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Verb First: On the syntax of verb-initial languages
Edited by Andrew Carnie, Heidi Harley and Sheila Ann Dooley

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On the syntax of verb-initial languages

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What fronts?

On the VP-raising account of verb-initial order*

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Kayne's (1994) theory of antisymmetry has inspired a range of analyses in which verb-initial order is derived from a core SVO clause structure when VP raises, intact or as a remnant, to satisfy the Extended Projection Principle. Such analyses lead to the larger theoretical question of whether VP-raising is invariably involved in the derivation of verb-initial order. This paper considers the sorts of empirical evidence that might be brought to bear on this question, focusing on Austronesian and Mayan languages whose pragmatically neutral clauses are VOS.

1. Introduction

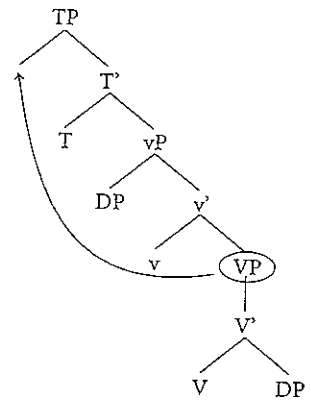
My aim here is to pose a question and then contemplate what sorts of evidence would have to be assembled for it to be answered. The question – revealed already in the title – is whether the word order of clauses in which the verb (V) surfaces at the left, preceding its complement (O) and the subject (S), is invariably a consequence of VP raising.

This question emerges from a strand of thinking that originates with Kayne (1994). In Kayne's theory of antisymmetry, linear order is determined rigidly by hierarchical relations: the (original) order of elements within a maximal projection is invariably Specifier Head Complement, and the order of clauses, which are projected from Tense (T) or equivalent, always has the subject preceding the predicate phrase or VP. Clauses in which the verb surfaces to the left of the subject must therefore be derived by movement.

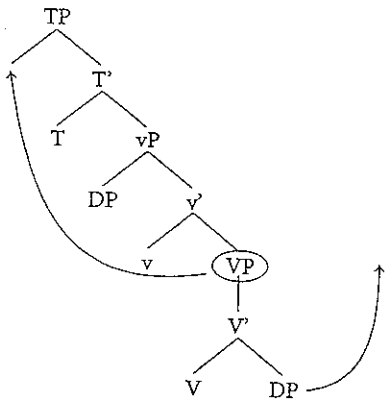
Kayne's leading idea has been fleshed out by Diane Massam and others in some tantalizing proposals for the clause structure of verb-initial languages – languages whose pragmatically neutral clauses are VOS or VSO. These proposals take VOS order to be derived from a core SVO clause structure by raising of VP (Massam 2000a, 2001b; Lee 2000a; Rackowski & Travis 2000) or of some maximal projection

dominating VP (Pearson 2001; Aldridge 2002). The landing site for VP raising is held to be the specifier of T, or some specifier located even higher in the functional layer of the clause (but see Carnie 1995 for a different view).[1] VSO order is derived similarly, by raising of a remnant VP – a VP from which everything but V has previously been extracted (Massam 2000, 2001a, b; Lee 2000a; Rackowski & Travis 2000). See the schematic derivations in (1).

(1) a.



b.



What is the motivation for VP raising? Within the minimalist framework developed by Chomsky (1995), the answer must be the need to check some strong feature. That, plus the properties of the landing site usually assumed for VP raising – the specifier of TP – has led Massam and others to hypothesize that VP raises to satisfy some version of the EPP. Originally formulated as the principle that clauses must have subjects (Chomsky 1982: 10), the EPP is recast in minimalist terms as the demand that T's [D] feature must be checked (by raising of DP to T's specifier; see Chomsky 1995: 232).[2] The principle is invoked in just this form

by Alexiadou and Anagnostopoulou (1998) (A&A) to derive the VSO order of languages, such as Irish and Greek, in which V is overtly inflected for agreement. A&A propose that in such languages, V raises to T so that the nominal feature of V's agreement morphology can check T's [D] feature. From this proposal it is not that far to the hypothesis that the VP raising that is claimed to be responsible for verb-initial order is also a response to the EPP. On this view, verb-initial languages differ from subject-initial languages in precisely which of T's features must be checked for the EPP to be satisfied. In subject-initial languages, the hypothesis goes, the EPP demands that T's [D] feature be checked. In verb-initial languages, it demands the checking of a feature of T variously identified as [V] (Davies & Dubinsky 2001b), [Pred] (Massam 2000a, 2001a, b; Aldridge 2002), or [T] (Massam & Smallwood 1997; Pearson 2001).

Such a hypothesis is clearly part of the larger effort, going back at least to Emonds (1976, 1980), to reduce exotic word orders to familiar constituent structures, acted on by familiar movements in accordance with familiar principles. What makes the current hypothesis special is its attempt to give a unified account of verb-initial order that encompasses both VOS and VSO.

Much of the verb-initial research that has explored this strand of thinking has been content to maintain that there are languages for which VP raising gives a superior account of verb-initial order (see the references just cited). But lurking in the background is a much stronger claim, namely, that the VP raising account of verb-initial order is not only possible but necessary.[3] If so, every language with verb-initial order in pragmatically neutral clauses would have such clauses derived from a core SVO structure when VP raises, intact or as a remnant, to satisfy the EPP.

Is the much stronger claim tenable? In what follows, I try to get at this question by asking what linguistic patterns are expected if the stronger claim is correct, and to what extent these expectations are borne out. My evidence will be drawn from languages whose pragmatically neutral clauses have VOS order (see Chung forthcoming), either alternating with VSO (e.g., Chamorro, Māori) or as the only option (e.g., Malagasy, Seediq, Tzotzil). (I will therefore be ignoring languages, such as Irish (see McCloskey this volume), whose pragmatically neutral clauses are exclusively VSO.) Because much of the crucial evidence from languages of these types remains to be collected, my discussion will be speculative rather than conclusive. Still, a therapeutic point will emerge: the issue of whether all verb-initial order is derived via VP raising, in response to the EPP, is one on which empirical evidence can, and should, be brought to bear.

Section 2 presents some evidence that in VOS clauses, the verb and its complement form a surface constituent. Section 3 investigates the extent to which this clause-initial VP has the profile of a phrase that has undergone movement. Section 4 examines the claim that VSO clauses are produced by movement of a remnant

VP. Finally, Section 5 explores the idea that when VP raises, either intact or as a remnant, it does so to satisfy some version of the EPP.

2. Evidence for a clause-initial VP

In principle, Kayne's theory of antisymmetry offers two routes by which an SVO clause structure could surface with VOS order: the entire VP might move leftward, or V and its complement might raise separately past the subject (Kayne 1994:47). Some evidence that favors the first route is supplied by VP coordination. In many languages with VOS clauses, it is possible for the predicative material preceding the subject – the material that normally consists of the verb plus its complement – to be coordinated (see Keenan 1978a:319–321). If one makes the traditional assumption that coordination is limited to constituents, such a pattern could be produced only if the material preceding the subject forms a constituent – presumably, VP.

Particularly clear evidence of VP coordination can be found in Malagasy, an Austronesian language with fixed VOS order (see, e.g., Keenan 1976b, 1978a; Paul 2000; Pearson 1996, 2001; Rackowski & Travis 2000). Consider the examples in (2), in which the material preceding the subject is a coordinate structure, each of whose (bracketed) conjuncts consists of a verb plus its complement. The conjuncts are separated by the conjunction *sy* 'and', which is used elsewhere to conjoin constituents smaller than clauses. If the constituents being coordinated here are VPs, this is what we expect.

(2) a. [Misotro toaka] sy [mihinam-bary] Rabe. **Malagasy**
drink alcohol and eat-rice Rabe
"Rabe is drinking alcohol and eating rice." (Keenan 1978a:320)

b. [Henon-dRabe] sy [najeren-dRakoto] ny mpihira gasy.
heard.TT-Rabe and watched.TT-Rakoto ART folk singer
"The folk singer was heard by Rabe and watched by Rakoto."
(Pearson 1996)

Similar coordination patterns are found in Seediq, another Austronesian language with fixed VOS order (Aldridge 2002), and Chamorro, an Austronesian language in which VSO alternates with VOS (Chung 1998). See also Davis (this volume) for an enlightening discussion of coordination in St'at'imcets (Lilooet Salish).

Even when VP coordination is, for whatever reason, not allowed, it is sometimes possible for other types of predicates preceding the subject to be coordinated. For instance, in Māori, a Polynesian language in which VSO alternates with VOS, the predicate can be of any major category type. (Māori word order is, therefore, better described as XSO alternating with XOS; see Bauer 1993, 1997 as well as Massam this volume). Coordinate VPs are rare or nonexistent in Māori. But coordinate nonverbal predicate phrases occur freely. In the examples in (3), taken from an English-Māori dictionary, the predicative material preceding the subject consists of conjoined phrases that are at least as large as PP (3a) or DP (3b). (In these examples, the relevant dictionary entry is cited in boldface.)

(3) a. [Kai roto], [kai waho] rānei te tāke hokohoko i
TAM.at inside TAM.at outside Q the tax trade in
tēnei kaute? **Māori**
this account
"Is this account G.S.T. inclusive or **exclusive**?" (Ngata 1994:137)

b. [He mahi roa], [he mahi manawanui] te whakapiata
PRED.a work long PRED.a work patient the shine
pounamu.
greenstone
"Working with greenstone is a long and patient enterprise."
(Ngata 1994:346; entry for "polish")

Of course, the evidence just cited leaves open the possibility that there might also be VOS clauses in which the verb and its complement do *not* form a surface constituent. To speed the rest of the discussion, I simply assume that this is never the case: instead, in every pragmatically neutral VOS clause, the verb and its complement form a surface VP. From Kayne's perspective, this would mean that VOS clauses would always be derived by raising of VP or equivalent, where by "equivalent" I mean a predicate XP or some even more inclusive constituent.[4] Let me now ask what evidence can be brought to bear on the claim that this constituent has reached its surface position via movement.

3. The clause-initial VP as moved constituent

Although different generative syntactic theories give different accounts of movement and its motivation, almost all such theories agree that moved constituents have the following profile. First, both phrases and heads can move. But whereas phrasal movement can cross clause boundaries, head movement evidently cannot (see Baker 1996:453–454).[5] Consider the English examples in (4), which are intended to illustrate the ability of moved phrases – subject DPs in (4a) and moved *wh*-phrases in (4b) – to surface a potentially unlimited number of clauses from their origin site.

(4) a. Jill seems [__ to be unlikely [__ to complain]].
b. What [do they think [__ that you believe [__ that they saw __]]]?

Second, moved constituents are islands to extraction (the Freezing Principle of Culicover & Wexler 1977:17). In the language of Principles and Parameters theory, if the only legal destinations of phrasal movement are specifiers or adjoined positions (see Chomsky 1986), then moved phrases are islands. If heads have only words as their content, then – whether moved or not – they are 'anaphoric islands' in the sense of Postal (1969). (See also Carnie 1995 on the claim that elements that have undergone head movement are islands.) Consider the ungrammatical examples in (5), which illustrate the islandhood of English DPs that been moved leftward by passive (5a) and Italian VPs that have undergone VP preposing (5b).

(5) a. *Who$_i$ do you think that [many rumors about $\_\__i$]$_j$ were spread $\_\__j$ by Kate?

b. ?*Quali mele$_i$ credi che [mangiato $\_\__i$]$_j$ Mario non abbia $\_\__j$?
(Which apples do you think that [eaten $\_\_$] Mario has not?)
(Longobardi 1985:172)

Now if the clause-initial VPs of VOS clauses are moved constituents, they should conform to this profile: they should be able to raise across clause boundaries, but should themselves be islands. The rest of this section investigates the extent to which these expectations are realized.

3.1 VP raising across an apparent distance

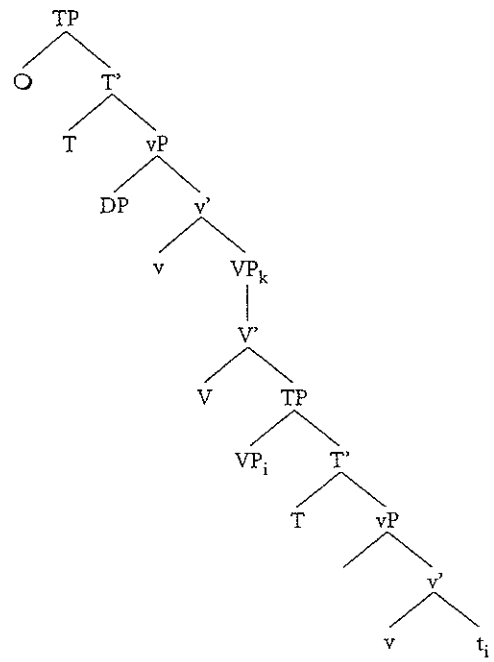
Can the VP of a VOS clause raise across clause boundaries? Evidence from at least one verb-initial language, Chamorro, indicates that it cannot. To see this, consider the Chamorro complex sentences in (6), which contain an infinitive VP (6a) or a finite embedded clause (6b).

(6) a. Ti ha-na'siña [bumaila] si Jose. Chamorro
not AGR-make.possible INFIN.dance Jose
"Jose didn't manage to dance."

b. Malägu' si Carmen [pära un-fattu gi gipot-ña].
AGR.want Carmen FUT AGR-arrive at party-AGR
"Carmen wants that you come to her party."

In a VP raising analysis, these sentences would at some point in the derivation have a structure in which the embedded VP has raised to the specifier of the embedded T, as shown in the schematic tree in (7). (Subsequently, (6a) would be produced by raising the entire matrix VP, including the infinitive complement, to the specifier of the matrix T; (6b) would be produced by first extracting the CP complement from the matrix VP and then raising the VP remnant.)

(7)



The question is whether the embedded VP in (7) can raise further, to the specifier of the matrix T – the position represented by the circle.

In fact, further raising of this sort is systematically disallowed. Compare (6) with the examples in (8), in which an attempt has been made to move the embedded VP (8a) or some more inclusive constituent (8b) to the specifier of the matrix T. The results are severely ungrammatical.[6]

(8) a. *[Bumaila]$_i$ si Jose ti ha-na'siña $\_\__i$. Chamorro
INFIN.dance Jose not AGR-make.possible
(Jose didn't manage to dance.)

b. *[Pära un-fattu gi gipot-ña]$_i$ si Carmen malägu' $\_\__i$.
FUT AGR-arrive at party-AGR Carmen AGR.want
(Carmen wants that you come to her party.)

What is responsible for the inability of the embedded VPs in (8) to raise across a clause boundary? One might be tempted to think that the pattern could be made to follow from some general demand that movement must affect the closest potential target (see Chomsky 1995:311). On such a view, further raising of the embedded VP (VP$_i$) in (7) would be blocked by the presence of a closer VP that could be targeted for movement, namely, the matrix VP (VP$_k$). Although such a view

might seem attractive, it encounters a difficulty: current versions of the claim that movement must affect the closest potential target define 'closest' in such a way that two potential targets count as equally close when one dominates the other (see McCloskey 2000: 59–60). But then the two VPs in (7) ought to count as equally close, since VP_k dominates VP_i.

This difficulty could perhaps be surmounted.[7] Still, given the fact that VPs cannot raise across a clause boundary, the most one could conclude would be that Chamorro lacks one type of evidence for the claim that its clause-initial VPs have undergone movement. The observation raises a question. Are there languages with pragmatically neutral VOS clauses in which VP can raise across a clause boundary? Such languages, if they exist, would offer clear positive support for the VP raising hypothesis.

3.2 The islandhood of VP

Does the VP of a VOS clause constitute an island? Preliminary investigation leads to a range of answers, as I now show.

3.2.1 *VPs are islands in Seediq*

Keenan (1972) was the first to observe that there are languages in which VPs do indeed constitute islands. In many Western Austronesian and Formosan languages with VOS clauses, subjects can be targeted by *wh*-movement but nonsubject arguments cannot. This is exactly what is expected if VOS order is derived from a core SVO structure by VP raising.

One paradigmatic example of this type is provided by the Formosan language Seediq, a language with fixed VOS order, which has been investigated by Aldridge (2002) (see also Holmer this volume). Aldridge claims that Seediq clauses are ergative-absolutive clauses in which the ergative is a subconstituent of VP but the absolutive lies outside VP, in the structural position traditionally associated with subjects. For simplicity's sake I adopt her terminology, but my primary focus will be not on ergativity but rather on whether a given DP originates internal or external to VP.[8]

Aldridge shows that Seediq observes the equivalent of Keenan's 'subjects only' restriction on *wh*-movement: DPs that are external to VP (her absolutives) are accessible to *wh*-movement, but other arguments and adjuncts are not. Consider the constituent questions in (9), which are cleft constructions in which the interrogative phrase is a higher predicate and the rest of the sentence forms its subject, a headless relative clause. In these constructions, some element within the headless relative clause has undergone *wh*-movement – by assumption, a null operator, which is represented as O in the examples. (One could imagine that *wh*-movement has affected some other type of element within the relative clause; but whatever that element is assumed to be, it must have no phonological realization.) When the null operator originates outside VP (as an absolutive, according to Aldridge), *wh*-movement is legal (9a). But when this operator originates inside VP, as an argument (e.g., an ergative in (9b) or an adjunct (9c)), *wh*-movement is ill-formed. (The outer set of brackets in these examples surrounds the headless relative clause, while the inner set surrounds the embedded VP.)

(9) a. Maanu ka wada [O [burig-un na Ape] __]? **Seediq**
what? ABS PERF buy-TRANS ERG Ape
"What did Ape buy?" (from Aldridge 2002)

b. *Ima ka wada [O [burig-un __] patis-ni]?
who? ABS PERF buy-TRANS book-DEF
(Who bought this book?) (from Aldridge 2002)

c. *Inu [O [m-n-ari patis __] Ape]?
where? ANTI-PERF-buy book Ape
(Where did Ape buy books?) (from Aldridge 2002)

The only route by which VP-internal arguments in Seediq can undergo *wh*-movement is indirect: they must be externalized, that is, realized in the structural position traditionally associated with subjects, before they can be targeted by *wh*-movement. (This externalization, which also occurs independently of *wh*-movement, is signaled by voice morphology on the verb.) Aldridge takes the overall pattern to argue that VPs are islands, and therefore clauses in Seediq are derived by VP raising.

Observe further that the cleft construction illustrated in (9) is simply not available when the interrogative phrase is a locative adjunct. Instead, locative interrogative phrases must surface in situ, as shown in (10).

(10) [M-n-ari inu patis] Ape? **Seediq**
ANTI-PERF-buy where? book Ape
"Where did Ape buy books?" (from Aldridge 2002)

If VPs are islands, we can understand this pattern in the following way. Suppose that in Seediq, locative adjuncts cannot be externalized, and it is also impossible for them to be stranded by VP raising. Then the only option for questioning such an adjunct would be to use a construction, such as (10), in which the adjunct is not targeted by syntactic *wh*-movement at all.

In short, Seediq VPs are islands. In this respect, the language conforms perfectly to the predictions of the VP raising hypothesis.

3.2.2 *VPs are not islands in Tzotzil*

Significantly, there are also languages with fixed VOS order in which VPs evidently are not islands. One such language is Tzotzil, a Mayan language investigated by Aissen (1987, 1996).

Aissen shows that in Tzotzil, subjects, nonsubject arguments, and adjuncts can all be targeted by *wh*-movement. Consider the constituent questions in (11), in which the interrogative phrases that surface at the left are a subject (11a), a direct object (11b), and a goal (11c).

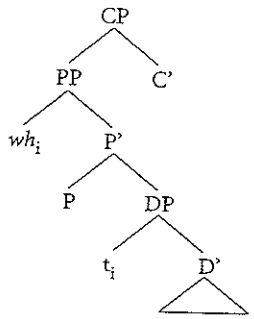
(11) a. Buch'u s-pas mantal __? **Tzotzil**
who? A3-do order
"Who's giving the orders?" (Aissen 1996:451)

b. K'usi av-il __?
what? CMPL.A2-see
"What did you see?" (Aissen 1996:451)

c. [Buch'u ta s-na] ch-a-bat __?
who? to A3-house INCMPL-B2-go
"To whose house are you going?" (Aissen 1996:470)

How do we know that these constituent questions are derived by *wh*-movement, and not base-generated constructions that involve a null resumptive pronoun? Some telling evidence is provided by the phenomenon of pied piping. Aissen shows that when the interrogative phrase is the possessor of a DP that is a prepositional object or the subject of a transitive verb, the constituent question is not legal unless the interrogative phrase has raised to the specifier of the PP or subject DP and the entire PP or DP has been pied piped to the left. The result of pied piping is illustrated in the subtree in (12).

(12)



Compare the examples in (11c) and (13a), in which raising and pied piping have occurred, with the ungrammatical (13b, c), in which the constituent that surfaces at the left consists of the interrogative phrase alone.

(13) a. [Buch'u x-ch'amal] y-elk'an chij __? **Tzotzil**
who? A3-child A3-steal sheep
"Whose child stole sheep?" (Aissen 1996:460)

b. *Buch'u cha-b-at [ta s-na __]?
who? INCMPL-B2-go to A3-house
(Whose house are you going to?) (Aissen 1996:469)

c. *[Buch'u y-elk'an chij [x-ch'amal __]?
who? A3-steal sheep A3-child
(Whose child stole sheep?) (Aissen 1996:460)

If constituent questions were base-generated constructions involving null resumption, the contrast between (11, 13a) and (13b, c) would be difficult to explain. The problem is this: were null resumption generally available, the questions in (13b, c) ought to be grammatical. There would be no reason to expect them to be ruled out, given that comparable nonquestions containing null pronouns, such as (14), are well-formed.

(14) I-kom [ta s-na *pro*]. **Tzotzil**
CMPL-remain to A3-house
"He remained at his house." (Aissen 1996:468)

On the other hand, if constituent questions are derived by *wh*-movement, then an account of the contrast between (11–12) and (13) is at hand. Pied piping is a familiar side-effect of *wh*-movement, one often explained in terms of movement-related principles. Aissen's account of Tzotzil pied piping, for instance, appeals to the Empty Category Principle and the *Wh*-Criterion – key principles of movement in Principles and Parameters theory. The details of her account need not concern us. What is important is that any such account commits us to the view that interrogative phrases in Tzotzil do not originate in their surface position, but rather must have arrived there as a consequence of movement.[9] Recall now that *wh*-movement in Tzotzil can affect subjects (11a) as well as nonsubject arguments (11b) and adjuncts plausibly attached to VP (11c). The conclusion seems to be that Tzotzil VPs are not islands, contrary to what the VP raising hypothesis would predict.

3.2.3 *Are VPs islands in Malagasy?*

Finally, in Malagasy, the issue of whether VPs are islands remains interestingly unresolved.

Malagasy at first glance appears to be a classic example of a fixed VOS language in which VPs are islands. As in Seediq, the only arguments accessible to *wh*-movement are those external to VP (i.e., subjects; see Keenan 1972). But, as Keenan (1976b) and subsequent authors have noticed, Malagasy also permits certain adjuncts – instruments, locatives, and temporal phrases – to be targeted

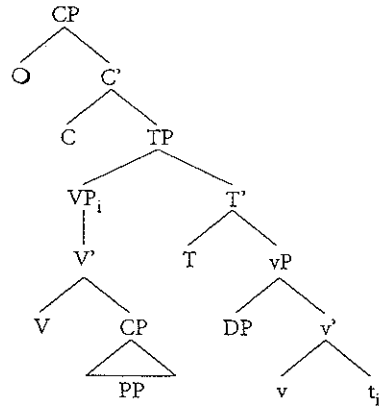
by *wh*-movement in the focus construction. Consider the examples in (15), in which the adjuncts that have been focused are an instrument (15a) and a temporal phrase (15b).

(15) a. Amin'ity savony ity no manasa lamba Rasoa. **Malagasy**
with.this soap this FOC wash clothes Rasoa
"It's with this soap that Rosa is washing clothes." (Keenan 1976b: 269)

b. Taorian'ny mpampianatra no niteny aho.
PST.after.GEN.ART teacher FOC PST.AT.speak I
"It's after the teacher that I spoke." (Paul 2000: 103)

What is the derivation of these focus constructions, and how does it bear on the islandhood of VP? One attractive possibility is that instruments, locatives, and temporal phrases in Malagasy might originate external to VP, adjoined to some higher constituent in the functional layer of the clause. If so, the islandhood of VP would not interfere with their ability to be targeted by *wh*-movement. Such an analysis makes a clear prediction. Matrix adjuncts should be able to undergo *wh*-movement, as in (15). But adjuncts embedded within a CP complement to V should be blocked from undergoing *wh*-movement across an apparent distance to the specifier of the matrix C. The reason is that such movement would involve extraction out of an island – the island created when the VP dominating the CP complement undergoes VP raising in the matrix clause. See the diagram in (16).

(16)



This prediction raises a larger issue: are there any types of embedded CPs from which adjuncts can be extracted in Malagasy? Keenan (1976b) and others have claimed that in this language, it is impossible for arguments to move out of CP complements to V, but possible for them to move out of CP subjects. The first pattern offers yet another indication that VPs are islands. The second pattern calls for further scrutiny. Can adjuncts – or, for that matter, arguments – undergo *wh*-movement out of CP subjects? And where do these so-called CP subjects surface in clause structure – as complements to unaccusative predicates, as specifiers of the abstract verbal head v, or as specifiers of some higher licensing head (see Lee 2000a)? The answers should shed further light on the system of assumptions with which this section began. If CP subjects are specifiers of v or of some higher licensing head, then in current thinking they should be islands. On the other hand, if they are complements to V and VP raising causes VPs to be islands, then any movement that crosses the VP boundary should be blocked as well. Further investigation is clearly needed, both of the empirical patterns and of their theoretical consequences.

4. Remnant VP raising and its motivation

The discussion has so far concentrated almost exclusively on VOS clauses. I want now to turn to VSO clauses and to the possibility that they are produced by raising of a remnant VP – a VP from which everything but the verb has exited.

Perhaps the most pressing question that confronts the remnant VP raising hypothesis is the question of exactly how remnant VPs arise. What independently motivated principles would force a maximal projection to exit from VP? The types of considerations most often appealed to involve Case licensing and scope. For instance, Massam (2000a, 2001a) proposes that in Niuean, a Polynesian language with fixed VSO order, DP complements must exit from VP to check their Case in the specifier of a licensing head. Lee (2000a) suggests that in Quiaviní Zapotec, another fixed VSO language, CP complements must similarly raise out of VP to be licensed. Rackowski and Travis (2000) posit that when DPs exit from VP in Niuean, they do so in order to escape existential closure.

While these proposals seem quite reasonable, it is harder to tell a convincing story about why there are VSO languages in which PPs are evidently forced to raise out of VP. Niuean, for instance, does not permit indirect objects, goals, or other apparent PP complements to surface next to the verb, but rather requires them to follow the subject. (See Massam this volume and Otsuka this volume for additional discussion of word order in Niuean.) Consider

(17) To fanogonogo a au ki a koe. **Niuean**
FUT listen ABS I to PROP you
"I'll listen to you." (Seiter 1980: 147)

Given that PPs do not need to be Case-licensed, it is unclear what would cause the PP in (17) to exit from VP prior to VP raising.[10]

Massam (2001a) addresses this issue by suggesting that Niuean simply has no complement PPs at all. Rather, every Niuean PP is adjoined to VP or even higher, in such a way that it must necessarily be stranded by VP raising. Such a view makes a prediction. If all PPs are adjuncts, it should be uniformly impossible for them to undergo *wh*-movement out of a weak island (assuming that Niuean has weak islands to begin with). It is a very interesting, as yet unanswered question whether this is indeed so.

A different sort of issue arises in verb-initial languages in which VOS alternates with VSO. In Chamorro, for instance, complements of all category types can surface to the left or to the right of the subject. The pairs of examples in (18–20) illustrate this word order freedom for various complement types (in brackets): definite direct object DPs (in (18)), locative PPs (also in (18)), nonspecific DPs (19), and embedded CPs (20). (In these and other Chamorro examples cited in this chapter, *si* is the marker of 'unmarked' morphological case for proper names; see Chung 1998.)

(18) a. Pära u-po'lu [i trastes-ña siha] [gi hälum kahun] i
FUT AGR-put the things-AGR PL LOC inside box the
infitmera.
nurse
"The nurse is going to put her things in the box."

b. Pära u-po'lu i infitmera [i trastes-ña siha] [gi hälum
FUT AGR-put the nurse the things-AGR PL LOC inside
kahun].
box
"The nurse is going to put her things in the box."

(19) a. Ha-na'-fam-ahan yu' [katni] si Sandy pära sena.
AGR-make-ANTI-buy me meat Sandy for dinner
"Sandy had me buy meat for dinner."

b. Ha-na'-fam-ahan yu' si Sandy [katni] pära sena.
AGR-make-ANTI-buy me Sandy meat for dinner
"Sandy had me buy meat for dinner."

(20) a. Mämpus hobin [pära um-äsagua] si Francisca.
too AGR.young for INFIN-marry Francisca.
"Francisca is too young to get married."

b. Mämpus hobin si Francisca [pära um-äsagua].
too AGR.young Francisca for INFIN-marry
"Francisca is too young to get married." Chamorro

From a VP raising perspective, such word order alternations suggest that complements can optionally exit from VP. What motivates this exit when it occurs, and why is the motivation sometimes suspended?

By way of response, one could try to maintain that the complements in (18–20) have invariably exited from VP, even when they surface next to the verb. If so, the material preceding the subject in the (a) examples would not be merely VP, but rather VP plus some additional constituent(s). Such a view raises some complicated issues. For instance, evidence from coordination argues that even in the (a) examples above, the material preceding the subject forms a single constituent. In (21), this constituent serves as the left conjunct of a coordinate structure whose right conjunct consists simply of a verb.

(21) a. [Ha-huchum i mata-ña] ya [humaha] si Maria. Chamorro
AGR-close the eye-AGR and AGR.yawn Maria
"Maria closed her eyes and yawned."

b. [Dumandan gitala] yan [kumanta] si Juan.
AGR.play guitar and AGR.sing Juan
"Juan plays the guitar and sings."

The traditional wisdom concerning coordination is that only constituents of like categories can be conjoined. If we accept this, then what categories are being conjoined in (21)? Notice further that the left conjunct in these examples seems to consist of (at least) a transitive V(P) plus its direct object. If this constituent is identified as some functional projection that properly contains VP – for instance, AgrOP, – can the same functional superstructure be motivated for the lone intransitive verb that occupies the right conjunct? (More specifically, if *hahuchum i mataña* 'closed her eyes' is an AgrOP in (21a), then is *humaha* 'yawned' in this example an AgrOP as well, despite the fact that the verb 'yawn' has no direct object for AgrO to license? Notice that if *humaha* is merely a VP, then it is not obvious that the conjuncts in this example – AgrOP and VP – are like categories.) Investigation of these questions should help to determine the feasibility of bringing VSO clauses under the wing of the VP raising hypothesis.

5. The motivation for VP raising

The preceding sections of this chapter have surveyed some types of evidence that could be brought to bear on the core claim of the VP raising hypothesis, namely, that the VPs of verb-initial clauses have invariably reached their surface position via movement. I should emphasize that my aim has been neither to establish that the VP raising hypothesis is correct nor to argue that it is incorrect, but rather to

explore some empirical pathways that might ultimately help to resolve the issue. Let me now, finally, turn to a different question. Suppose, for the sake of argument, that VPs do indeed raise in verb-initial clauses. What would drive this movement?

As mentioned earlier, the motivation most often given for VP raising involves appeal to some version of the EPP. It is worth pausing to clarify what the appeal consists of. Although some current work in minimalist syntax (e.g., Chomsky 2000) has reinterpreted the EPP as a diacritic for movement in general, the EPP relevant to us here is one that specifically demands the raising of some constituent to the specifier of T. The claim that VP raises to satisfy the EPP, then, amounts to the claim that VP raises to T's specifier, and this movement is obligatory – forced, in minimalist terms, by the need for some designated feature of T to be checked.

What sorts of empirical evidence could be brought to bear on the claim that VP raises to satisfy the EPP? A promising line of investigation is suggested by Miyagawa (2001) in an important discussion of the EPP and scrambling in Japanese. Miyagawa shows that in Japanese, certain universally quantified subjects must generally take wide scope with respect to sentential negation. But it is possible for these subjects to have narrow scope just in case an object has been scrambled to the left. His account of this pattern builds on three familiar assumptions. First, in order for an element to have narrow scope with respect to negation, it must be c-commanded by the functional head Neg, which is lodged below T but above the abstract verbal head v (which is the functional head immediately above V) in clause structure. Second, all of the predicate's arguments originate within vP. Third and finally, T has an EPP feature which is checked when a DP raises to its specifier. Miyagawa's key insight is that in Japanese, any DP – subject or nonsubject – can raise to check T's EPP feature. When the subject raises, the result is an SOV clause in which the subject must have wide scope with respect to negation. But when the object raises (via a movement characterized as A-scrambling in other work), the result is an OSV clause in which the subject remains in situ, within vP, where it is possible for it to have narrow scope.

The broader message of this account is that the scope and specificity effects traditionally associated with subjects (by, e.g., Keenan 1976a) are not, after all, inherent attributes of these DPs. Rather, they flow from the syntactic position in which these DPs typically surface – the specifier of T. Suppose we accept this and hold further that in verb-initial clauses, VP must raise to the specifier of T. Then it follows that no other constituent can also raise to T's specifier; in particular, the subject cannot. But then the subject should remain within vP, and its typical association with scope and specificity effects should be suspended: the subject should not necessarily have to take wide scope or be specific.

Can this be shown to be so? For the most part, information concerning quantifier scope in verb-initial languages is not readily available (but see Keenan 1976b on Malagasy and Chung 1998 on Chamorro). Some progress can be made, however, by considering the issue of specificity effects.

There are verb-initial languages that seem not to require the subject DP to be specific in any sense. For instance, consider Tongan, a Polynesian language closely related to Niuean in which VSO alternates with VOS (see Otsuka this volume). In Tongan, it is possible for both subjects and nonsubjects to be headed by the nonspecific article *ha*, which generally takes narrow scope with respect to sentential operators (see Churchward 1953). Compare the nonspecific prepositional object in (22a) with the nonspecific subject in (22b).

(22) a. Na'a ku fa'o ia ki ha puha. **Tongan**
TAM I put it at a box
"I put it into a box (some box or other)." (Churchward 1953:271)

b. 'Oku tapu ke hū ha sela tangata ki he
TAM forbidden TAM enter a warder male to the
'api pōpula.
prison
"It is unlawful for a male warder to enter a prison."
(Churchward 1953:59)

This pattern conforms to expectations if Tongan VPs raise to the specifier of T and the subject remains in place, within vP, and therefore within the domain of existential closure (see Diesing 1992). (On this view, raising of (a remnant) VP would strand the subject in the specifier of vP, leading to the surface word order seen in (22b). In (22a), the subject is a pronominal clitic and something further must be said to account for its surface position.)

In contrast, other verb-initial languages seem to impose a specificity requirement on (certain) subject DPs. According to Chung and Ladusaw (2004), Māori demands that subjects that are external arguments must be specific. Subjects of this type can be headed by the indefinite article *tētahi*, which can take wide scope with respect to sentential operators. But they cannot be headed by the indefinite article *he*, which must have narrow scope. Compare the examples in (23) and (24).

(23) a. E kōrero ana tētahi wahine. **Māori**
TAM speak a woman
"A (particular) woman was speaking." (Chung & Ladusaw 2004:57)

b. Ka katakata ētahi, ka umere ētahi, ka kohete ētahi.
TAM laugh a.PL TAM applaud a.PL TAM scold a.PL
"Some laughed, some applauded, some scolded." (Waititi 1974:86)

(24) a. *E kōrero ana he wahine.
TAM speak a(ny) woman.
(A(ny) woman was speaking.) (Chung & Ladusaw 2004:57)

b. ?*E patu poaka ana he tāngata.
TAM kill pig a people
(A(ny) people were killing pigs.) (Chung, Mason, & Milroy 1995:438)

How might this specificity effect be handled? If we continue to assume that vP is the domain of existential closure, then the examples in (23–24) would seem to indicate that subjects in Māori must, for some reason, raise out of vP. But to what destination would they raise, and what could motivate this raising? Notice that the answer cannot be that subjects raise to the specifier of T, since – by assumption – VP must occupy this position. But it is not obvious that there is another conceivable destination site whose existence could be independently motivated.

Following proposals made by Pearson (2001) for Malagasy and Aldridge (2002) for Seediq, one might think of trying to derive the Māori specificity effect illustrated in (23–24) from some different demand. For instance, if external arguments in Māori had to be licensed as topics, via raising to the specifier of a functional head such as Top, then the specificity effect illustrated in (23–24) might not be directly relevant to subjecthood after all. It is not immediately obvious that such an approach would work for Māori. Although Māori does have topics, most of which are also subjects, these topics have a morphosyntax that distinguishes them from the subjects shown in (23): they do not surface to the right of the verb, but rather at the left edge of the clause, preceded by the particle *ko* (see Bauer 1997:654–659). Consider

(25) Ko te nuinga ia i mea. **Māori**
TOP the majority CONTR TAM say
"The majority, however, said [the following]." (Bauer 1997:655)

The contrast between the subjects in (23) and the topic in (25) suggests that in the end, the pattern in (23–24) might simply have to be acknowledged as characteristic of subjects that are external arguments. If so, the presence of this specificity effect would run counter to the predictions of the VP raising hypothesis.

Different evidence pointing to a similar conclusion can be found in Chamorro. Chamorro is a negative concord language: it permits multiple instances of morphosyntactically negative items to be interpreted as expressing a single semantic negation. Now, nonsubject arguments and adjuncts can be realized as negative concord DPs, but subjects cannot (see Chung 1998). The examples in (26–27) illustrate this point for a direct object (26a), a locative adjunct (26b), and various subtypes of subjects (27a–c).

(26) a. Ti in-kässi [ni háyiyi ha' na palao'an]. **Chamorro**
not AGR-tease not any EMPH LNK woman
"We didn't tease any girls."

b. Ti in-li'i' si Dolores [ni mánunu ha'].
not AGR-see Dolores not anywhere EMPH
"We didn't see Dolores anywhere."

(27) a. *Ti mamahlao nu hagu [ni unu].
not AGR.ashamed OBL you not one
(No one is ashamed of you).
b. *Ti metgot-ña [ni unu] kini si tata-mu.
not AGR.strong-COMPARE not one than father-AGR
(No one is stronger than your father.)
c. *Ti ha-akka' yu' [ni háfafa ha'].
not AGR-bite me not anything EMPH
(Nothing bit me.)

One widely accepted approach to the semantics of negative concord DPs holds that they are interpreted as narrow-scope indefinites (see Ladusaw 1992). If we adopt this view, then the inability of subjects to be realized as negative concord DPs looks very much like a specificity effect. As before, this would seem to suggest that subjects must raise out of vP, the domain of existential closure. But to what destination would they raise, and for what reason? Once again, the absence of independently motivated answers to this question runs counter to the expectations generated by the VP raising hypothesis.

In sum, subjects in Tongan evidently lack specificity effects, but subjects in Māori and Chamorro evidently display them. (See also England 1991 for discussion of verb-initial Mayan languages, such as K'iche' (K'ichee' or Quiché), in which subjects must be definite.) This nonuniformity is reminiscent of the sorts of evidence that led A&A (1998) to draw a distinction between the EPP, on the one hand, and the issue of whether some constituent must raise to T's specifier, on the other. In the system that they end up with, the EPP is localized to a separate head in the functional layer of the clause, Agr, whose requirements are independent of T's requirements. One could, of course, think of pursuing a similar strategy here. The challenge then for the VP raising hypothesis would be to locate other sorts of empirical evidence that could bear on the issue of whether VP raises to the specifier of T or to the specifier of some other head.

6. Conclusion

Where does this leave us? Clearly, more sustained investigation is necessary before any of the issues raised in the preceding sections can be considered to be resolved. What is clear is that languages with VOS clauses differ significantly from one another in the transparency with which they conform to the predictions of the VP

raising hypothesis. The evidence from Seediq and Malagasy for the islandhood of VP is automatically explained if VPs in these languages must raise to the specifier of TP. But the evidence from word order patterns and specificity effects in Chamorro seems far less amenable to a VP raising account.

These initial indications of diversity could be pursued in two ways. One could take them to reveal that the VP raising account of verb-initial order is indeed possible, but by no means necessary; in other words, the 'much stronger claim' identified in the introduction is not tenable. On this view, which I have advocated elsewhere (see Chung 1998), there are various pathways to verb-initial order, one of which is (remnant) VP raising; the next tasks are to solidify the evidence against any monolithic account and to identify the full range of pathways. On the other hand, one could take these initial findings as an invitation to refine the theory, and fill out the empirical picture, until all the patterns presented above can be accommodated within the VP raising hypothesis. On this view, the 'much stronger claim' is ultimately correct, and the task is to demonstrate that this is so.

Whichever approach is taken, it strikes me that there is much more empirical work to be done. In delineating the profile of expectations associated with VP raising, I hope to have taken this side of the investigation a bit further.

Notes

* Earlier versions of this work were delivered at the Workshop on the Syntax of VSO Languages held at the University of Stuttgart in May 2002, and at UCLA. Thanks to Andrew Carnie, Heidi Harley, and Sheila Dooley-Collberg for agreeing to take the current version in lieu of the paper I actually delivered at the Verb-Initial Syntax Workshop, and to them, James McCloskey, and two reviewers for comments. The written version of this chapter was completed while I was a Visiting Erskine Fellow in the Department of Linguistics, University of Canterbury, Christchurch, New Zealand, and I wish to acknowledge both the Department and the Fellowship Program for their support. Some of the empirical material discussed here draws on the description of VOS clauses given in Chung (forthcoming).

1. See, for instance, Pearson (2001) and Aldridge (2002) for treatments of VOS clauses in which the VP-like constituent that undergoes VP raising is more inclusive than VP, and its landing site is the specifier of a functional head significantly higher than T in clause structure. To simplify the exposition, I will gloss over these differences of detail and simply refer to the constituent that undergoes VP raising as 'VP or equivalent', and to its landing site as the specifier of T, which I take to be the clausal head.

2. Of course, T's [D] feature can in principle also be checked by the raising to T of some head valued for the [D] feature. For relevant discussion, see, e.g., Massam and Smallwood (1997), as well as Alexiadou and Anagnostopoulou (1998), Jouitteau (this volume), and Oda (this volume).

3. The claim that verb-initial order is invariably produced by VP raising is central to, and explicitly stated by, Koopman (this volume); see also Koopman and Szabolcsi (2000) for an account of verbal complexes that assumes that all movement is phrasal movement. For the view that verb-initial order has two sources, V raising and VP raising, see, e.g., Oda (this volume).

4. Other perspectives could, of course, be entertained. On the proposal that some VOS clauses have the specifier of the clausal head projected to the right, see, e.g., Chung (1998) and the references cited there.

5. The extent to which the clitic climbing phenomenon conforms to this generalization is a question that I leave for another time.

6. Recall that Chamorro is a language in which VOS alternates with VSO. Complex sentences with clausal complements also exhibit this word order alternation, so (6a) could just as well have the infinitive occurring to the right of the subject, and (6b) could just as well have the finite embedded clause occurring to the left of the subject. For further discussion of the issues raised by such word order alternations, see Section 4.

7. For instance, one could think of invoking the A-over-A principle to force the dominating VP to be chosen as the constituent to be moved. A reviewer suggests that intuitively, the reason why VPs cannot move across a distance is that every clause must have a VP. For Chamorro, a language in which many clauses lack VPs, the intuition could perhaps be recast as follows: every clause must have a predicate of some sort. The challenge then would be to formulate the relevant constraint so that a violation would ensue when VP raises across a distance, but not when it raises within its clause. It is not obvious (to me) how to meet this challenge within frameworks in which movement leaves behind some footprint of the moved element, either a complete copy or a trace.

8. One alternative to Aldridge's analysis of clausal syntax would be to assume that Seediq is a nominative-accusative language that makes heavy use of passive (as in Keenan's 1976b analysis of Malagasy). On this view, Aldridge's ergative-absolutive clauses would be reanalyzed as passive; her antipassive clauses would be reanalyzed as active transitive; and (9a–b) would illustrate that derived subjects of passive are accessible to *wh*-movement but by-phrases are not. It is completely irrelevant for current purposes whether one adopts this alternative or Aldridge's original analysis.

9. As a reviewer observes, the discussion in the text makes the prediction that the pied-piping patterns found in Tzotzil will not be obligatory in any language whose *wh*-constructions are routinely formed via resumptive pronouns.

10. Andrew Carnie has suggested to me that similar issues might arise with respect to VP adverbs. In fact, Niuean adverbs do not follow the subject, but rather occur in a fixed order to the immediate right of the verb. See Rackowski and Travis (2000) for an analysis of adverbial order in Niuean that relies crucially on remnant VP raising.