also section 4). However, it seems that the data she discusses are also compatible with a FL analysis. For example, while Otsuka suggests that the lack of weak crossover effects in VOS structures shows that the order is not derived by A-bar movement, the grammaticality of the following example is also compatible with an analysis in which the object has not undergone movement:

(9) (All following examples are from Otsuka 2006: 250ff.)

Na‘e fili ‘a e taha kotoa$_i$ ‘e he‘ene$_i$ tamai.
*PST choose ABS DEF one every ERG his father*
‘His$_i$ father chose everyone$_i$.’

Tongan doesn't have a specific set of reflexive pronouns but the same form can be used as either pronominal or anaphoric. For example, here the ‘the third person singular pronoun *ia* can either be coreferential with or disjoint from the subject *Sione*’(Otsuka 2006: 251).

(10) Na‘e fili ‘e Sione$_i$ ‘a ia$_{i/j}$ pē.
*PST choose ERG Sione ABS 3.S only*
‘Sione chose him/himself.’

However the interpretation of pronouns is not free. Otsuka provides the following examples:

(11) a. Na‘e fili ‘a ia$_i$ pē ‘e Sione $_{*i/*j}$ t$_i$.
PST choose ABS 3.S only ERG Sione
‘Sione chose him/*himself.’
b. Na‘e fili ‘a Sione$_i$ ‘e ia$_{*i/j}$ pē t$_i$.
PST choose ABS Sione ERG 3.S only
‘He/*himself chose Sione.’

(11a) shows that a pronominal object cannot be corefential with the subject in a VOS clause. (11b) shows that a pronominal subject cannot be coreferential with a full noun phrase object in a VOS clause. As Otsuka notes, this second fact is surprising if VOS clauses involve A-movement of the object because after this movement the object should c-command the subject. These facts could be captured if the ungrammaticality of the bound interpretation in (11b) is not due to a c-command problem but rather due to a precedence constraint on bound pronouns of the type proposed by Chung for Chamorro (see above). Given such a constraint, the pattern illustrated in (11) would seem compatible both with Otsuka’s A-scrambling analysis as well as with a FL analysis.

In Tongan, ‘tense and aspect are indicated by independent lexical items, which immediately precede the verb’ (Otsuka 2000: 49). These tense and aspect particles

look as if they could be used as landing sites for verb movement.[3] Finally, Otsuka assumes that there is verb movement from V-to-T-to-C in Togan. However, since her arguments for verb movement are based on the assumption of an underlying SVO order, it is not clear to what extent they carry over to an FL approach.

*3.3.4 Summary.* This brief survey indicates an interesting match between the predictions of the FL model and the properties of the languages discussed –leaving aside for the moment the issue of verb movement (but see section 5). Thus, St'át'imcets, Chamorro and Tongan all allow both VSO and VOS orders. Binding patterns indicate that the subject c-commands the object in both orders in St'át'imcets and Chamorro, and the Tongan data in (11) seems to be at least compatible with such an analysis as well. The three languages all have some type of preverbal particles that look like potential landing sites for verb movement and they also have some rich system of agreement or case morphology which means that the marking of grammatical functions need not rely on word order.

While I hope that this discussion shows that the FL model may at least have the potential to make a contribution to the analysis of VSO-VOS languages, the selected data discussed here should of course be seen in the broader context that led Davis, Chung, and Otsuka to develop rather different analyses of St'át'imcets, Chamorro and Tongan, respectively. A detailed discussion of these different proposals is beyond the scope of this paper, but the next section provides a (necessarily brief) look at them and argues that they all differ from the FL proposal in one significant way.

## 4 Alternative analyses of VSO-VOS alternations

The previous section discussed the language profile predicted by a FL analysis of VSO-VOS alternations and explored to what extent the predictions materialise in St'át'imcets, Chamorro and Tongan. In this section, I briefly summarise the analyses of these languages provided by the authors whose data I used. We will see that Davis, Chung and Otsuka provide very different analyses for St'át'imcets, Chamorro, and Tongan respectively. However, these alternative analyses all differ from the FL approach outlined here in one significant: they all assume that one of the two orders (VSO and VOS) has a more basic derivation or structure, and that the other order is derived through a special rule.

*Davis 2004, 2005.* Davis argues that the 'postpredicative word order alternations in St'át'imcets show the same profile as "extraposition" dependencies in more

[3] While clitics can appear between the tense/aspect particle and the verb, 'a clitic pronoun and a tense marker form a single phonological unit' (2005:72); so it is not clear whether this would be a problem for the type of analysis proposed here.

familiar languages like Dutch and English' (2005: 55). Moreover, he provides evidence, such as the binding facts discussed above, for the existence of a VP constituent that contains the verb and its internal argument but that excludes the subject and he shows that the alternation is sensitive to prosodic weight. Davis (2005: 56) concludes that the alternation must be dealt with by the PF side rather then the LF side of the grammar but he notes that there currently is no theory on the market that captures the St'át'imcets pattern, or certain generalisations about right-peripheral linearisation more generally. Davis 2005 doesn't provide any structures to illustrate his assumptions about the St'át'imcets VSO-VOS alternation but he seems to assume that in the syntax, there is a constituent that contains the verb and the object and that the subject sits in a rightward specifier position (cf. Davis 2004). Thus, in his analysis St'át'imcets is VOS in (pre-PF) syntax and VSO order is derived by some form of PF extraposition of the object.

(12) *Davis on St'át'imcets* VOS order: [[V O] S]
VSO order: [[V ~~O~~] S] O (extraposition at PF)

While both Davis' analysis and the proposal made here invoke the syntax-PF interface, they make use of rather different processes. In the flexible linearisation proposal, syntax underspecifies word order and VSO and VOS are both orders compatible with the constituency defined by the same structure; in contrast, Davis' extraposition leads to a discontinuous linearisation of the VP constituent, which is of course similar to what may happen with extraposition in English and elsewhere.

*Chung 1998, 2006.* Like Davis for St'át'imcets, Chung assumes that Chamorro has a basic VOS structure with the subject sitting in the highest specifier (and that this is a rightward specifier). However she provides evidence for an analysis in which VSO order is derived by (syntactic) lowering of the subject into the constituent that contains the verb and the object. In these structures, the lowered subject is coindexed with a null pronominal in the original subject position (1998: 169):

(13) *Chung on Chamorro* VOS order: [[V O] S]
VSO order: [[V $S_i$ O] $pro_i$] (syntactic lowering)

Chung 2006 notes that many of the patterns she discusses in the earlier work 'could equally be produced via linearisation' (2006: 714).

*Otsuka 2005, 2006.* Finally, Otsuka argues that Tongan VSO order is derived by leftward (head-)movement of the verb from an underlying SVO constituent. She assumes that in VSO clauses the subject occupies a derived position, the specifier

of TP. In VOS clauses, the subject remains in its base position and instead the object A-scrambles into the specifier of TP, triggered by an information focus feature. (This option becomes available because, following verb movement to T, the base positions of the subject and the object are equidistant from the specifier of TP (Otsuka 2006: 254).)

(14) *Otsuka on Tongan*

| | | |
|---|---|---|
| VSO order: | $V_j\ [S_i\ [t_i\ t_j\ O]]$ | |
| VOS order: | $V_j\ [O_i\ [S\ t_j\ t_i]]$ | (scrambling) |

As we can see, these are very different ways of deriving an alternation between VSO and VOS orders. However, what unites them is that they all assume that one order is basic –VOS for Chung and Davis, VSO for Otsuka– and that the other order is derived by a special rule.[4] This is a significant property of these analyses since it implies that the grammar of a language that allows both VSO and VOS orders is more complex than the grammar of a language that allows only one of the two orders. In other words, the syntax of a language with a rigid VSO or VOS order would require one rule or one derivational step less. In this respect, these analyses collectively differ from the FL proposal, where an alternation between VSO and VOS orders is expected in a verb-initial language, unless word order, more specifically the position of the subject and/or the object, has some grammatical role.[5] Arguably then, the FL approach (with verb movement) and approaches that assume a linearised syntax make different predictions with regard to the expected relative frequencies of verb-initial languages with a fixed VSO or VOS system as opposed to languages with VSO-VOS alternation.[6]

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[4] A further possibility is offered by VP-preposing analyses (cf. Massam 2000, Rackowski and Travis 2000 and the critical overview in Chung 2006): VOS order can be derived from an underlying SVO constituent through preposing of the VP, which contains the verb and the object. VSO order can be derived in a similar way, if the object leaves VP before VP fronts. The additional step of object shift in the VSO derivation also constitutes such a special rule.

Davis 2005 suggests that the St'át'imcets pattern may fall out from a general theory of right-peripheral linearisation. Given such a theory, it could be argued that object extraposition in St'át'imcets does not require a special rule. However, as Davis notes, currently there is no such theory.

[5] Recall that St'át'imcets has two dialects that differ with respect to which verb-initial order is the preferred order. Since in the FL proposal VSO and VOS clauses have the same structure but in Davis' analysis VSO order involves extraposition, this dialect split may arguably be less surprising given an FL analysis.

[6] However see Newmeyer 2005 who argues that such statistical generalisations should not be explained in terms of competence theories.

## 5 Conclusion

### 5.1 Verb movement in verb-initial languages

Before concluding this paper, I outline a number of possible directions of future work that relate to the status of verb movement in the analysis of verb-initial languages. First, the structure proposed in section 3 that may derive some VSO-VOS alternations crucially assumes that the initial verb is moved to a position outside of the constituent that contains the subject and the object (and the trace position of the verb). As the discussion above showed, it is not so easy to find clear evidence for verb movement in VSO-VOS languages (cf. Gärtner et al (2006: 9) on Austronesian, a language family with a significant number of VSO-VOS languages). Here I'd just like to suggest that there may be a principled reason for why verb movement in these languages is difficult to spot. Recall that, assuming flexible linearisation, VOS order can be derived without any movements. This means that VSO-VOS languages could have some verb-initial structures, namely some VOS orders, that do not involve verb movement. This would then make verb movement a string-vacuous process and consequently hard to detect. The problem is comparable to the status of rightward verb movement in verb-final languages and it may be that the arguments and diagnostics that have been proposed there can lead to some progress in the verb-initial context as well (cf. Vermeulen 2006 on verb movement in Japanese).

Second, as noted earlier, there is a class of derivations of verb-initial clauses that assumes neither head movement of the verb nor base-generated verb-initial orders. Verb-initial order can also be derived through the fronting of a phrasal constituent from which the subject and possibly the object have been removed. As Chung (2006) argues, this type of analysis may have a strong motivation for some verb-initial languages and consequently a discussion of such VP-preposing languages in the context of flexible linearisation is of great interest.

Finally, there has been no discussion here of languages with rigid VOS order (some of which may be VP-preposing languages). Since VOS order can in principle be derived without any verb movement, a detailed comparison of VOS languages with languages that allow both VSO and VOS could potentially bring to light asymmetries between the two that could bear on the question of verb movement in these languages.

### 5.2 Summary

Section 1 of this paper outlined an approach to syntax (in a broad sense) in which word order is not fully determined by structural hierarchies. Section 2 reviewed the relevant features of Bury 2005 and showed how this model can derive the generalisation that verb-initial languages tend to have preverbal particles. Section 3

argued that this model provides a simple analysis for a word pattern in which VSO and VOS orders alternate, a pattern that is found in many verb-initial languages. This analysis also predicts such languages to have certain properties and a brief look at St'át'imcets, Chamorro and Tongan suggests that these VSO-VOS languages seem largely compatible with at least the predictions discussed here. Section 4 summarised a number of earlier analyses of languages with a VSO-VOS alternation and concluded that the FL model proposed here is the only one that doesn't assume a special rule to derive the alternation.

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