Austronesian Verb-Initial Languages and Wh-Question Strategies

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This paper presents a research agenda for investigating possible implicational universals connecting the syntactic strategy that a verb-initial language uses to derive verb-initial word order (verb raising, VP raising, verb lowering, right hand subjects, etc.) and its strategy for forming wh-questions (wh-in-situ, clefting, wh-fronting, etc.). The Austronesian language family, with it over 1000 members, is taken as a starting point for the investigation because of its abundance of verb-initial languages. The existing analyses of Austronesian languages support one potential universal in this domain: languages that derive verb-initial word order by VP raising do not have wh-movement. Possible theoretical explanations for this pattern are evaluated. The paper then considers Fijian, a potential counterexample. Further analysis suggests that Fijian is unlikely to be a problem; however, it highlights a main claim of the paper. Careful, in-depth analyses are required to yield robust results in such a typological study.

1 Introduction

One of the first, and best known, claims about the relationship between verb-initial word order and wh-question formation is the first half of Greenberg's (1963) Universal 12:

(1) *Greenberg's Universal 12 (Greenberg 1963)*

If a language has dominant order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions

Keenan (1978, p. 292) subsequently proposed nearly the same generalization for VOS languages, differing only in recognizing that interrogative-first word order could be optional. Many languages of both the VSO and VOS types allow the interrogative phrase to appear first but do not require it; they also allow wh-in-situ.[1] In a refinement of both claims, Hawkins (1983) argues that whether the subject precedes the object or vice versa is not relevant. Only the position of the verb is typologically significant. I formulate these findings as Universal 12':[2]

(2) *Universal 12'*

If a language has dominant verb-initial (V1) word order in declarative sentences, it can put interrogative phrases first (Wh1) in interrogative questions

I start from the position that implicational word order universals like (2) might very well be valid generalizations about the world's languages but they are not part of Universal Grammar (UG). They are not part of the set of principles that guide children in their acquisition of language (Coopmans 1984; Newmeyer 2004). One reason is that, as it stands, 12' is a surface-oriented claim, referring only to linear order. Neither V1 nor Wh1 constitutes a structural claim about a language and there are numerous derivational histories to obtain both of these surface word orders. The hypothesis under investigation is that a theoretically-oriented investigation of

the structural underpinnings of V1 and Wh1 will lead us to refined generalizations that might reasonably be direct consequences of UG. The paper is a programmatic investigation of this hypothesis. I will not be primarily concerned with proposing and defending particular universal claims; rather, I will suggest possible correlations and indicate the kind of research that is necessary to develop and test such claims. It will become evident that quite subtle and sophisticated analysis is often required to evaluate such linguistic proposals.

The paper will focus on Austronesian languages (AN) as a test case for this hypothesis because of their propensity for being V1. A significant minority of the world's languages, about 19%, are V1 (van Everbroeck 2003) and my suspicion is that most of these are Austronesian.[3] Given the diversity with AN, it provides a rich testing ground for typological claims about V1 languages. Thus, the paper lays out a program for investigating certain theoretical claims within a comparative Austronesian perspective.

The organization of the paper is as follows. Section 2 lays out the theoretical issues behind V1 and Wh1. The central claim is that neither one is a natural class from a structural perspective and, thus, it would not be surprising if principles of UG did not actually refer to these parameters. In section 3 I lay out a research agenda for investigating potential universals involving V1 and Wh1. I outline the kinds of correlations one might expect to see. Section 4 begins to assemble the results from the literature that are necessary to test such potential universals. The remainder of the section turns to an in-depth consideration of one particular hypothesis from Oda (2002, 2005):

(3) *Oda's Generalization* (Oda 2002, 2005)

If a language uses VP fronting to derive V1 word order then it will have available a cleft to form wh-questions

Section 4 develops Oda's (2005) account of this claim and provides critical discussion. Section 5 turns to the empirical side of the claim and I consider a potential counterexample to (3), in Fijian. The section concludes that Fijian is probably not a counterexample but the partial analysis serves to illustrate the complexities involved in evaluating such claims even for single languages. Section 6 concludes with a summary of the research program and its prospects.

2 V1 and Wh1 within Principles and Parameters

The goal of this section is to demonstrate that within a Principles and Parameters syntax, there are numerous derivational routes to V1 and Wh1 word order. As a result, V1 and Wh1 do not form natural classes from a structural perspective. Section 2.1 discusses derivations for V1 and section 2.2 discusses Wh1. The implication of this result for linguistic universals is that, from a syntactic perspective, one does not necessarily expect all V1 and Wh1 languages to pattern alike and Universal 12' is rather surprising. Language universals may in fact be better stated over a subset of V1 and/or Wh1 languages that are a natural class based on their underlying syntax.

The proposals to follow are widely known. In general, I cite only references that specifically relate the analyses to Austronesian languages. I make no attempt to systematically credit the original sources, which are largely outside of Austronesian.

2.1 Deriving V1

There is considerable consensus that V1 languages do not all share the same derivational history and that there are numerous routes to a surface V1 word order (Chung 1998, 2006; papers in Carnie and Guilfoyle 2000; papers in Carnie et al. 2005; and others). This section surveys four possible derivations for V1 word order:[4]

(4) *derivational paths to V1*

a. right specifier (RIGHT SPEC)

b. verb raising (V RAISING)

c. predicate fronting (VP RAISING)

d. subject lowering (S LOWERING)

In what follows, I will keep to basic assumptions about clause structure. More articulated structures could be adopted but at this stage I do not believe that they contribute significantly to the discussion. I assume that the object is a right complement of V since V1 languages are overwhelmingly head-initial (Greenberg 1963 and others). Further, I will make use of only one subject position, spec,I. I ignore for present purposes a predicate-internal subject position and the accompanying projection PredP/vP above VP (Chomsky 1995; Bowers 1993). In summary, I start out with the clausal architecture in (5).

(5) $[_{CP}\ [_{C'}\ C^{\circ}\ [_{IP}\ SU\ [_{I'}I^{\circ}\ [_{VP}\ V\ \ OBJ]]]]]$

At this point I will also not be concerned with whether the V1 order is VSO or VOS. The trees will typically show VOS; however, VSO can be derived with independent mechanisms if needed for particular languages.[5] I will also only be concerned with getting the verb initial with respect to the subject and object. Adjuncts and TMA particles are not considered.

2.1.1 right subject position

The most straightforward way to achieve verb-initial word order is to simply place the subject on the right. Such an option is allowed under the traditional conception of X' Theory as a pair of

phrase structure rules that can be parameterized across languages for the order of the daughters (commas indicate unordered constituents).

(6) *X' Theory*

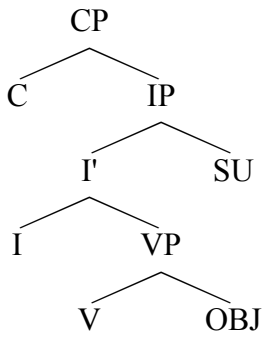
a. XP → X', spec

b. X' → X, complements

English is achieved by specifying the rule XP → spec X'. A verb-initial language could be instantiated using XP → X' spec, yielding the structure in (7). I will call this the RIGHT SPEC analysis.

right specifier analysis of V1

(7)



Guilfoyle et al. (1992) uses (a variant of) this structure as part of their explanation for V1 in a number of Austronesian languages. It is also the structure for VOS in Paul's (2000) analysis of Malagasy and Chung's (1998) analysis of Chamorro.

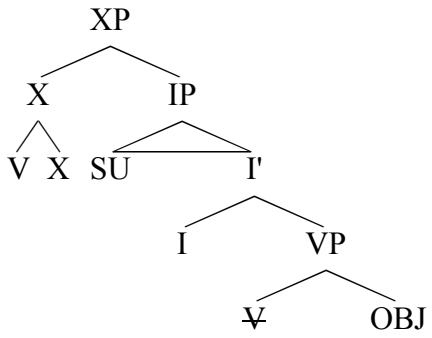
The right hand specifier analysis has been criticized from a universalist perspective that wishes to eliminate X'-related ordering parameters. Kayne (1994) and subsequent work, for example, propose a fixed underlying spec > head > complement word order that allows no parameterization or right specifiers. RIGHT SPEC would be excluded in such a system.

2.1.2 verb raising

The verb raising approach (V RAISING) to V1 uses head movement to place the verb in a left-peripheral position in the clause. From a base structure as in (5), the verb must move to a head position above the subject:

verb raising analysis of V1

(8)



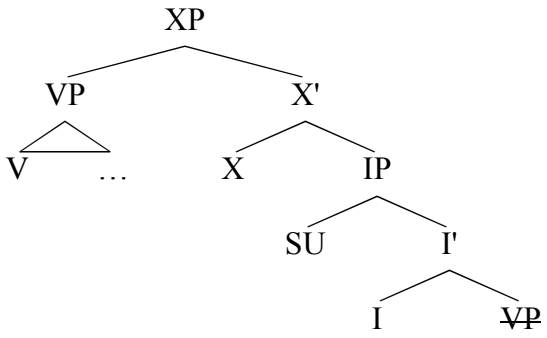
The exact position of the verb depends upon the position of the subject and the head positions available in the clause. This head position could be I°, C°, or some articulated Infl projection between the two. V RAISING is the dominant approach to V1 in the literature. It is best known for its application in Irish (McCloskey 1991, 1996). Variants have been proposed and defended in Austronesian for Tongan (Otsuka 2000, 2005) and Tagalog (Aldridge 2004), among others.

2.1.3 VP raising

An alternative to fronting the verb to achieve V1 order is to front the entire VP. Since the VP is verb-initial, such VP RAISING will also result in V1 word order. VP RAISING would take the structure in (5) and transform it into (9), in which the VP moves to the specifier of a projection above IP.[6]

VP raising analysis of V1

(9)

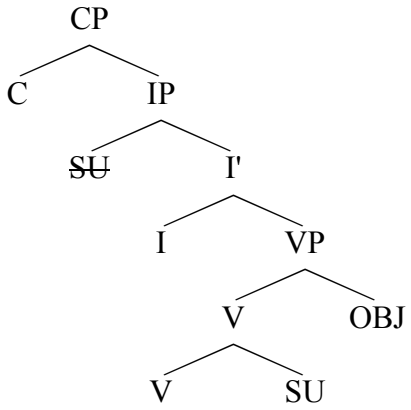


A number of researchers have generalized this approach to fronting of constituents larger than the VP, such as vP/PredP or even TP (Aldridge 2004; Pearson 2001, 2005; Potsdam to appear). I will continue to call the analysis VP RAISING, bearing in mind that it represents a larger family of analyses that derive V1 by fronting some phrasal constituent. It has proven quite popular for Austronesian in recent work (Massam and Smallwood 1997; Pearson 2001, 2005, 2006; Rackowski 1998; Rackowski and Travis 2000; Massam 2000, 2001; Aldridge 2002, 2004; Cole et al. 2002; Holmer 2005; Oda 2005; Travis 2005; Cole and Hermon 2006).

2.1.4 subject lowering

The previous two analyses derive V1 by raising some constituent to the left past the subject. An alternative is to lower the subject rightward, past the verb. Following Chung (1998), S LOWERING is an operation that lowers the subject from spec,I to a position right-adjoined to any projection of the verb (V°, V', or VP). A resulting structure is shown in (10).

(10)



The most articulated presentation and defense of this analysis for V1 is Chung's (1998) analysis of Chamorro. In that analysis, the trace of the subject in spec,I is then covered up with a null expletive which forms an expletive-argument chain with the lowered subject. Since the subject is coindexed with an element in spec,I, it behaves, by and large, as though it were still in this position. Although Chung (1998) uses S LOWERING to derive VSO order, it seems that it would also be capable of deriving VOS order if the subject were adjoined within the VP projection above the object.

2.2 Deriving Wh1

Just as with V1, there is more than one syntactic route to Wh1 word order. I survey three options here.

(11) *derivational paths to Wh1*

a. wh-movement (WH MVT)

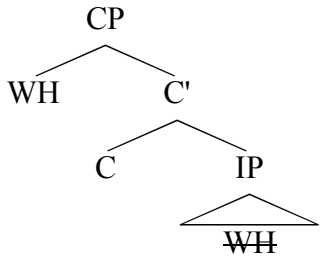
b. focus fronting (FOCUS MVT)

c. cleft or pseudocleft structure (CLEFT)

2.2.1 wh-movement

By far the most well-known way to achieve Wh1 word order is via wh-movement (WH MVT). This is traditionally analyzed as movement of a wh-phrase to spec,C:

(12)



True wh-movement specifically targets wh-phrases and is driven by a [wh] feature on the moving phrase. Given that wh-movement is universally to the left (Petronio and Lillo-Martin 1997; Hawkins 1999; and references therein), a language that has wh-movement will yield Wh1 word order. Chung (1998) proposes WH MVT in Chamorro. I suggest below that Fijian uses WH MVT.

2.2.2 focus fronting

There are other operations besides wh-movement that can move a phrase to the beginning of a clause. Such movements, often called scrambling, focus fronting, or focus movement (FOCUS MVT), mimic wh-movement in some ways, particularly in targeting a clause-initial position, but are syntactically distinct in others. Such operations usually target all varieties of focused phrases, of which wh-phrases are typically a subset because of their use in requesting new information.[7] In English, for example, focus fronting and wh-movement both target a left-peripheral position but the two can be distinguished in that only wh-movement triggers subject-auxiliary inversion. In other cases, focus movement may be optional while wh-movement is obligatory. FOCUS MVT

may also target a different structural position from wh-movement, which can be diagnosed using complementizers, question particles, topics, or other left periphery elements.

2.2.3 (pseudo)cleft structure

The final means of achieving Wh1 is via cleft formation (CLEFT). By cleft, I mean a biclausal construction resembling an *it*-cleft as in (13a) or a pseudocleft as in (13b).

(13) a. It was who that you saw?

b. The one you saw was who?

Consider the pseudocleft more carefully: If a language has no copula, the basic word order of non-verbal clauses is predicate-initial, and the predicate is a wh-phrase, one obtains Wh1 order. Such is the case for many V1 languages, which lack a copula and show predicate followed by subject word order in non-verbal clauses. If the non-verbal predicate is a wh-phrase, even if it does not undergo wh-movement, it will end up being first, yielding the desired Wh1 word order.

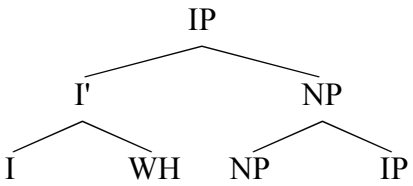
An illustration from Palauan will help to clarify. Palauan has basic VOS word order (Georgopoulos 1984, 1991). Wh-phrases appear clause-initially, (14), or in-situ (not shown).[8]

(14) a. ng-te'a a kileld-ii a sub
3SG-who NMLZ heat.REALIS.PERF-3SG.OBJ NMLZ soup
'Who heated up the soup?'

b. ng-ngera a le-silseb-ii a se'el-ii
3SG-what NMLZ burn.3SG.IRREALIS.PERF-3SG.OBJ NMLZ friend-3SG
'What did his friend burn?'

Georgopoulos (1991) argues that the structure of such clauses is as in (15). The wh-phrase is the predicate and the remaining material is a free relative. The nominal status of the subject material is signaled by the nominal element *a* (glossed NMLZ), which Georgopoulos (1991, p. 32) indicates is a marker of full NPs.[9]

(15)



Pseudocleft structures for wh-questions have been proposed for a wide range of Austronesian languages, including Palauan (Georgopoulos 1991), Malay (Cole et. al to appear), Tsou (Chang 2000), Tagalog (Richards 1998; Aldridge 2002, 2004), Seediq (Aldridge 2002, 2004), Malagasy (Paul 2000, 2001; Potsdam 2006a, 2006b), Maori (Bauer 1991), and Tongan (Otsuka 2000; Custis 2004).

3 A Research Agenda: V1/Wh1 Language Universals and UG

Given that there are numerous syntactic paths to both V1 and Wh1, from a theoretical perspective, it would be surprising (at least to me) if all V1 strategies somehow converged on allowing one or more of the Wh1 strategies, as Universal 12' predicts.

(16) *Universal 12'*

If a language has dominant verb-initial (V1) word order in declarative sentences, it can put interrogative phrases first (Wh1) in interrogative questions

Rather, I would like to propose the following research question:

(17) Are there any correlations between the derivational strategy that a language employs to obtain V1 (V RAISING, VP RAISING, RIGHT SPEC, or S LOWERING) and its strategy for forming Wh1 wh-questions (WH MVT, FOCUS MVT, CLEFT)?

In other words, are there universals of the form in (18), which I will call V1/Wh1 implicational universals:

(18) *V1/Wh1 implicational universals*

If a language uses {V RAISING, VP RAISING, RIGHT SPEC, S LOWERING} (pick one) to derive V1 word order then it {WILL, WILL NOT} have available {WH MVT, FOCUS MVT, CLEFT} (pick one) to form wh-questions[10]

My interest in establishing answers to the above questions lies not in the possible universals themselves but in what such universals could tell us about UG. Like 12' I assume that such universals would also *not* be directly encoded in UG. Rather, they should be derivable from deeper principles of grammar.

An example of the desired chain of logic from language universal to UG is Emonds' (1980) account of Greenberg's Universal 12. It is illustrative of how a V1/Wh1 universal could inform linguistic theory. Emonds assumes the correctness of the following V1/Wh1 implicational universal: If a language uses V RAISING to derive V1 word order then it will have available WH MVT to form wh-questions. The explanation runs as follows: Assume that VSO word order is derived by movement of the verb to a sentence-initial COMP. Assume also that the existence of COMP in a language entails a wh-movement transformation to COMP (den Besten 1977). Given that the verb is in COMP in VSO languages, we know that COMP is activated and there will therefore be wh-movement to that domain. We obtain the result that VSO languages will

necessarily have wh-movement, Greenberg's Universal 12. Universal 12 is not part of UG; instead, it is deduced from the syntactic assumptions in (19).

(19) a. VSO word order involves movement to COMP

b. COMP in a language entails wh-movement

c. wh-movement targets the COMP domain

Emonds' account would not succeed today; (19a,b) are not widely accepted. It nonetheless illustrates how principles of UG, which (19) were at the time, can derive word order universals that are not themselves part of UG.

The biggest challenge in the research program is the groundwork necessary to establish the existence of V1/Wh1 implicational universals. Unlike with surface-oriented typological work, paging through grammatical sketches of languages is unlikely to yield a confident answer to the questions of how V1 and Wh1 are derived in a given language. This determination is rarely straightforward and it typically requires sophisticated analysis. This is the primary reason why I can only raise questions and offer a research agenda at this stage. Analyzing enough V1 languages to identify potential patterns will require a more sustained effort.

Two brief illustrations might be useful to appreciate the complexities involved. The first concerns Chamorro. Chung (1998) convincingly argues that VSO order in that language results from S LOWERING and not V RAISING. The argumentation is complex and subtle, however, supported by decades of experience with the language. Such a result could probably not have been achieved by paging through even the best of descriptive grammars. The second illustration comes from the VOS language Malagasy. There is much excellent work on the syntax of Malagasy, beginning with Ed Keenan's groundbreaking work in the 1970's (Keenan 1972, 1976)

in which wh-questions were first described in a generative context. Some Malagasy wh-questions are formed by preposing the wh-phrase and following it with the focus particle *no*:

(20) a. iza no nanasa lamba?
who FOCUS washed clothes
'Who washed the clothes?'

b. taiza no nividy vary Rasoa?
where FOCUS bought rice Rasoa
'Where did Rasoa buy rice?'

Examination of such examples, particularly in light of what was known about wh-movement at the time suggests that the examples are also derived by WH MVT with the focus particle in C°. This made complete sense and was the accepted view until very recently. Starting with Paul (2000) (citing Dahl 1986 and Pearson 1996), it began to be recognized that such sentences are actually CLEFTS. To my mind, this change from WH MVT to CLEFT is correct and is strongly supported by empirical evidence (Paul 2001; Law 2005; Potsdam 2006a, 2006b); yet, it took numerous researchers and years to establish.

In the next sections, I begin the necessary groundwork for this research program with an incomplete survey of the literature on these topics and an investigation of Fijian.

4 Particular Universals

Logically, the establishment of V1/Wh1 implicational universals would precede their theoretical explanations. In practice, the analysis and theorizing take place in parallel. Universals are proposed in the absence of unequivocal support when such potential universals have the capacity

to inform linguistic theory. In this section I begin the work of summarizing some of the available analyses that bear on the establishment of V1/Wh1 implicational universals. I then focus on a most promising universal and discuss theoretical proposals in Oda (2005) to account for it.

4.1 language data summary

Table 1 summarizes the status of V1 and Wh1 in several Austronesian languages for which specific analyses are available. Here and in what follows I restrict my attention to argument (ARG) questions (subject and object). It is sometimes the case that languages use different strategies for questioning arguments versus adjuncts, so I exclude the latter complexity here. In the table, the term ARG IN-SITU refers to argument in-situ. Clefts are actually a kind of wh-in-situ, namely wh-predicate in-situ, if we interpret in-situ to mean 'not moved'; however, I wish to exclude cleft from that column. Finally, the table should not be taken as an endorsement of the particular analyses. I cite them without critical evaluation.

LANGUAGE	WORD ORDER	V1 STRATEGY	Wh1 STRATEGY	ARG IN-SITU	SOURCES
Malagasy	VOS	VP raising	cleft	yes	Pearson 2006, Potsdam 2006a,b
Niuean	VSO	VP raising	cleft	yes	Massam 2000, 2001, Seiter 1980
Seediq	VOS	VP raising	cleft	yes	Aldridge 2002, 2004, Holmer 2005
Maori	VSO	VP raising	cleft		Herd 2003
Toba Batak	VOS	VP raising	yes	yes	Cole & Hermon 2006
Tagalog	VSO, VOS	V raising	cleft	no	Aldridge 2002, 2004
Tongan	VSO, VOS	V raising	fronting, cleft[11]		Otsuka 2000, Custis 2004
Chamorro	VSO, VOS	S lowering, right spec	wh mvt	no	Chung 1998, 2005b
Palauan	VOS	right spec	cleft	yes	Georgopoulos 1991

Table 1

It should be clear at this point that the database is not large enough to draw clear conclusions. Most of the languages that I have included use CLEFT for Wh1; however, it is a small, unrepresentative sampling of Austronesian languages. A clear goal of the proposed research is to fill in the table with the necessary analyses.

There is one promising correlation in the table that I will pursue in the remainder of the paper. The VP RAISING languages are always wh-in-situ, either wh-argument in-situ or CLEFT (wh-predicate in-situ). I will formulate this observation as a negative implication and call it Universal 8624.

(21) *Universal 8624 (VP Raising-Wh-in-Situ Implicational Universal)*

If a language uses VP RAISING to derive V1 word order then it will not have wh-movement to form wh-questions

Part of this observation, namely, the relationship between VP RAISING and CLEFT, has already been postulated in Oda (2002, 2005):

(22) *Oda's Generalization* (Oda 2002, 2005)

If a language uses VP RAISING to derive V1 word order then it will have available CLEFT to form wh-questions

The difference between Universal 8624 and Oda's Generalization is that the former only requires that VP RAISING languages not have wh-movement. Lack of wh-movement does not entail a cleft, however. It only entails wh-in-situ. Wh-in-situ has two instantiations: a wh-predicate in-situ cleft or simple wh-in-situ without a cleft structure. The latter is thus a stronger claim. In the next section, I explore Oda's analysis of (22).

4.2 Oda 2005

Oda (2002, 2005) contain explicit theoretical proposals to account for the proposed generalization in (22).[12] Oda (2005) starts from the claim that there are just two ways to derive V1 order: V RAISING and VP RAISING (see also Otsuka 2005). Of these, VP RAISING languages show a correlation with wh-question strategies, namely, CLEFT.[13]

The various theoretical pieces of Oda's (2005) analysis are given in (23) and described below.

(23) a. parameterized EPP (φ-feature or Pred-feature satisfaction)

b. Generalized EPP (for CP and TP at least)

c. uniformity of EPP satisfaction (both EPPs satisfied by same type of feature)

d. Clausal Typing Hypothesis (a wh-question must be typed by wh-movement to spec,C xor a question particle in C°)

Oda proposes that the two types of V1 languages result from a parameterization of the Extended Projection Principle (EPP)—the requirement that spec,T be filled. Some languages check the EPP via a φ-feature; others check the EPP via a Pred(icate)-feature.[14] If a language is of the φ-feature-checking type, either a DP with φ-features can move to spec,T or a verb with φ-features (agreement morphology) can undergo head movement to T°.[15] An example of the latter is Greek as analyzed in Alexiadou and Anagnostopoulou (1998, 1999). For the Pred-feature-checking type of language, the predicate phrase must move to spec,T to satisfy the EPP. An example is Niuean as analyzed in Massam (2000, 2001). Movement of the predicate to T° is ruled out by a kind of Structure Preservation which prevents phrases from substituting into or adjoining to heads.

Oda connects the two types of EPP languages and wh-question strategies by bringing in Chomsky's (2000, 2001) Generalized EPP and Cheng's (1997) Clause Typing Hypothesis. Chomsky (2000, 2001) proposes a Generalized EPP as an extension of the traditional EPP. In addition to TP, projections such as CP also have an EPP requirement (see Rizzi's (1996) Wh-Criterion). Like the TP-EPP, the CP-EPP should be satisfiable in two ways: it can be checked by a DP with φ-features moving to spec,C or by a predicate with a Pred-feature moving to spec,C. The latter is an option not discussed by Oda but that will be relevant below. Further, the setting of the TP-EPP and the CP-EPP are not independent. Oda follows Chomsky in assuming that the

two are linked by Uniformity of EPP Satisfaction. Because the C-T domain constitutes a single system; the EPP for the two heads must be parameterized the same. Both must be identically satisfied by a φ-feature or a Pred-feature.

The final ingredient of Oda's analysis is Cheng's (1997) Clausal Typing Hypothesis (CTH): clauses must be typed. Wh-questions can be typed by either a wh-question particle in C° (Chinese, Japanese) or movement of a wh-phrase to spec,C (English, Icelandic) but not both. There are to be no optional wh-movement languages in her theory. A language is allowed only one strategy.

The EPP principles interact with the CTH in the following way to predict the relationship between V1 and wh-in-situ. Oda's analysis of VP RAISING languages is that the VP moves to spec,T (following Massam and Smallwood 1997; Massam 2000, 2001). This indicates that the TP-EPP is checked by a Pred-feature. Uniformity requires that the CP-EPP be satisfied in the same way. The flip side of this is that the CP-EPP is *not* satisfied by DP movement to check a φ-feature. Assuming that wh-movement is precisely this—DP movement for φ-feature checking purposes—VP RAISING languages cannot have wh-movement. The CTH requires that the CP-EPP can be satisfied by wh-movement to spec,C or a question particle in C°. Since the former is ruled out, VP RAISING languages must resort to a question particle and wh-in-situ. The system thus actually derives Universal 8624 rather than Oda's Generalization.

Oda (2005, pp. 118-119) goes beyond the V1/Wh1 implicational universal however and concludes that this system predicts a number of more further differences between V RAISING and VP RAISING languages:

(24)		V RAISING	VP RAISING
a.	rich and uniform subject-verb agreement	required	disallowed
b.	nominal predicate fronting	disallowed	required
c.	SV/VS alternation	possible	disallowed
d.	wh-in-situ	possible	required
e.	wh-movement	possible	disallowed
f.	questioning of VP-internal elements	possible	disallowed

(24a) indicates that only V RAISING languages can have rich verbal agreement. This is a consequence of their satisfying the EPP via φ-features on the verb that moves to T˚. Bobaljik (2002) asserts that rich verbal inflection entails verb raising. If a VP RAISING language were to have rich inflection, the verb embedded within the VP in spec,T would not be in a structural position from which it could raise to T˚ and check φ-features. Therefore, VP RAISING languages cannot have rich agreement.

(24b) indicates that nominal predicate fronting is required in VP RAISING languages because it is a particular instance of the more general pattern of predicate raising to spec,T to satisfy the EPP with a Pred-feature. The word order in such languages will be Nom+S, where Nom is a nominal predicate. V RAISING languages, on the other hand, cannot have nominal predicate fronting because the phrasal nominal cannot move to the head position T˚ in the way that verbs do. Instead, a copula or some verbal head will move to T˚ to satisfy the EPP. In those languages, we should thus see the order (COPULA)+S+Nom.

According to (24c), only V RAISING languages will show a VS/SV alternation, which arises if the subject optionally raises to spec,T, preceding the verb in T˚. VP RAISING languages, in contrast, cannot have SV word order because spec,T is already filled by the fronted VP.

Further, there can be no appropriate specifier landing site above the VP in spec,T for the subject because such positions would also not be suitable landing sites for a DP with φ-features. The EPP feature of that projection would not be checked by φ-features, in accordance with Uniformity of EPP Satisfaction. As Massam (2003) puts it, D-elements are banned from left periphery in VP RAISING languages.

Finally, (24d,e) indicate that VP RAISING languages must be wh-in-situ and cannot avail themselves of wh movement, as discussed above. V RAISING languages are not so restricted and are predicted to show either wh-movement or wh-in-situ.[16]

To this list one can add Chung's (2005a) and Aldridge's (2004) claim that VP LANGUAGES should disallow A'-movement of VP-internal constituents. Only questioning of VP-external elements, subjects and some adjuncts, should be possible. This follows in Oda's system because the VP has been moved to a specifier. Moved phrases are islands to extraction (Huang's (1982) Condition on Extraction Domain or Culicover and Wexler's (1977) Freezing Principle). Hence, questioning of such elements if the strategy requires A'-movement will be excluded.

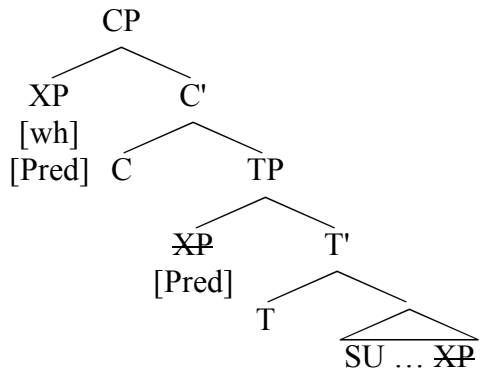
To summarize, Oda's theory provides an interesting typology of V1 languages and seems to provide a foundation for the claim in Universal 8624 that VP RAISING languages must be wh-in-situ. To this I would like to add a couple of observations. The first concerns the status of the CTH. There is a sense in which the CTH is largely redundant with Chomsky's generalized EPP. If C° contains a feature in questions that must be checked, the generalized EPP already asserts that it can be checked by movement to spec,C or by insertion of some head into C°. The difference is that the generalized EPP does not rule out both options existing within a single language, which is not possible with Cheng's CTH. Empirical observations seem to support the weaker picture. There are counterexamples to the claim that a language cannot have optional wh-

movement, including the Athapaskan languages Babine Witsuwit'en, Western Apache, and Slave (Denham 2000), Ancash Quechua (Cole 1983), Fijian (see below), and Estonian. The theory would be stronger to the extent that it did not rely on the CTH and I will assume that it is not part of UG. This does not change any of the conclusions above.

Second, the discussion of (24d,e) indicates why a VP RAISING language cannot have wh-movement. As discussed above, it thus derives Universal 8624 but not Oda's Generalization, which requires that they specifically have CLEFT. If Oda's Generalization is correct, it is not fully accounted for why one of the non-movement strategies that VP RAISING languages all choose is CLEFT. Genuine argument or adjunct wh-in-situ should be sufficient. Cross-linguistically, other wh-in-situ languages do not typically use the cleft as a neutral way to formulate a wh-question.

A possible explanation for CLEFT presents itself if we consider the Generalized EPP more carefully. If the C-T domain really is one system with identical parameterization of the EPP, CP and TP should behave exactly the same as far as (required) movement into the two domains is concerned. By hypothesis, spec,T requires an XP that can check T°'s Pred-feature. Question CPs should thus also have a Pred-feature that must be checked by an XP. This suggests an explanation for why VP RAISING languages use clefts specifically in wh-questions: spec,C in questions must be filled by an XP that can check both the Pred-feature and the wh-question feature. The only XP that could do both is a wh-predicate. Under this scenario, a wh-question in a VP RAISING language would have a derivation in which the wh-predicate first raises to spec,T and then moves further to spec,C:

(25)



This explanation suffers from the reverse problem of Oda's however, in that it seems to force CLEFT as the only strategy. All languages in the present survey however also allow simple wh-in-situ as an alternative. We can claim that such wh-in-situ questions do not project a question CP.[17] Assuming that CP_q can optionally be projected, we arrive at the following typology.

(26) *wh-question strategies for VP RAISING languages*

a. CLEFT and WH-IN-SITU (CP_q optionally projected)

b. WH-IN-SITU only (CP_q never projected)

c. CLEFT only (CP_q always projected)

All of the languages surveyed above fall into the first group. Further research, as outlined above, is required to determine if the other two types exist and, if not, why not.[18]

To summarize, at this point, we have a small data set and two possible universals on the table, repeated below. Variants of Oda's analysis can derive either one.

(27) *Universal 8624 (VP Raising-Wh-in-Situ Implicational Universal)*

If a language uses VP RAISING to derive V1 word order then it cannot have wh-movement

(28) *Oda's Generalization* (Oda 2002, 2005)

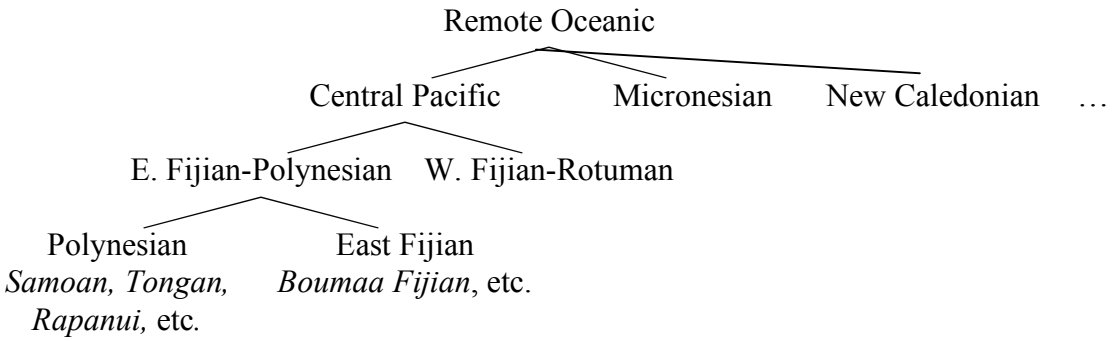
If a language uses VP RAISING to derive V1 word order then it will have available CLEFT to form wh-questions

Additional in-depth analyses of clause structure and questions in Austronesian languages is crucial to the proposals developed here. In particular, only empirical investigations can provide support or counterexamples. A counterexample to both claims would be a language with VP RAISING and WH MVT. In the next section I provide an initial analysis of an under-analyzed Austronesian language, Fijian, and consider whether it might be such a language.

5 Fijian

There is a good deal of excellent Principles and Parameters research on selected Austronesian languages: Malay/Indonesian, Javanese, Tagalog, Seediq, Tsou, Malagasy, Chamorro, Palauan, Niuean, Tongan, to name several. In order for genuine comparative work to take off, however, more languages and the researchers who specialize in them have to be brought into play. The goal of this section is twofold. First, I begin to develop a Principles and Parameters analysis of Boumaa Fijian (Dixon 1988), supplemented by Standard Fijian (Schütz 1985) as necessary. Fijian is a Central Pacific language closely related to Polynesian within the Oceanic family (Gordon 2005):

(29)



Second, I will explore the issues of V1 and Wh1 in Boumaa Fijian (henceforth BF). I begin with a general introduction to the language and then explore the structure of wh-questions and V1 clauses.

5.1 basic patterns

BF, and Fijian in general, are often described as VOS languages:

(30) a. era dree a cauravou (Dixon 1988, p. 45)
3PL.SUBJ pull D youth
'The youths are pulling.'

b. e tadra-a a 'aa'ana a gone (Dixon 1988, p. 45)
3SG.SUBJ dream-TRANS D food D child
'The child is dreaming of food.'

c. au aa ca'a-va a ca'aca'a levu yai o yau (Dixon 1988, p. 62)
1SG.SUBJ PAST do-TRANS D work big this D 1SG
'I did this big job.'

While VOS is the usual order in elicited contexts, VSO is also possible (Dixon 1988, pp. 35, 242-243):

(31) e rai-ca a gone a qase (Dixon 1988, p. 243)

3SG.SUBJ see-TRANS D child D old.person

'The old person saw the child.'

'The child saw the old person.'

(32) a. sa tau-ra a drano o Boumaa (Dixon 1988, p. 243)

ASP hold-TRANS D lake D Boumaa

b. sa tau-ra o Boumaa a drano

ASP hold-TRANS D Boumaa D lake

'Boumaa held the lake.'

Fijian is well-known for its transitive suffix, which alternates between *-Ca* and *-Ci*. *-Ca* is used when the object is third person singular, as above, and *-Ci* is used elsewhere (examples below). Dixon (1988, p. 34), following Arms (1974) and Pawley (1986), indicates that *-Ci* is the basic form (and historically prior) and *-Ca* results from reduction of the transitive suffix and a third person singular object pronoun, *-Ci + 'ea* → *-Ca*. This reduction is optional in BF, (33), but obligatory in Standard Fijian.

(33) a. au rai-ci 'ea (Dixon 1988, p. 34)

1SG.SUBJ see-TRANS 3SG.OBJ

b. au rai-ca

1SG.SUBJ see-TRANS

'I see him.'

To distinguish these cases terminologically, I will refer to what follows *-Ci* as a FULL pronoun. *-Ca*, in contrast, contains a REDUCED pronoun.

In all examples, there is a pronominal element preceding the predicate head which agrees with the subject, *era* '3PL.SUBJ' in (30a), *e* '3SG.SUBJ' in (30b), and *au* '1SG.SUBJ' in (30c). I take these elements to be subject agreement clitics (building on Churchward 1941; Milner 1972; Dixon 1988; Kikusawa 2001; contra Schütz 1985). Dixon (1988, p. 68) indicates that such subject clitics are obligatory.[19]

BF has two articles illustrated above (Dixon 1988, p. 35). *A* occurs with common nouns, *o* occurs with proper nouns: personal names, place names, and pronouns.

Although the normal state of affairs based on texts and native speakers' intuitions is for V1, with the arguments following the verb, NPs may also be fronted before the verb (Dixon 1988, pp. 41-42, 245-251). This has a topicalizing function:

(34) a. [o ira a 'ai-Waini'eli] ra saa mate va'a-dua 'ece
D 3PL D native.of-Waini'eli 3PL ASP dead altogether ALL
'They, the people of Waini'eli, they are all dead.' (Dixon 1988, p. 246)

b. [a uvi] era dau-te-a a we-imami qase (Dixon 1988, p. 246)
D yam 3PL.SUBJ HAB-plant-TRANS D our ancestor
'As for cultivated yam, our ancestors would plant it.'

A resumptive pronoun/clitic must be left behind with fronting, although for common nouns as in (34b), it may be reduced into the transitive suffix *-Ca*. If the fronted element is a proper noun (which takes the determiner *o*), a full resumptive pronoun (bold-faced) must be left behind. The reduced form in *-Ca* is not acceptable:

(35) a. [o 'emudrau] au aa rogo-ci **'emudrau** (Dixon 1988, p. 247)

D 2DU 1SG.SUBJ PAST hear-TRANS 2DU.OBJ

'As for you two, I heard you two.'

b. *[o 'emudrau] au aa rogo-ci/-ca

D 2DU 1SG.SUBJ PAST hear-TRANS

(36) a. o Nato saa mai rai-ci **'ea** o Roopate (Dixon 1988, p. 247)

D Nato ASP come see-TRANS 3SG.OBJ D Roopate

'As for Nato, Roopate came to see him.'

b. *o Nato saa mai rai-ca o Roopate

D Nato ASP come see-TRANS D Roopate

(36b) is ungrammatical, in contrast to (34b), because a full resumptive object pronoun is required.

5.2 wh-questions

Wh-questions in BF can employ wh-in-situ:

(37) a. e sabi-ci i'o **o** **cei**? (Dixon 1988, p. 170)

3SG.SUBJ hit-TRANS 2SG D who

'Who hit you?'

b. o aa rai-ci **cei**?

2SG.SUBJ PAST see-TRANS who

'Who did you see?'

c. o aa soli-a **vei** **cei** a omu i-sele?

2SG.SUBJ PAST give-TRANS PREP who D 2SG.POSS knife

'Who did you give your knife to?'

Fronting of the wh-phrase is also possible:

(38) a. **o** **cei** e sabi-ci i'o? (Dixon 1988, p. 170)

D who 3SG hit-TRANS 2SG

'Who hit you?'

b. **o** **cei** o aa rai-ca?

D who 2SG PAST see-TRANS

'Who did you see?'

I claim that the movement above is WH MVT. In order to demonstrate this, I will show that it has neither the characteristics of topicalization, the known fronting option in the language illustrated above, nor CLEFT.

The first observation against wh-fronting being an instance of topicalization is that Dixon (1988, p. 170) indicates that wh-fronting may leave behind a full resumptive pronoun, (39a), but need not. The reduced pronoun is also possible, (39b). This makes it syntactically different from topicalization, which we saw must leave behind a full pronoun, (40a,b) below (see also (35) and (36) above).

(39) a. **o** **cei** o aa rai-ci 'ea? (Dixon 1988, p. 170)

D who 2SG PAST see-TRANS 3SG.OBJ

b. **o** **cei** o aa rai-ca?

D who 2SG PAST see-TRANS

'Who did you see?'

(40) a. **o** **Mere** o aa rai-ci 'ea (Dixon 1988, p. 170)

D Mary 2SG PAST see-TRANS 3SG.OBJ

'As for Mary, you saw her.'

b. ***o** **Mere** o aa rai-ca

D Mary 2SG PAST see-TRANS

The contrast between (39b) and (40b) shows that wh-fronting is subject to different restrictions than topicalization. It is reasonable to conclude that it is a different syntactic operation.

On the other hand, the fronting in wh-questions patterns with relative clauses, which I assume involve null operator movement. Relative clauses exhibits no special grammatical marking in Fijian, (41). Relativization must also leave behind a resumptive pronoun (Dixon 1988, pp. 251-255). As with wh-questions and unlike with topicalization, the resumptive pronoun for a third singular object can be reduced into the transitive suffix *-Ca*, (41b). This makes relativization parallel to wh-fronting in (39b) and unlike topicalization in (40b).

(41) a. a 'edra 'aa'ana [e saqa] (Dixon 1988, p. 253)

D 3PL.POSS food 3SG.SUBJ boiled

'their food which was boiled'

b. a kuruse [au saa tara-a] (Dixon 1988, p. 251)

D cross 1SG.SUBJ ASP hold-TRANS

'the cross I am holding'

Lastly, it is unsurprising that wh-fronting does not look like topicalization as a fronted wh-phrase is not a topic and is an unlikely target for a topicalization operation. These observations collectively suggest that wh-phrase fronting is distinct from topicalization in Fijian and is plausibly WH MVT.

Wh-fronting, in (38), also does not look like CLEFT. If that were the case, the wh-phrase should behave like a nominal predicate and the material following the wh-phrase should be a headless relative clause:

(42) *cleft analysis of Fijian wh-fronting*

[**o cei**]$_{\text{predicate}}$ [o aa rai-ca]$_{\text{DP/headless relative}}$?

D who 2SG PAST see-TRANS

'Who did you see?'

The first consideration against this account is that Dixon (1988, pp. 65-66) indicates that predicate nominals may not include the common determiner *a*. This is permitted with the wh-phrase *a cava* 'what', however, (43). *A cava* 'what' differs from *o cei* 'who' in being a common noun rather than a proper noun.

(43) a. [a cava] e lutu-mi au? (Dixon 1988, p. 171)

D what 3SG.SUBJ fall-TRANS 1SG.OBJ

'What fell on me?'

b. [a vale cava] o va'a-i-ti'oti'o 'ina?

D house what 2SG.SUBJ ??-NMLZ-stay PREP.3SG

'What house do you live in?'

Second, in none of the wh-questions in Dixon (1988) is the initial wh-phrase preceded by a subject pronominal or any other pre-predicate material such as TAM markers. Dixon does not indicate that this would be possible. True predicate nominal sentences do seem to allow such preceding material. In (44a), the predicate nominal is preceded by an aspect particle (boldfaced). In (44b), it is preceded by a modal particle and aspect particle In (44c), there is a subject clitic (following the topicalized DP).

(44) a. **sa** [marama savasavaa] sara gaa [o Aneta] (Dixon 1988, p. 66)

ASP lady clean MOD MOD D Aneta

'Aneta is a very clean lady.'

b. **me** **sa** [i-otioti ni omu 'ana-tamata] [qoo]

SHOULD ASP last ASSOC 2SG.POSS eat-person this

'This should be the last (instance) of your eating people (a priest is entreating a Fijian chief to give up cannibalism).' (Dixon 1988, p. 67)

c. o yau, au [Tui Vanualevu] (Dixon 1988, p. 345)

D 1SG 1SG.SUBJ King Vanualevu

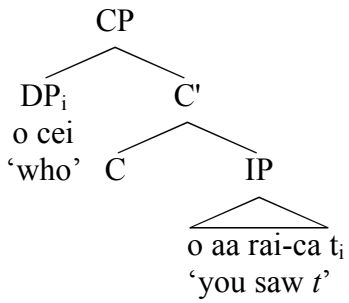
'As for me, I am King of Vanua Levu.'

Lastly, the clause-final material in wh-questions like (42) does not look like a headless relative clause. It does not have a determiner in any of Dixon's examples. Clear cases in which the material following the wh-phrase is a nominalized clause (Dixon 1988, pp. 130-134) have a determiner and a possessor:

(45) a cava [a omu nanu-ma]? (Dixon 1988, p. 241)
D what D 2SG.POSS think-TRANS
'What is your thinking?'

I tentatively conclude that wh-questions in BF are the result of genuine WH MVT and not CLEFT or topicalization. An example such as (38b) would have the analysis in (46).

(46) a. o cei o aa rai-ca?
D who 2SG PAST see-TRANS
'Who did you see?'



5.3 V1 clause structure

The issue of how Fijian derives V1 word order is rather less clear. What we will see is that Fijian does not pattern with VP RAISING languages. It looks more like a V RAISING language. Before concluding this, I lay out an analysis of Fijian clause structure in Alderete (1998), which

suggests that V1 arises from Fijian being a pronominal argument language. We can at least tentatively conclude that Fijian does not counter-exemplify Universal 8624.

To begin, consider how Fijian/BF stacks up against the putative characteristics of V RAISING and VP RAISING languages from section 4, repeated in (47) with a final column for BF added. I discuss the specifics below; however, it is clear that BF patterns most closely with V RAISING and not VP RAISING languages with regard to these characteristics.

(47)

	V RAISING	VP RAISING	BF/FIJIAN
a. subject-verb agreement	required	disallowed	required
b. nominal predicate fronting	disallowed	required	??
c. SV/VS alternation	possible	disallowed	possible
d. wh-in-situ	possible	required	possible
e. wh-movement	possible	disallowed	possible
f. questioning of VP-internal elements	possible	disallowed	possible

Taking the initial pronominal clitics to be agreement indicates that Fijian does in fact have obligatory (Dixon 1988, p. 68), rich and uniform subject-verb agreement, (47a). Regarding predicate fronting, (47b), BF does show predicate initial order Nom+S in nominal clauses, (44). At the same time, Dixon (1988, p. 240) discusses 'equational clauses' in which the alternative order S+Nom seems to be unmarked:

(48) a. [yaa] [a i-va'a-rau ni teivudi] (Dixon 1988, pp. 241-242)

that D preparation ASSOC plant.plantain

'That is the method of planting plantains.'

b. [o yau] [a o-mudrau qase ni vantua]

D 1SG D 2DU.POSS ancestor ASSOC place

'I am (one of) your elders of the place.'

c. [a gonetuuraga o Raatuu-i Ca'au] [a Tui Vanualevu raaraba tale gaa]

D great.chief D Title D Title whole.of MOD MOD

'The great chief Tui Ca'au was king of the whole of Vanua Levu.'

It is unclear whether these are basic clauses, with the earlier clauses somehow derived, or whether these equational clauses are themselves derived by topicalization. The situation is equally unclear with PP predicates, which should pattern with nominal predicates for the purposes of this diagnostic. PPs tend not to be clause-initial predicates (I did not find any clear examples); rather, a locative verb *ti'o* 'stay' (*tiko* in Standard Fijian)is used:

(49) a. era saa ti'o tauco'o i le'utu (Dixon 1988, p. 313)

3PL ASP stay all PREP forest

'They are all in the forest.'

b. saa tiko mai waqa na kato (Schütz 1985, p. 344)

ASP stay PREP boat D box

'The box is on the boat.'

Alternatively, one finds NP PP order:

(50) a. [Narova] [i Nagasau] (Dixon 1988, p. 312)

Narova PREP Nagasau

'Narova is (near) Nagasau.'

b. [o yau] [mai Lau] (Schütz 1985, p. 345)

D 1SG PREP Lau

'I'm from Lau.'

I will not make a claim about the availability of non-verbal initial predicates, pending further investigation.

A similar situation exists concerning possible SV/VS alternations, (47c). VS seems to be the default order, as Dixon 1988 and the examples above show, (30). SV order is possible but is a result of topicalization. It is unclear whether this should count as an SV/VS alternation. I will assume that it does.

Regarding (47d,e,f), we have already seen that BF allows wh-in-situ, (37). I previously suggested that it has wh-movement and examples of questioning a direct object with this strategy were possible.

It seems most clear from (47) that, despite a basic VOS word order, Fijian does not behave like a VP RAISING language. Fijian in fact patterns with V RAISING. If this is correct, it is not a threat to the claimed correlation between VP RAISING and CLEFT. One might hypothesize then that Fijian is a V RAISING language. The substantial literature on Celtic languages, which have traditionally been taken to also be V RAISING languages, and Chung's (1998) thorough argumentation that Chamorro is not a V RAISING language would provide the next stop in supporting this claim.

Before concluding, I would like to introduce Alderete's (1998) analysis of Fijian clause structure. Alderete develops an analysis of Fijian using the Pronominal Argument Hypothesis (Jelinek 1984; Baker 1996):

(51) *Pronominal Argument Hypothesis (PAH)*

agreement morphemes represent pronominals functioning as arguments of the predicate

full noun phrases are adjuncts coindexed with the pronominal arguments

Under the PAH, subject and object A-positions are filled with (null or overt) pronouns. In order to specify these arguments, full noun phrases may be adjoined in A'-positions and coindexed with the pronominals. The PAH has been applied to a wide range of free word order languages.

The PAH predicts that the relevant languages will have certain characteristics (Alderete 1998, p. 24):

(52) *characteristics of PA languages*

a. full NPs can drop (pro-drop)

b. free constituent order of V, S, and O

c. lack of morphological case

The ability to drop full NPs, (52a), follows because they are optional adjuncts. The true arguments are the pronominals, be they null or overt. Free constituent order, (52b), also follows from the adjunct status of the arguments. They may be adjoined in any order, to the left or to the right. Lastly, because the NPs are adjuncts that are not in A-positions, they cannot be Case-marked and will lack morphological case, (52c). Fijian largely fits this scenario. It is a pro-drop language; only the pronouns are required in a minimal clause, (53). The pronouns function similarly to agreement affixes in more familiar PA languages.

(53) au rai-ci ira (Dixon 1988, p. 34)

1SG.SUBJ see-TRANS 3PL.OBJ

'I see them.'

Alderete (1998, p. 27) summarizes the state of affairs for Fijian: i) every clause contains a subject pronoun (clitic) and ii) if the predicate is transitive, the object is indicated by a pronoun or the transitive suffix *-Ca*.[20] Such a scenario is clearly compatible with the PAH.

Full NPs are also not marked for case (see (31) and (32)), which is also in keeping with the PAH. The main wrinkle, as Alderete points out, is that Fijian is not really a free constituent order language. Although word order is freer than in Malagasy or English, V1 order dominates. Alderete provides solutions for this problem, and others. I do not repeat the analysis here. It is the idea that Fijian is plausibly a PA language that I highlight at this stage. More in-depth research and a more critical evaluation of Alderete's proposal will determine if such an approach is appropriate. The discussion of the PAH in Chung (1998) will be useful.

In conclusion, I have tentatively determined that Fijian has WH MVT. If it were a VP RAISING language, it would be problematic for the claim that such languages do not employ WH MVT. Initial indications are that it is not a VP RAISING language however, even though it is not entirely clear how Fijian clause structure is derived. Both V RAISING and the Pronominal Argument Hypothesis seem to be viable alternatives. If Alderete (1998) is correct, V1 word order in Fijian instantiates a clause structure strategy that has not been identified, or even widely considered, in Austronesian. If that is the case, the Austronesian languages that have been best investigated do not exhaust the possible syntactic analyses of V1, pointing again towards the need for further in-depth work on the clause structure of Fijian and other Austronesian languages.

6 Conclusions

The goal of this paper has been to set up a research agenda for investigating and accounting for possible implicational universals concerning the syntactic strategy used to derive verb-initial word order and the strategy(s) used to form wh-questions. Austronesian is a fertile testing ground for this agenda because of the diversity in the language family and the plethora of V1 languages.

I have offered two specific potential universals in this domain, building on Oda (2005):

(54) *Universal 8624*

If a language uses VP RAISING to derive V1 word order then it cannot have wh-movement

(55) *Oda's Generalization* (Oda 2002, 2005)

If a language uses VP RAISING to derive V1 word order then it will have available CLEFT to form wh-questions

These claims are supported by the very limited number of languages surveyed. An important part of the research agenda will be to expand the analytical database that can be used to evaluate such proposals.[21]

The paper concluded with an investigation of Fijian as a potential counterexample to Universal 8624 and a token contribution to the analytical database. It proved not to be a counterexample but, in showing this, it became evident that more work is necessary. Fijian showed rather novel characteristics, unlike many of the better-analyzed V1 Austronesian languages. It evidenced WH MVT and possibly a pronominal argument clause structure.

In closing, I restate the two main questions that have been raised.

(56) a. What, if any, are the implicational relationships between the syntactic strategy a verb-initial language uses to derive V1 and its wh-question strategy?

b. Are all VP RAISING languages wh-in-situ and, if so, what particular wh-in-situ strategies do they use (CLEFT and/or argument wh-in-situ)?

Endnotes

[1] Austronesian examples include Tuvaluan (Besnier 2000), Toba Batak (Cole and Hermon 2006), Malagasy (Keenan 1978), Fijian (Dixon 1988), Tongan, and Palauan.

[2] Dryer 1991 cites 13 languages that he claims are exceptions to Greenberg's Universal 12. Of these, 10 are Austronesian: Bikol, Fijian, Hawaiian, Kiribatese, Niuean, Samoan, Tahitian, Toba Batak, Tongan, Rukai. My investigations show that Fijian, Kiribatese, Niuean, Samoan, Tahitian, Toba Batak, and Tongan allow wh-in-situ but do not require it. Thus, they are not exceptions to Universal 12'. I do not have information on the other languages.

[3] For example, Dryer (1989) indicates that 71% of VSO languages are Austronesian.

[4] There are at least two other analyses of V1. A flat structure is common in the LFG literature (Kroeger 1993; Sells 2000) in which the initial-verb and its arguments are all sisters. The pronominal argument hypothesis (PAH) (Jelinek 1984; Baker 1996) can also create V1 ; the core clause consists of a verb and null pronominal arguments with overt noun phrases coindexed with the subject and object right-adjoined to the clause. See the discussion of the PAH with respect to Fijian in section 5.

[5] One could make use of a predicate-internal subject position, object shift, and/or rightward extraposition to obtain VSO or VOS. See Chung (1998, 2005a, 2006) and references therein for discussion.

[6] Without further assumptions, VP RAISING only derives VOS word order, as the predicate moves as a unit. See Massam (2000, 2001) for discussions of predicate fronting for VSO languages.

[7] I will assume that this movement is not related to topicalization on the assumption that wh-phrases cannot be topicalized (Bresnan and Mchombo 1987).

[8] I use the following abbreviations in glossing: 1/2/3, number; ASP, aspect; ASSOC, associative; DU, dual; HAB, habitual; MOD, modifier; NMLZ, nominalization; OBJ, object; PERF, perfective; PREP, preposition, POSS, possessor; SG/PL, number; SUBJ, subject; TRANS, transitive.

[9] A potential complication here is that Palauan does not appear to be predicate-initial when it comes to non-verbal predicates. The word order in equational sentences of the form NP NP is subject + predicate (Josephs 1975, p. 377):

(i) a demak a sensei
NMLZ father.1SG NMLZ teacher
'My father is a teacher.'

Josephs (1975) does not indicate if predicate + subject order is possible.

[10] I do not formulate the statements such that a language with a particular V1 strategy must use a particular Wh1 strategy. The reason for this is that wh-in-situ seems overwhelmingly available, at least in V1 Austronesian languages, and should not be excluded as an alternative strategy. It may turn out that wh-in-situ has a special discourse use in these languages but insufficient descriptions exist to determine the status of wh-in-situ in most of the languages under investigation.

[11] Custis (2004) argues that the structure of Tongan wh-questions is ambiguous between a fronting construction and a cleft.

[12] Aldridge (2004, pp. 329-332) also contains an explanation for why VP RAISING languages cannot use wh-movement. Using the clause structure that she argues for, a wh-moved DP would have to be interpreted as a topic. Assuming that this is an anomalous interpretation, the structure is illicit. A cleft structure or wh-in-situ avoids this semantic problem. In the interest of space, I do not consider that account here as it relies on two less familiar Minimalist principles.

[13] V RAISING languages, Oda points out, do not show any correlations. The Austronesian V1 languages above make use of CLEFT but non-Austronesian languages such as Romanian, Catalan, and dialects of Arabic use WH MVT. There does not seem to be an implicational universal relating V RAISING and any wh-question strategy.

[14] Chung (2006) raises theory-internal issues concerning the exact identity of the feature that drives such EPP checking. She concludes that "while VP raising might well be motivated by the need to check an EPP-feature, the precise identity of that feature remains unclear" (Chung 2006, p. 706). I agree with the assessment but will put this problem aside. The analysis of VP RAISING in Aldridge (2004) is not subject to this criticism as the fronting operation is not driven by feature checking.

[15] See Davies and Dubinsky (2001) for similar ideas.

[16] Such predictions force Oda to analyze Irish as a VP RAISING language, contra much earlier work on Celtic.

[17] The question particle hypothesized as part of the CTH would be insufficient here. It could check the wh-feature of C° but it is unlikely that it could check the Pred-feature.

[18] Null operators are clearly relevant to this system. If they are DPs (contra Massam 2003), then VP RAISING languages cannot have null operator movement.

[19] In a number of instances they phonologically merge with a previous element such as a complementizer (Dixon 1988, p. 30). The pronoun may also optionally be deleted if it is immediately preceded by a bare fronted pronoun (Dixon 1988, p. 246) and very occasionally in casual speech.

[20] See Kikusawa (2000) for discussion of the clitic versus agreement debate concerning object pronouns. This analytical choice is orthogonal to the analysis of Fijian as a PAH language.

[21] In an interesting turn, Universal 8624 is reminiscent of the second half of Greenberg's Universal 12 (not given above):

(i) *Second Half of Greenberg's Universal 12 (Greenberg 1963)*

If a language has dominant order SOV in declarative sentences, there is never a wh-movement rule

If Universal 8624 turns out to be correct, VP RAISING languages pattern with verb-final languages in lacking wh-movement. I hesitate to speculate on any theoretical significance.

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