Samoan predicate initial word order and object positions

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Abstract Verb-initial ordering may be derived by fronting the VP (or a larger constituent) to a specifier position higher than the subject. For VSO languages, this analysis requires that the object raise out of the VP to a position below the subject before the (remnant) VP fronts to the higher position. This paper builds a comprehensive analysis of VSO order in the Polynesian language Samoan, employing the VP-fronting analysis, arguing the account does better than competing derivational accounts (e.g., a head movement account). I argue that evidence for the raising of the complement of V to a VP-external position comes from data showing that the coordination of unaccusative and unergative verbs is not possible in Samoan. This paradigm has a ready explanation under the VP-fronting account: as the complement of V must raise out of the VP before VP-fronting takes place, unaccusative subject DPs are predicted to bind a VP-internal copy. This blocks coordination with unergative VPs which do not contain DP copies (via the Coordinate Structure Constraint). I provide a generalized account of DP movement whereby the functional head *v* is specified to trigger the movement of *all* DPs in its local c-command domain to its projected specifier positions. In cases where *v* does not locally c-command any DP, the requirement is trivially satisfied. I show how this accounts for the observed VSO/VOS word order alternations in Samoan.
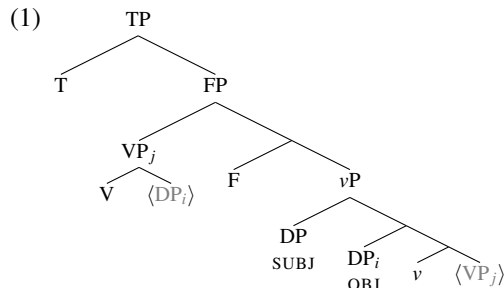
1 Introduction

This paper deals with the VP-fronting analysis of the clause structure of verb initial languages. The analysis holds that the VP (or a larger XP-sized constituent containing the VP) raises to a pre-subject position. This account has proven popular in analyses

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of Austronesian verb initiality (e.g., Massam 2001; Aldridge 2004; Rackowski and Travis 2000, among others). This paper provides several pieces of evidence in favor of a VP-fronting account of the Polynesian language Samoan. I show how this case study of Samoan clausal syntax allows us to better understand the formal mechanisms behind various productive word order alternations.

Samoan has VSO word order in basic transitive clauses. The VP-fronting analysis derives VSO from an underlying SVO structure by first raising the object out of the VP. In (1), the object DP is moved to an inner specifier of vP, then VP (or a larger constituent), which contains the vacated position of the object, is raised to a position higher than the subject. For Samoan, I hypothesize that this position is a specifier of a projection immediately below T (labelled FP to remain neutral as to its precise identity).

(1)

```
              TP
             /  \
            T    FP
                /  \
             VP_j    \
            /   \     \
           V  ⟨DP_i⟩   \
                 F      vP
                       /  \
                     DP    \
                    SUBJ  DP_i  v  ⟨VP_j⟩
                          OBJ
```

The analysis in (1) makes predictions about the structure and syntactic complexity of the fronted VP. Firstly, the fronted VP should host elements typically analyzed as VP-internal, including resultatives, directional particles, and manner adverbs. Next, the constituent may consist of coordinated phrasal constituents. Finally, assuming that restructuring predicates such as *fia* 'want' select for a VP complement (following Wurmbrand 2001), the restructuring predicate should front along with its VP complement. This paper argues that all of these properties are true of Samoan, allowing syntactically complex fronted VPs such as the bracketed constituents in (2), which include restructuring predicates, coordination, and directional particles. I discuss these kind of data in more detail in §3.[1,2]

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[1] Data in this paper comes from a variety of sources. Examples without an identified source come from consultations with native speakers. Abbreviations of sources in example sentences are as follows: BFP = *Brighter Futures Program* brochure, accessible at `http://www.community.nsw.gov.au/__data/assets/pdf_file/0009/321111/brighterfutures_samoan.pdf`; BOM = Book of Mormon 1965, The Church of Jesus Christ of Latter-day Saints (1903 Samoan translation); DIfP = *Drug Information for Parents* brochure, accessible at `http://www.education.vic.gov.au/Documents/school/teachers/health/samoan.pdf`; MH = Mosel and Hovdhaugen 1992; Mi = Milner 1966; Mos = Mosel 2004; Moy = Moyle 1981, 'O Sina ma le 'Ulafala, accessible at `http://www.fagogo.auckland.ac.nz/content.html?id=1`; MS = Mosel and So'o 1997.

In some cases, glosses have been changed from the original for consistency. Orthography also differs from source to source: some sources omit macrons which mark vowel length and the ' character which is used for the glottal stop. Where omitted in the source material, these have been added to the examples in this paper.

[2] Abbreviations used are as follows: ABS absolutive; CAUS causative; CIA verbal suffix *-Cia*; COMP complementizer; DAT dative; DIR directional particle; EMPH emphatic particle; ERG ergative; EXC exclusive (1st person dual/plural); FOC topic/focus marker; FUT future; GEN genitive; INA verbal suffix *-a/-ina*;

(2) a. *'ua   lātou [fia   [tutū   ma tatalo]]_{VP} i   sunako   ma*
        PERF   3PL   want   stand.PL and pray.PL   LOC synagogue.PL and

        fetaulaigāla
        street.cornerPL

        They want to stand and pray in synagogues and street corners. (Matthew 6:5)

   b. *'ou   te   [fia   [[feiloa'i] ma   [toe   faatōfā   atu]]_{VP} i   la'u*
        1SG   PRES   want   meet   and again farewell DIR   LOC   my

        afioga
        master

        I want to see and again say goodbye to my lordship.

                           (afamasagaofisa.wordpress.com)

Next, the VP-fronting account of VSO requires that the object front out of the VP, before the VP itself fronts. If the object does not move out of the VP, it should front along with the VP, deriving [VO]S word order. Massam (2001) observes that the closely related Polynesian language Niuean has basic VSO word order with full DP objects. However, bare NP objects appear directly adjacent to the verb, resulting in [VO]S order. Massam accounts for this VSO/VOS word order alternation by analyzing bare NP objects as failing to raise out of the VP, therefore fronting along with the verb to the pre-subject position. Samoan demonstrates the same VSO/VOS alternation as Niuean, suggesting the same kind of analysis is warranted. In (3a), the full DP object is realized in a post-subject position, here analyzed as moving out of the VP before the VP itself fronts. In (3b), the bare NP object is realized in a pre-subject position, here analyzed as remaining within the VP as the VP fronts.

(3) a. *e   [su'e   ⟨DP_i⟩]_{VP} pea   e   le   teine [le   maile*
        PRES   search   continually ERG   SPEC   girl   SPEC   dog

        ula]_i
        mischievous

        The girl continually searches for the mischievous dog.

   b. *e   [su'e   [maile ula]_{NP}]_{VP} pea   le   teine*
        PRES   search dog   mischievous continually SPEC   girl

   The girl continually searches for mischievous dogs.

The VP-fronting account of verb initiality holds that DPs which are merged as the complement of V (direct objects of transitives and subjects of unaccusatives) bind a trace or copy, depending on the theory of movement assumed, within the VP. I provide evidence for this based on coordination. Assuming unaccusative subjects are underlyingly sisters of V, the account predicts they must raise out of the VP, binding a VP-internal copy. As unergative VPs contain no VP-internal copy, the coordination of unaccusative and unergative verbs should be ruled out as a violation of the Coordinate Structure Constraint. (4a) shows such coordinations are indeed ungrammatical in Samoan, while coordinations of unergatives with unergatives (4b) and coordinations of unaccusatives with unaccusatives (4c) are fine. I suggest that this paradigm has a

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LOC locative; NEG negation; NSPEC non-specific determiner; PERF perfect; PL plural; PRES present tense; Q question particle; SG singular; SPEC specific determiner

ready explanation if we assume, based on the VP-fronting account, that DPs which are merged VP-internally must front out of the VP before VP-fronting takes place.

(4) a. *'ua [[taunu'u ⟨*DP_i*⟩] ma [siva]] [Simi]_i ana po.
         PERF arrive   and dance Simi   last night
         Simi arrived and danced last night.
     b. 'ua [[siva] ma [ta'alo]] Simi ana po.
         PERF dance   and play   Simi last night
         Simi danced and played last night.
     c. 'ua [[taunu'u ⟨*DP_i*⟩] ma [toefoi ⟨*DP_i*⟩]] [Simi]_i ana po.
         PERF arrive   and leave   Simi   last night
         Simi arrived and left last night.

Having argued that VP-fronting is the right approach to verb initiality in Samoan, I explore the hypothesis proposed in previous literature (e.g., Massam and Smallwood 1997; Alexiadou and Anagnostopoulou 1998; Massam 2000; Otsuka 2005) that verb initial word order is driven by the EPP: the principle, assumed to be active in English, by which every finite clause is required to contain an overt subject. Ordinarily, this principle is operationalized by positing an uninterpretable feature on T, an "EPP feature", which is eliminated only when the specifier of T is occupied by an overt DP as in (5a) (see e.g., Svenonius 2002 for an overview). In verb initial languages however, this feature is understood to be satisfied in these languages by the VP, instead of the subject, as in (5b).

(5) a.   b.
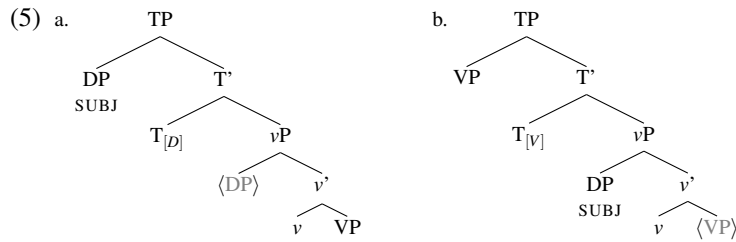
This analysis has the advantage of reducing subject initial word order and verb initial word order to a simple parameter setting. Thus, in this parametric format, the presence of the EPP feature on T can be thought of as a universal principle. However, I argue that the picture in (5b) cannot be correct for Samoan. I demonstrate that although Samoan is a VP-fronting language, the functional head T in Samoan does not trigger movement of the VP as in (5b), but rather triggers movement of DPs, as in (5a), albeit only pronominal DPs. This accounts for the observed SVO word order in cases where the subject is realized as a pronoun (cf. Otsuka's (2005) study of similar empirical facts in Tongan).

(6) sā   'ou tuli   le   tama
     PAST 1SG chase SPEC boy
     I chased the boy.

Further, I provide evidence that a functional head below T, labelled F in (1), *does* enforce a requirement that its specifier is filled by a predicative XP. Thus, the distinction between subject initial and verb initial languages cannot universally be reduced to just a parameter setting on T, but requires a finer grained treatment of functional projections following the tradition of Pollock (1989) etc. Under this more permissive approach, multiple functional heads within a clause may have formal requirements that their specifiers are filled by constituents of different categories. In Samoan, T requires that its specifier is filled by pronominal DPs only, while F requires that its specifier is filled by predicative XPs.

The VP-fronting account of VSO further raises the question of why DP objects do not remain within the VP, fronting along with the verb to a pre-subject position, generating [VO]S word order. I propose that Samoan *v* has its own "EPP" requirement which forces the fronting of DPs in its local c-command domain. In implementing the system described in this paper, I provide an explicit account of features which trigger movement. I propose a set of parameters upon which these features may vary, including (i) their location, (ii) the category of constituent attracted to the specifier position, and (iii) the conditions under which the feature's requirements are satisfied.

In terms of the parameter (iii), I propose a category of features which trigger movement if they c-command a constituent of the requisite category. In structures where they do not c-command any such constituent, the featural requirement is nevertheless satisfied without movement. This approach relates in many ways to the one taken in Preminger 2014 who proposes a similar theory in the domain of agreement. I compare this "conditional" approach to approaches which assume that features obligatorily trigger movement and to approaches which assumes that features optionally trigger movement. I suggest that the conditional approach is empirically more successful then either of these alternative approaches.

In Section 2 I provide the key pieces of evidence that VP-fronting is the right approach for Samoan. In Section 3, I discuss the structure of fronted VP, providing data which are problematic for the alternative head movement theory of verb initiality. In Section 4, I discuss structures with multiple VPs (e.g., structures with restructuring predicates and VP-adjuncts), and explain the requirement that only the largest VP is able to front in terms of phase theory. In Section 5, I discuss the possible landing site of the fronted VP, and conclude the landing site must be below T. In Section 6, I show how the VP-fronting account of Samoan clause structure accounts for the coordination paradigm outlined in (4). In Section 7, I discuss the movement of the VP-internal DP to a clause-medial position. I propose an explicit characterization of a feature on *v* which derives this movement.

2 The VP-fronting analysis

In this section, I provide evidence that Samoan verb initiality is best analyzed by movement of an XP-sized constituent which contains the verb to a pre-subject position. Evidence comes from the existence of pre-subject, non-verbal, phrasal predicates, as well as the existence of pseudo noun incorporation in the sense of Massam (2001). Here, I discuss the basic word order patterns found in Samoan, including pro-

ductive alternations between VSO, VOS, and SVO orders. I provide a characterization of the VP-fronting account of verb initiality within the copy theory of movement.

Samoan is an Austronesian language of the Polynesian subfamily, spoken by over 400,000 people in Samoa, American Samoa, and in significant immigrant communities in New Zealand, Australia, the United States, and elsewhere. Data in this paper comes from published sources, online texts, as well as consultation with native speakers[3]. Samoan has an ergative alignment in its case marking system. It is largely left-headed syntactically, with prepositions and pre-nominal determiners. Nominal and verbal modifiers follow their heads. The morphosyntactic distinction between verbs, adjectives, and nouns is rather weak in Samoan (Mosel and Hovdhaugen 1992:75–83; Rijkhoff 2003), as in other Polynesian languages (Broschart 1997 on Tongan; Massam 2005 on Niuean).

Like the majority of Polynesian languages, Samoan is verb initial, primarily demonstrating VSO word order in transitive clauses (7a). Many but not all speakers also accept a VOS alternate word order (7b).[4] Grammatical relations are signalled by morphological case, the transitive subject being marked by the ergative case marker *e*, while intransitive subjects and transitive objects are not marked by a case marker, though see Yu (2011) for arguments that Samoan absolutive is marked by a high boundary tone. Collins (2014, 2015) provides an analysis of the morphosyntax of Samoan ergativity. This paper primarily focuses on generating VSO word order with full DPs as in (7a), leaving VOS structures as in (7b) as a topic for later work (see Otsuka 2005 for discussion of an analogous phenomenon in Tongan which she analyzes as an instance of scrambling).

(7) a. *sā*   *tuli*   *e*   *le*   *tamāloa* *lona* *atali'i*
        PAST   chase   ERG   SPEC   man   his   son

        The man chased his son.

     b. *sā*   *tuli*   *lona* *atali'i* *e*   *le*   *tamāloa*
        PAST   chase   his   son   ERG SPEC   man

        The man chased *his son*.

Pronominal arguments in Samoan may appear in one of two forms. They may be morphologically independent, in which case they appear post-verbally in the same linear position and with the same case marking as lexical DPs (8a).[5] Otherwise, subject pronouns may appear pre-verbally, to the right of the TAM (tense-aspect-mood)

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[3]Consultation with native speakers took place between 2013–2014 in Sydney, Australia, Stanford, CA, and Palo Alto, CA. The speakers Emily Sataua and Joey Zodiacal speak the American Samoa variety of Samoan, while Vince Schwenke-Enoka and Fautua Tuamasaga Falefa speak the Samoa variety of Samoan. The extent and nature of dialect variation in Samoan remains an underexplored issue.

[4]Though see Calhoun 2015, which finds that VOS with full DP arguments is rarely used by experimental participants.

[5]Idiosyncratically, the absolutive form of the third person singular, morphologically independent pronoun *ia* usually appears with the particle *'o*. Calhoun 2015, Hohaus and Howell 2015 discuss the use and distribution of this marker.

marker (8b), without case marking, generating SVO word order.[6] I discuss the syntax of subject pronouns in §7.

(8) a. *sā*   *tuli*   *e*   *a'u*   *'o*   *ia*
     PAST chase ERG 1SG FOC 3SG
     I chased him.

   b. *sā*   *'ou*   *tuli*   *'o*   *ia*
     PAST 1SG chase FOC 3SG
     I chased him.

2.1 Non-verbal predication

Predicate initial word order is not limited to verbal clauses in Samoan. Predicate initial word order is also found with non-verbal predicates. In general, clause initial non-verbal predicates in Samoan are XP-sized. In §2.2, I show how XP-sized clause initial predicates of the variety exemplified in this subsection are a prediction of the XP-fronting account of predicate initiality.

Mosel and Hovdhaugen (1992) report examples of PP predicates which immediately follow a TAM marker and precede their subjects (9a-b). Similarly, existential clauses are formed with a locative case marked pronoun *ai* in the predicate position (9c).

(9) a. *'ua*   *[i*   *luga]_{PP}*   *le*   *lā*
     PERF LOC up   SPEC sun
     The sun is up. (MH:8.14)

   b. *sā*   *[i*   *Apia]_{PP}*   *lo mātou tinā*   *i*   *lea taimi*
     PAST LOC Apia   our   mother LOC that time
     Our mother was in Apia at that time. (MH:3.9)

   c. *e*   *[i*   *ai]_{PP}*   *ta'avale*   *i*   *Sāmoa*   *nei*
     PRES LOC there car.PL   LOC Samoa now
     There are cars in Samoa now. (MH:12.11)

Bare NP predicates pattern similarly to verbal and PP predicates, following the TAM marker and preceding the subject.

(10) a. *sā*   *[ali'i matua]_{NP}*   *Pili*
     PAST chief old   Pili
     Pili was an old man. (MH:4.48)

   b. *'ua*   *[togāniu*   *'ātoa]_{NP}*   *le*   *mea*   *maupu'epu'e*
     PERF coconut.plantation whole   SPEC place hilly
     The whole hilly place is now a coconut plantation. (Aiavao 1987:10)

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[6]If the TAM marker is the present tense marker *e*, the presence of a subject pronoun causes *e* to be realized as its allomorph *te*, and the subject pronoun appears to the left of the TAM marker, instead of to the right.

We also find cases in which the predicate is formed with a full DP. Basic equative copular clauses are formed with a full DP predicate, marked with the particle *'o*, preceding its subject, as in (11a,b). Unlike examples with other kinds of predicates, there is no TAM marker in a present tense, affirmative clause with a DP predicate (11a-b). The TAM marker does surface, however, in a negative clause (11c). The negative clause (11c) reveals that clauses with DP predicates demonstrate the same basic word order patterns as clauses with other kinds of predicates: the predicate follows the TAM marker but precedes the subject.[7] See §5 for a discussion of the structural position of negation.

(11) a. *['o   lo mātou fale]$_{Pred}$ [lena]$_{Subj}$*
          FOC   our   house   that

       That is our house. (MH:11.23)

     b. *['o   se   fale   Sāmoa]$_{Pred}$ [lo'u aiga   fou]$_{Subj}$*
         FOC NSPEC house Samoa   my   home new

       My new home is a Samoan house. (MH:11.12)

     c. *e   lē   ['o   se   pepe]$_{Pred}$ [le   teine lea]$_{Subj}$*
         PRES NEG FOC NSPEC baby   SPEC girl   that

       That girl is not a baby. (MH:11.21)

I take non-verbal predication of the kind exemplified in this subsection to show that the clause initial predicate in Samoan may be an XP-sized constituent. This is expected under the XP-fronting account of predicate initiality. In the next subsection, I sketch the formal mechanism involved in XP-fronting, and show that under this analysis, the clause initial predicate is *always* XP-sized, even in cases where the predicate appears to be a single word.

2.2 The XP-fronting account of predicate initial ordering

The XP-fronting account holds that predicate initiality is derived by moving a phrasal constituent containing the verb to a pre-subject position. This kind of analysis of Polynesian clause structure is well known due to Massam and Smallwood's (1997) proposal that Niuean (Polynesian; Tongic) predicate initiality is derived by fronting the VP to a pre-subject position. This proposal and its implications have been detailed in several papers including Massam 2000, 2001, 2005, 2010, and 2013. The analysis has been extended to several other Austronesian languages (e.g., Medeiros 2013 (Hawaiian); Rackowski and Travis 2000; Pearson 2007, 2013 (Malagasy); Aldridge 2004 (Seediq); Mercado 2002 (Tagalog); Cole and Hermon 2008 (Toba Batak)). In the remainder of this section, I provide an explicit characterization of this movement operation within the copy theory of movement.

[7]A possible analysis of the affirmative (11a-b) clauses takes the TAM marker to delete under adjacency with the particle *'o*, adjacency which is interrupted by the negative particle in a negative clause, though further investigation is required. See Chung and Ladusaw (2004:62–65) for a discussion of a similar phenomenon in Māori equational clauses, in which a TAM marker deletes when adjacent to the DP predicate.

Like Samoan, Niuean exhibits predicate initial word order with PP and DP predicates. Compare the Niuean PP initial clause (12a) to the Samoan PP initial clauses in (9), likewise the DP initial clause (12b) to the Samoan DP initial clauses in (11). Glossing is from Massam (2001).

(12) a. *hā   [he fale   gagao]$_{PP}$ a   ia*
         PRED in   house sick   ABS she

      She is in the hospital. (Seiter 1980:54)   Niuean

      b. *ko   [e   tau kamuta   fakamua]$_{DP}$ a   lautolu*
         PRED ABS PL   carpenter before   ABS they

      They were carpenters before this. (Seiter 1980:54)   Niuean

(13) provides a basic structure for the XP-fronting account of predicate initiality. Following Massam's (2001) analysis, a feature on a functional head high in the structure triggers the movement of the predicate XP. This functional head has previously been variously labelled as I (Massam 2001) or T (Massam 2010). In order to be neutral about the identity of this head, I give it the arbitrary label F.

F bears a feature which I will label in (13) as [uPred]. The [uPred] feature on F requires that the lower XP which bears the [Pred] feature move to a specifier position projected by F. In (13), the [uPred] is crossed-out, signalling that its requirements are satisfied. Following Massam (2001), the subject occupies the specifier of a clause-medial, functional projection, here identified as v.

(13)
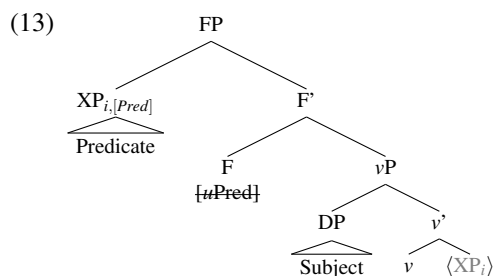
This theory of predicate initiality maintains the hypothesis that the subject is universally projected in a left-branching specifier which is sister to a constituent containing the predicate (Emonds 1976), and further, is compatible with the stronger hypothesis that *all* specifiers, and thus landing sites for movement, branch leftward (Kayne 1994) (cf. accounts of verb initiality which posit the rightward movement of constituents, e.g., Chung 1998 for Māori). It also maintains the hypothesis that clauses are endocentric (Chomsky 1986), in the sense that they are projected by a functional head (here F, standing in for T or I), a hypothesis which is not maintained under most flat branching structures for verb initial languages (e.g., Chapin 1970; Ball 2008). A goal of this paper is an analysis which is consistent with these assumptions, constraining the range of possible kinds of syntactic structures and movement operations.

Accounts which derive verb initiality via head movement of V to a structurally higher position than the subject also maintain the key assumptions of left-branching

specifiers, upward movement, and endocentricity. However, predicate initial word order in clauses with non-verbal NP, DP, and PP predicates are problematic for accounts which employ head movement. Carnie (1995) and Otsuka (2005) have proposed non-standard mechanisms that allows non-verbal XP-sized predicates to undergo head movement. For example, Otsuka proposes that nominal phrases in their predicative uses may be dominated by an X-node, and thus may participate in head movement. By contrast, the analysis in (13) is able to generate the observed word order with only standard assumptions about phrase structure.

Under the analysis in (13), the non-verbal predicates (NP, DP, AP, or PP) are initially merged into the complement position of v. The v head's role in these structures is to syntactically relate subjects with their predicates, facilitating their semantic composition. The structure in (14) is a vP structure for the clause in (11b).

(14)

vP

DP v'

lo'u aiga fou v DP$_{[Pred]}$
my new home

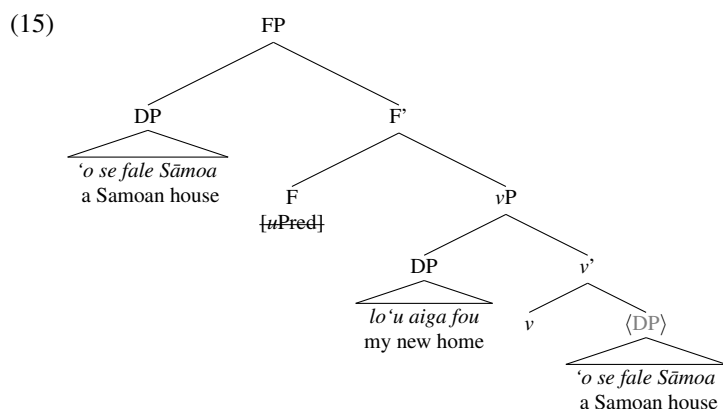*'o se fale Sāmoa*
a Samoan house
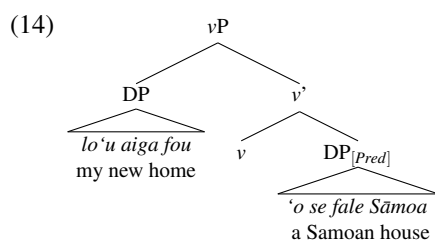
The analysis holds that v may select for two DP arguments, a subject and a predicate, in its specifier and complement positions respectively. I propose that in Samoan, the constituents VP, NP, DP, AP, and PP may optionally bear the feature [Pred]. The v head selects only for constituents which bear the feature [Pred] in its complement position. Throughout this paper, I use the term "predicate" to refer to the constituent which is initially merged as the complement of v, bearing the [Pred] feature. "Predicate fronting" is thus the operation which fronts this constituent to a structurally higher position.

In the interest of being explicit about the syntactic assumptions of this paper, I briefly introduce here the conceptualization of movement which I will adopt throughout. The implementation follows insights from the copy theory of movement (cf. Chomsky 1995; Bobaljik 2002; Boškovic and Nunes 2007 amongst many others). Movement phenomena are analyzed as the appearance of two or more identical constituents within a structure, only one of which is pronounced. See footnote 12 for a discussion of how to determine which copies are left unpronounced. It is important to note that the XP-fronting analysis outlined in this paper does not depend crucially on these assumptions, and could be ported to a transformational, trace-binding view of movement (as in Massam 2001).

Movement is driven by particular features, notated as [uX] features. [uX] features impose particular well-formedness requirements on the syntactic structure. If these requirements are not met, ungrammaticality results. If a head bears a [uX] feature, a constituent of category XP must be copied from a structurally lower position into its specifier position.

The vP in (15) is embedded as the complement of the head F. F has [uPred] feature which triggers the copying of the predicate. Intuitively, a [uPred] feature on a head demands firstly that the specifier projected by the head is occupied by a constituent

X with the [Pred] categorial feature, and secondly, that the head c-commands an identical copy of X. The structure in (15) is therefore well-formed (cf. Massam's (2010:275) analysis of Niuean copular clauses).

(15)

```
                          FP
                 ┌─────────┴─────────┐
                DP                   F'
            ┌───┴───┐         ┌───────┴───────┐
        'o se fale Sāmoa      F              vP
        a Samoan house      [uPred]      ┌────┴────┐
                                        DP         v'
                                    ┌────┴────┐  ┌──┴──┐
                                  lo'u aiga fou  v   ⟨DP⟩
                                  my new home     ┌────┴────┐
                                              'o se fale Sāmoa
                                              a Samoan house
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The following is a more precise definition of a [uX] feature which triggers the copying of a constituent XP. In §7, I revisit this definition in order to deal with more complex structures, such as those in which there is no constituent eligible for the copying operation, and those with multiple constituents eligible for the copying operation. At this preliminary stage, the definition assumes there is one constituent which is able to be copied by the [uX] feature.

(16) **[uX]:**
  If a head H has a [uX] feature, then:
  i. a constituent α, with a categorial feature [X], appears in a specifier of H.
  ii. H c-commands β, a structurally identical copy of α.
  iii. There is no γ which is the same category as α (and β), and H asymmetrically c-commands γ, and γ asymmetrically c-commands β (analogous to "Attract Closest", cf. Chomsky 1995:296; Richards 1997)

The structure in (15) exemplifies why the feature triggering copying on F is defined as attracting the [Pred] feature, rather than the lexical category of the constituent's head (i.e., [D]). If F triggered copying of a DP, the definition in (16iii) demands that the *subject* DP is copied into the specifier projected by F, as the subject is closer than the predicate to F in terms of c-command.

Thus, the XP-fronting account of word order gives us a clear understanding of predicate-subject ordering in Samoan. The analysis proposed here involves an abstract categorial [Pred] feature which optionally appears on various types of maximal projections. This [Pred] feature determines that the phrase is merged as the complement of *v* and then copies into the pre-subject position.

2.3 VOS and VSO ordering with VP-fronting

Under the VP-fronting account of verb initiality, the distinction between VOS and VSO word order may be reduced to the presence or absence of object movement.

VSO order may be understood as the movement of the object out of a VP-internal position to a position outside the VP, while VOS order may be understood as the lack of object movement. Massam (2001) provides an account of Niuean VSO/VOS alternations under the VP-fronting account. In this subsection, I show how her analysis carries over to a similar alternation in Samoan.

As exemplified earlier in (17), Samoan demonstrates a productive VOS construction with a wide variety of verbs, in which the O is not generated as a full DP, but rather a bare NP, interpreted as a non-specific indefinite, as in (17a). Compare the VOS (17a) with the VSO near paraphrase (17b).

(17) a. *sā*   *tausi pepe le   teine*
         PAST   care baby SPEC girl

      The girl took care of babies/a baby. *or* The girl is a baby-sitter.

   b. *sā*   *tausi e   le   teine le   pepe*
         PAST   care ERG SPEC girl SPEC baby

      The girl took care of the baby.

There is a requirement that bare NP objects in Samoan are strictly adjacent to their selecting verbs. Evidence for this empirical generalization comes from the position of certain adverbial modifiers, such as temporal modifiers. These necessarily intervene between the verb and its full DP arguments, including the object in a VOS-ordered clause with full DP arguments (18a). By contrast, these temporal modifiers necessarily follow bare NP objects however (18b). Thus, these temporal modifiers can be thought of as marking the right edge of the fronted predicate.

(18) a. **sā*   *tausi*   *le*   *pepe pea*   *e*   *le* *teine*
         sā   *tausi pea*   *le*   *pepe*   *e*   *le* *teine*
         PAST   care continually SPEC baby continually ERG SPEC girl

      The girl went on taking care of the baby.

   b. **sā*   *tausi pea*   *pepe*   *le*   *teine*
         sā   *tausi*   *pepe pea*   *le*   *teine*
         PAST   care continually baby continually SPEC girl

      The girl went on taking care of babies.

Further evidence that bare NP objects in Samoan are strictly adjacent to their selecting verbs comes from the placement of resumptive pronouns. If dative or locative case marked DPs are fronted to a pre-verbal position, a resumptive pronoun *ai* or *i ai* appears at the right of the verbal complex, preceding all full DP arguments, but following bare NP objects. The following paradigm exemplifies this with a relativized locative. Similar word order alternations are observed with directional particles, manner adverbs, emphatic particles, and floating quantifiers.

(19) a. **le*   *fale*   *sā*   *tausi*   *le*   *pepe ai*   *e*   *le* *teine*
         le   *fale*   *sā*   *tausi ai*   *le*   *pepe*   *e*   *le* *teine*
         SPEC house PAST care LOC SPEC baby LOC ERG SPEC girl

      The house where the girl took care of *the baby*.

b. *le   fale   sā   tausi ai   pepe   le   teine
    le   fale   sā   tausi   pepe ai   le   teine
    SPEC   house   PAST   care   LOC   baby LOC   SPEC   girl
    The house where the girl took care of babies.

Massam (2001) refers to the appearance of bare NPs adjacent to the verb in Niuean as 'pseudo noun incorporation' (PNI). She argues that these verb-noun complexes must be built in the syntax, rather than in the lexicon. The motivation for this conclusion comes from data showing that the pseudo incorporated object may be phrasal, able to appear with various kinds of modifiers. Pseudo incorporated objects in Samoan pattern like those in Niuean. They are able to be instantiated by syntactically complex NPs, including those containing coordination (20a), adjectival modification (20b), and even clausal modification (20c,d).[8,9]

(20) a. e   [su'e   maile ma   moa]   pea   le   teine.
      PRES   search dog   and chicken continually the girl
      The girl continuously searches for dogs and chickens.

    b. 'o   le   [fai mea   piopio]   o   faifeau
      FOC   the   do   thing wicked   of   pastor.PL
      [because] pastors do crooked things (lit. the doing crooked things of pastors)
      (MH:13.114)

    c. e   tatau foi ona   amata [su'e   [mea   e   fai   ai]]
      PRES   must   still COMP   start   search things PRES   do   there
      saoga
      righteous.PL
      The righteous still must start to find things to do there.
                             (from poem *Faaipoipoiga le taunuu*, Soogafai)

    d. sā   [su'e   ma'a [e   [togi   ipu] ai] le   teine
      PAST   search stone PRES   throw.at dish DAT SPEC   girl
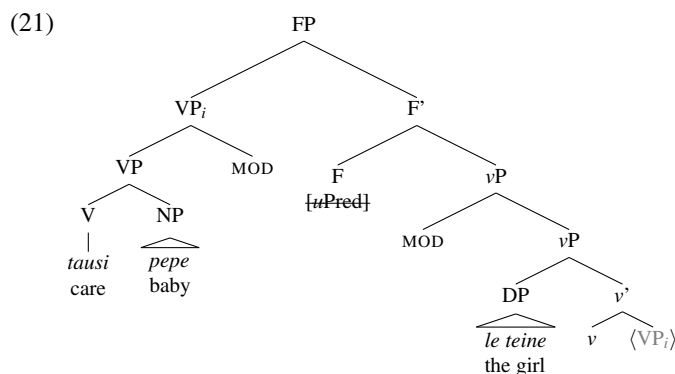   The girl searches for stones to throw at dishes with.

Massam's analysis of Niuean PNI takes PNI to involve the direct selection of a bare NP by a transitive verb, accounting for its immediately verb-adjacent linear position. The analysis accounts for why pseudo-incorporated objects may be phrasal. As the NP constituent selected by the verb does not include higher functional heads, the account explains why the object appears without functional material such determiners and case markers.

Massam's analysis of PNI is straightforwardly incorporated into this paper's analysis of Samoan word order. Transitive V heads in Samoan optionally select for either

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[8]Massam (2001) also describes a variety of PNI in Niuean in which a bare NP is adjacent to the existential predicate, forming an existential clause. Samoan lacks this variety of PNI. Existentials are formed as in (9c). A third variety of PNI in Niuean involves the incorporation of bare NPs which are interpreted as thematic instrumental arguments. Samoan also seems to lack these.

[9]The presence of bare NP objects in Samoan does not exclude the possibility that Samoan may also demonstrate morphological incorporation. Chung and Ladusaw (2004) argue that the two modes of incorporation may coexist with reference to Niuean and Māori. See also Baker 2014 for the suggestion that PNI and morphological incorporation of V and N work in tandem in Sakha and Tamil.

NP or DP complements. The [V NP] constituent is therefore able to be copied into the higher Spec,FP position, generating the observed VOS word order (21). This structure allows us to understand why verbal modifiers are unable to intercede between the verb and the pseudo incorporated object. The structure provides at least two maximal projections onto which material like temporal modifiers and locative/dative resumptive pronouns may adjoin: they may be left-adjoined at the vP layer or above, or they may be right-adjoined at the VP-level.[10] However, there is no structural position which allows for verbal adjuncts to intervene between the verb and its complement NP.

(21)

```
                          FP
               ┌──────────┴──────────┐
             VP_i                    F'
          ┌───┴───┐            ┌──────┴──────┐
        VP      MOD            F            vP
     ┌───┴───┐              [uPred]    ┌─────┴─────┐
     V      NP                        MOD         vP
     │       △                              ┌──────┴──────┐
   tausi   pepe                            DP            v'
   care    baby                            △         ┌───┴───┐
                                        le teine     v    ⟨VP_i⟩
                                        the girl
```
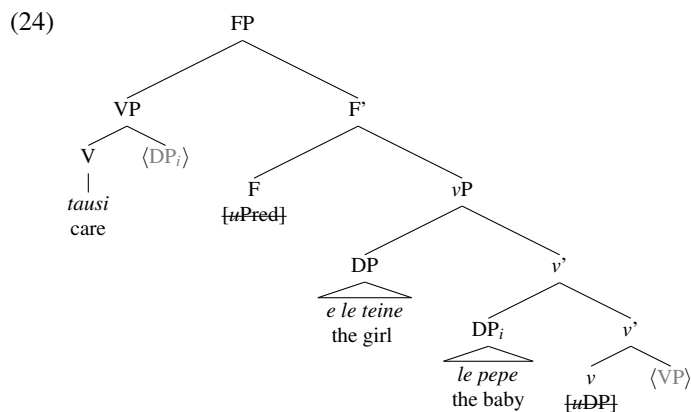
Samoan patterns like Niuean in terms of non-verbal predication and PNI, and therefore the VP-fronting account etends to Samoan easily. Beyond PNI structures, the VP-fronting account is also well-suited to handle VSO structures. Massam's (2001) proposal for Niuean VSO clauses is that full DP objects move from their base generated position in Comp,VP to a clause medial position lower than the subject.[11] For Massam, the landing site for the object is the specifier of AbsP, a projection responsible for the assignment of absolutive case. In this paper, I characterize the position as a second specifier of vP, discussed in more detail in §7. According to Massam, the movements of the object DP and the VP are ordered in a bottom-up fashion, the object DP moving first, binding a trace within the VP. The VP then moves to the clause initial position, containing the trace of the object. Thus, the movement of the VP is an instance of remnant movement: movement of a constituent which contains a bound trace to a position higher than the trace-binder.

The structure in (24) is the version of this analysis proposed in this paper.[12]

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[10]In fact, if we find evidence that the constituents labelled VP and vP in (21) are more syntactically complex then sketched, then there will be multiple regions of adjunction sites for modifiers. See Massam 2013 who suggests that strict ordering of adverbials in Niuean is suggestive of a cartographic approach to adverbial modification in the style of Cinque 1999.
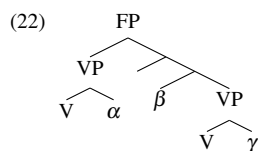
[11]Though see Massam (2010; 2013) for a discussion of an alternative proposal in which the subject and object (as well as obliques) occupy VP-external positions, without binding a trace/copy in the fronted predicate XP.

[12]How is it ensured that the correct copy of the object DP is pronounced? (22) is a schema for the VP-fronting account of VSO, where α, β, and γ stand in for copies of the object DP. How do we ensure that only β is pronounced, and not α or γ (generating incorrect word orders)? A basic premise is that constituents which are asymmetrically c-commanded by copies are not pronounced (subject to cross linguistic

(24)

```
                        FP
              _____
             |                |
            VP               F'
         _____        _____
        |       |      |          |
        V     ⟨DP_i⟩   F          vP
        |             [uPred]  _____
      tausi                   |        |
      care                   DP        v'
                            _____     _____
                          e le teine  |      |
                          the girl   DP_i    v'
                                    _____   _____
                                  le pepe  |      |
                                  the baby v     ⟨VP⟩
                                          [uDP]
```

A phonologically null *v* head employed in transitive clauses not only selects for the DP subject, but also copies the object DP to its inner specifier (with a [*u*D] feature).[13] The VP, containing the silent copy of the DP object, copies into Spec,FP. This is triggered by the [*u*Pred] feature on F. The observed VSO word order is therefore generated.

---

variation (Bobaljik 2002)). This is enough to ensure that γ is not pronounced, as it is c-commanded by β. But neither α nor β are c-commanded by copies, leaving α ostensibly able to be pronounced.

(22)

```
              FP
          _____
         |         |
        VP          \
      _____    _____
     |     |  |    |    |
     V     α  β    VP
            _____
           |       |
           V       γ
```

The following rule for the pronunciation of sequences of copies draws from Nunes 2004 and Boškovic and Nunes 2007, based on an intuition in Chomsky 1995 that elements of a chain are distinguished by their local syntactic environments, i.e., the syntactic category of their sister nodes. According to this intuition, operations apply equally to elements of a chain which have the structurally identical sister nodes.

(23) **Non-pronunciation**:
   i. Do not pronounce A if there is a B which asymmetrically c-commands A and is a copy of B.
   ii. If (i) applies to Y whose syntactic sister is Z, delete all copies of Y whose syntactic sister is a copy of Z.

In (22), γ is not pronounced by (i), being c-commanded by β. α is not pronounced by (ii). As (i) applies to γ, and its syntactic sister is V, (ii) must apply to α, whose syntactic sister is a copy of V.
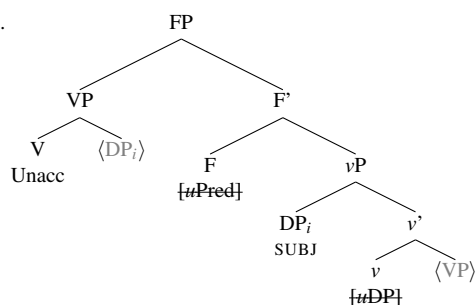
[13]Under this paper's analysis, the phonologically null *v* head is always stranded clause-finally. As the paper posits that all *v* heads are silent, it remains unclear how to empirically justify this claim without a clear hypothesis about which morphemes can be conclusively said to instantiate *v*. A potential candidate for overt *v* heads are the *-ina* and *-Cia* suffixes appearing on derived transitive verbs and transitive verbs with extracted subjects.

It remains to be determined as to how to analyze these suffixes morphosyntactically, though one option could be *v*-to-V head lowering. This is not precluded by the current analysis, so long as the fronted VP contains the morphological concatenation of *v* and V. Another option could be to adopt a more complex extended verbal projection, consisting of both Voice and *v* layers, along the lines of Harley (2013); Legate (2014). Under this analysis, *-ina* and *-Cia* could instantiate the *v* head, and the more complex *v*P undergoes predicate fronting. Under this analysis, it is the null Voice head that is always stranded clause finally. A deeper exploration of these issues remains a topic for future research.
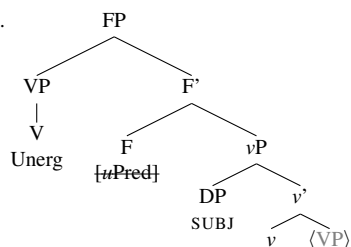
The alternation between VSO sentences with full DPs, and VOS sentences with bare NP objects, as in (21), is treated as an alternation between movement of the object (generating VSO) and the lack of movement of the object (generating VOS).

Unaccusative clauses in Samoan have a similar structure to (24), save for the omission of the external argument. The DP originates as the complement of V (following Burzio's (1986) implementation of Perlmitter's (1978) Unaccusativity Hypothesis). It then copies into Spec,vP as in (25a). Unergative clauses involve the merging of the intransitive subject directly into Spec,vP, without binding a copy in the VP (25b).

(25) a.

```
                    FP
              _____|_____
            VP            F'
          __|__         __|__
         V   ⟨DP_i⟩    F      vP
       Unacc        [uPred]  __|__
                            DP_i    v'
                            SUBJ   __|__
                                  v    ⟨VP⟩
                                [uDP]
```

b.

```
                    FP
              _____|_____
            VP            F'
            |           __|__
            V          F      vP
         Unerg      [uPred]  __|__
                            DP     v'
                            SUBJ  __|__
                                 v   ⟨VP⟩
```

Central to this analysis is the notion that the functional head v serves to attract DPs to its specifier. Under this analysis, v in Samoan can be said to bear an EPP requirement, thus driving the copying of the VP-internal DP into its specifier. The question then is how is this feature satisfied in PNI structures like (21) and unergative structures like (25b), where no DP movement takes place? I address this question in §7, and conclude that the EPP feature on Samoan v attracts *all* DPs it c-commands (within a relevant syntactic domain) to projected specifier positions. This requirement is trivially satisfied in cases where v does not c-command any DP.
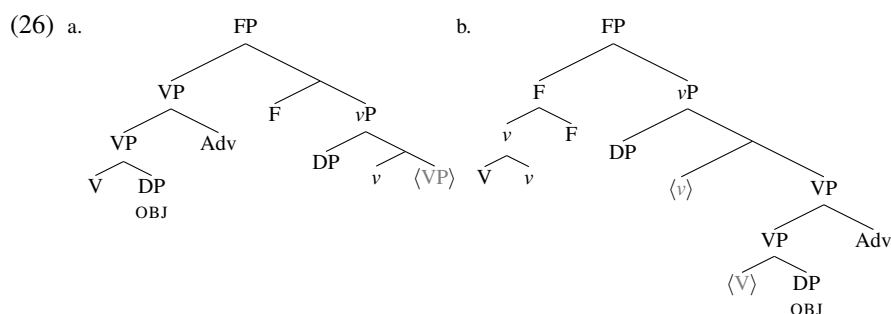
The VP-fronting analysis provides a unified account of various kinds of Samoan clause types, including clauses headed by intransitive, transitive, and pseudo incorporating verbs. Generalizing VP-fronting to the fronting of various XP-sized categories, we also account for clauses with non-verbal predication.

3 Structure of the fronted predicate

In this section, I compare the VP-fronting account of Samoan verb initiality to the V-movement account proposed for several other Polynesian languages (e.g., Pearce 2002 for Māori, Otsuka 2005 for Tongan, Clemens 2014 for Niuean). Determining

which analysis is correct for a given V1 language requires an understanding of the analyses' empirical implications given some fixed assumptions. In particular, if we assume (i) subjects are in specifier positions, (ii) phrasal movement is to specifier positions, and (iii) specifiers branch leftward, the VP-fronting account and the V-movement account make differing predictions regarding the structural and linear positions of certain items.

The competing theories make different predictions about the position of any VP-internal or adjoined material that is not the internal argument (e.g., resultative secondary predicates, directional particles, manner adverbs). The VP-fronting account however allows VP-internal or adjoined material to front with the VP. In cases where the largest VP moves, this material appears to the left of the subject (26a). The V-movement account predicts that VP-internal or adjoined material should be stranded and appear to the right of the subject, (26b).

(26) a.
```
              FP
          ____|____
        VP         |
      __|__       _|___
    VP    Adv    F    vP
  __|__            __|__
 V    DP          DP    |
      OBJ              _|___
                      v   ⟨VP⟩
```
b.
```
              FP
          ____|____
        F          vP
      __|__      ___|___
     v    F     DP      |
          DP          __|___
                    ⟨v⟩     VP
                          ___|___
                        VP      Adv
                       __|__
                     ⟨V⟩   DP
                           OBJ
```

In this section, I provide evidence in favor of structures like (26a). This section focuses on the linear positions of resultative secondary predicates, directional particles, adverbials, and restructuring predicates. I also discuss additional problems which arise with verbal coordination.[14]

3.1 Complex Predication

Resultative secondary predicates in Samoan appear in a pre-subject position. By resultative secondary predicates, I mean XPs which denote the eventual state of the patient argument (unaccusative or passive subject or transitive object) as a result of the event denoted by the main predicate.

(27)   a. Joe wiped the table clean.
       b. The table$_i$ was wiped ⟨the table$_i$⟩ clean.
       c. The bottle$_i$ broke ⟨the bottle$_i$⟩ open

In Samoan, resultative secondary predicates and pseudo-resultative secondary predicates (in the sense of Levinson 2010) show up adjacent to the verb, giving TAM-V-XP-S-O order, as in (28). The resultative XP may never appear to the right of the subject. Secondary predicates in (28) exhibit the hallmark properties of resultatives,

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[14]For a detailed discussion and description of the varieties of complex predication in Samoan, see Mosel 2004.

being stage-level predicates, denoting result states directly caused by the event denoted by the main verb (Levin and Rappaport Hovav 1995).

(28) a. *sei   vagana   ai   'ua   [tatā   fa'asinasina]   ona   ofu*
      only   except   DAT   PERF   strike   CAUS.white   his.PL   dress

      (no man will be saved)...except if his clothes are [washed white].

                                              (BOM, Alma 5:21)

    b. *'ua   ['efu'efu   fa'asamasama]   lona   fatafata   ma   lona   ua*
      PERF   fade   CAUS.yellow   his   chest   and   his   neck

      His chest and neck [faded yellow].
       (Thomas Powell (1886), A Manual of Zoology in the Samoan Dialect: 157)

    c. *'ua   'ou   va'ai   atu   'ua   [tatipi   fa'alaiti]   'uma   o'u*
      PERF   1SG   see   DIR   PERF   cut.PL   CAUS.small   all   my.PL

      ofu   aoga
      dresses   school

      I saw that all my school dresses were [cut into small pieces]. (MH:7.399)

    d. *le   failele   lea   e   tau   [fa'asusu   fa'amoemoe]   lana   pepe*
      the   mother   that   PRES   try   CAUS.suck   CAUS.sleep   her   baby

      That mother that tries to [breastfeed to sleep] her baby. (MH:7.422)

There is converging syntactic evidence that resultatives occur VP-internally (Carrier and Randall 1992; Roberts 1988; Hoekstra 1988; Levin and Rappaport Hovav 1995), and therefore low enough structurally for the internal argument to saturate the resultative predicate in the compositional semantics. Syntactic analyses differ on the attachment site of the resultative predicate: It has been argued to be embedded within a small clause complement of V (Hoekstra 1988; Kratzer 2005; Son and Svenonius 2008), or as a second complement of V in a ternary branching structure (Simpson 1983; Carrier and Randall 1992; Wechsler 1998). The following partial structure for the Samoan sentence (28) assumes the resultative structure is a *v*P complement to V (though this is not crucial).

The following structure for a VP containing a resultative predicate assumes the resulative XP is contained within a *v*P complement to V.

(29)
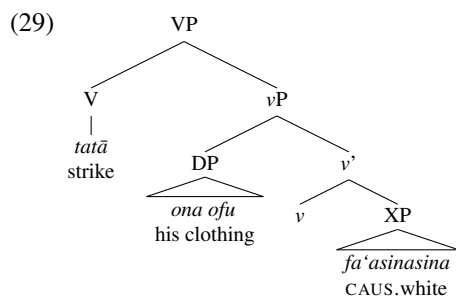
The head movement account predicts the V vacates the structure in (29), stranding the resultative in the incorrect position in (28a). The VP-movement hypothesis predicts that VP-internal material such as resultative secondary predicates should front along with the verb, as sketched in (30).

(30)
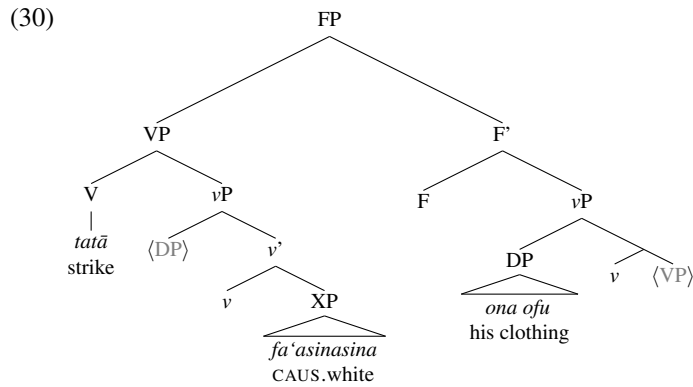
The linear placement of resultative predicates in Samoan supports a VP-movement analysis. By extending the same reasoning to other kinds of VP-internal or adjoined material, a similar conclusion is reached.

Directional particles have been argued to occur VP-internally cross-linguistically (Emonds 1972; Neeleman and Weerman 1993; Harley and Noyer 1998; Ramchand and Svenonius 2002). As expected on the VP-movement account, directional particles occur to the left of the subject. In Samoan, directional particles behave similarly to English directional particles, signaling direction and orientation of an event, as well as combining with certain verbs to create non-compositional expressions (e.g., *fai atu* 'say, ask', literally 'do+away'). The V-movement account predicts directional particles should be stranded to the right of the subject, which is impossible (31a). As predicted on the VP-movement account, directional particles appear post-verbally, to the left of the subject (31a–b).

(31) a. **na   maua   ai   la'u tusi mai i   lo'u tinā*
       na   [maua mai] ai   la'u tusi   i   lo'u tinā
       PAST   get   DIR LOC my letter DIR from my   mother
       [I] got a letter from my mother. (MH:7.16)
    b. *'ua   [tauau lēmū   mai] lona mālosi*
       PERF tend   slowly DIR his   strength
       His strength is increasing little by little. (Mi:251)

The examples in (32) show that verbs and directional particles form a constituent, able to be coordinated within the fronted predicate. This is evidence that directional particles are situated within the constituent which undergoes fronting.

(32) a. *sā   [[taunu'u mai] ma [toefoi]] Simi.*
       PAST   arrive   DIR and leave   Simi
       Simi was arriving and leaving.
    b. *'o   le   mea lea 'ou te   [[fai atu] ma [ta'utino atu]] i*
       FOC SPEC thing this 1SG PRES do DIR and testify   DIR   to
       le   Ali'i
       the Lord
       This thing I say and testify to the Lord. (Ephesians 4:17)

c. ... *e*   *[[fai atu] ma [ta'u atu]] 'ia te 'oe lenei tala lelei*
      PRES do   DIR and tell   DIR   DAT 2SG this word good

[God, who commands me]... to tell and bring to you this good news.
(thatotherange.net, Agelu Asiasi Mai)

Manner adverbs occur adjacent to the verb (33). If manner adverbs are thought of as VP-internal or VP-adjoined, the VP-movement account correctly predicts that they occur to the left of the subject, and never appear after the subject as predicted by the V-movement account. See Mosel (2004: 278–284) for several more examples of this type.

(33) a. **'ua sau   le   teine vave*
      'ua   [sau vave] le   teine
      PERF come quickly the girl   quickly

    The girl came quickly. (Mi:315)

   b. *'o   le   aso manino e   [susulu lelei] ai   le   lā*
      FOC SPEC day clear   PRES shine   good LOC SPEC sun

    A clear day on which the sun shines nicely. (MS:68)

   c. *sā   [moe 'umi] le   tama*
      PAST sleep long   SPEC boy

    The boy slept for a long time. (Mos:278)

The data presented in this section are evidence against the head movement account. As the head movement account involves copying the V head only to a higher position, VP-internal material and modifiers should be left stranded in the post-subject position, contrary to the observed data.[15]

To rescue the head movement account, we could assume that various kinds of syntactic items, including adverbials and resultatives, could adjoin to the V head via head movement. See Clemens 2014 which employs this kind of analysis in order to account for Niuean complex predicates. Under this analysis, Samoan complex predicates are X^0-sized, and move to the pre-subject position via head movement as a single head, thereby retaining the head movement account of verb initiality.

Under several theories of the phonologization of syntactic structure (see Harley 2010; to appear for recent discussions), X^0-level nodes in the syntax map to phonological words, including syntactically complex X^0-level nodes derived by head movement.[16] Taking this assumption at face value, if we analyze Samoan complex predicates as being formed by head movement, we predict that complex predicates should form a single phonological word. The data in (34) presents a challenge for this theory. In (34), parentheticals are inserted between the individual elements of the Samoan complex predicates, problematic for the view that verbs and their modifiers co-occupy a single head position in the syntax.

---

[15]Though see Toivonen 2000 who analyzes adverbial XPs as directly branching from the V head. Under this account, the V could undergo head movement, with adjoined adverbials in tow. The proposal in this paper derives the same facts without violating common phrase structural assumptions, namely, that XP-sized constituents adjoin at maximal projections.

[16]Though Harley (to appear) points out that verb+particle clusters in English, such as *look up*, could be a counterexample to the generalization that syntactically complex X^0-nodes derived by head movement map to single phonological words (citing Johnson 1991; Koizumi 1993; Den Dikken 1995).

(34)   a. *sā*   *[tapena (e   moʻi loʻu tala) faʼamāmā] e   le   teine*
             PAST tidy   PRES true my   story CAUS.clean ERG SPEC   girl

          le   taʻavale
          SPEC   car

          The girl cleaned the car (this is totally true) spic and span.
      b. *sā*   *[vali (tali lā) faʻalanumūmū] e   le   fafine   le*
             PAST paint wait this CAUS.color.red ERG SPEC   woman   SPEC

          fale
          house

          The woman painted (wait for this) the house red
      c. *ʻua*   *[sau   (tali lā) vave]*   *le   teine*
             PERF come   wait this quickly   the girl

          The girl came (wait for this) quickly.

The data from this subsection shows that the Samoan predicate may be syntactically complex, including a range of verbal modifiers. Any analysis of Samoan clause structure should therefore provide an account of why VP-internal material is observed in the clause initial position. I suggest that the VP-fronting account provides a natural account for this observation: the VP-internal material does not vacate the VP and simply fronts along to the pre-subject position along with the VP. An analysis which assumes that the predicate is simply a head, derived via head movement, does not provide the necessary architecture to host VP-modifiers and so the data discussed here remains problematic.[17,18]
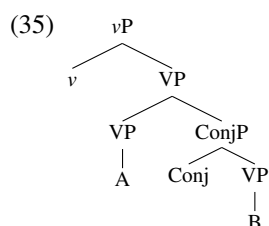
3.2 Coordination

The two theories of verb initiality make differing predictions for the coordination of two or more non-identical predicates, sketched in (35). Under a head movement account, it is not possible for both the heads A and B to move out of their respective VPs to the higher head *v*, stranding the coordinator.[19]
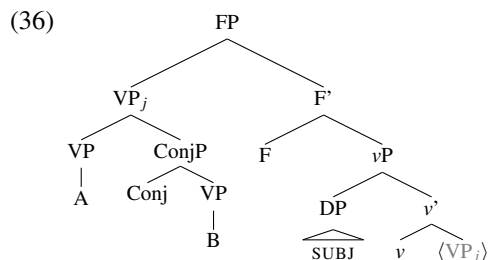
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[17]Massam's (2010; 2013) analysis of complex predication in Niuean reaches a similar conclusion to the one outlined so far for Samoan in this section. For Massam, VP-fronting in Niuean is evidenced by the pre-subject placement of adverbial modifiers. Her analysis follows Cinque's (1999) universal hierarchy of functional projections, proposing that post-verbal adverbials in Niuean match Cinque's ordering for adverbials, except in the inverse order. Massam derives this ordering by positing cyclic "roll-up" movement of these functional projections. The present account of Samoan is neutral as to whether the ordering of relevant adverbial modifiers motivate an analysis in the style of Cinque. The relevant observation is that the fronted predicate can be syntactically complex. I leave the issue of whether the internal structure of the constituent here labelled as VP should be further syntactically decomposed.

[18]A careful comparison between Samoan adverbial placement and Massam's observations about Niuean remain to be carried out, though certain differences are immediately apparent which may suggest that the analysis of Samoan should be somewhat different to Massam's. For example, Samoan lacks Niuean's instrumental applicative construction. While both Niuean and Samoan have a phrase-final question particle, the distribution of Samoan's question particle suggests it is attached phrase-finally in the prosodic structure rather than syntactic structure (see Mosel and Hovdhaugen (1992:485)).

[19]If the two VPs were headed by identical verbs, A and A, both verbs could move to one head position, vacating all conjuncts via Across-The-Board movement, as per (Ross 1967; Gazdar 1981).

(35)   *v*P

```
         vP
       /    \
      v      VP
           /    \
         VP     ConjP
         |     /     \
         A   Conj     VP
                      |
                      B
```

Under the VP-fronting account, nothing should prevent two dissimilar VPs from coordinating. In (36), coordination at the *v*P level encounters no structural problems under a VP-fronting account.

(36)

```
              FP
          /        \
        VP_j        F'
       /    \      /    \
      VP   ConjP  F      vP
      |   /    \       /    \
      A Conj   VP     DP     v'
               |     /  \   / | \
               B   SUBJ v  ⟨VP_j⟩
```

The data in Samoan match the predictions of the VP-fronting account. Dissimilar VPs are able to coordinate. The following data show coordinated verb phrases headed by dissimilar verbs, as predicted by the VP-fronting account.

(37) a. *e   [[aulelei tele] ma [atamai   tele]] foʻi   le   fafine*
         PRES   beautiful very and intelligent very   EMPH the woman
         The woman is very beautiful and very intelligent.

      b. *sā   [[tā   lalo] ma [tipi faʻalaititi]] e   Simi   le   laʻau*
         PAST   fell DIR   and cut   CAUS.small   ERG Simi   SPEC tree
         Simi cut down and chopped the tree into small pieces.

      c. *sā   [[auli faʻamafolafola] ma [gaugau   faʻalelei]] e   le*
         PAST   iron CAUS.flat   and fold.REDUP CAUS.good   ERG SPEC
         tamāloa le   tagamea
         man   SPEC shirt
         The man ironed the shirts flat and folded them well.

Note that the head movement account allows for the coordination of dissimilar verbs, so long as they are coordinated at the X level. The coordinated predicates in (37) are syntactically complex, suggesting that the coordination here is at the XP level. Thus, these data provide evidence against the head movement account of verb initiality, but are consistent with the VP-fronting account, which freely allows non-identical predicates to coordinate.

Could examples like (37) could be clause-level coordination, with ellipsis of the DP arguments in the first clause? I will leave aside the question of whether such constructions are possible in Samoan, but coordination at the VP level, as the bracketing (37) suggests, is indeed possible in Samoan. This is evidenced by adverbial modification of the conjoined VP.

In (38), the adverb *foʻi* 'also' to the right of the conjoined VP, *ulaula ma inu pia* 'smoke and drink beer', modifies the entire VP. The agent of the conjoined VP (the parents) is understood to participate in the same action of smoking and drinking beer as an individual in the previous discourse (the children). If conjunctions of VPs with *ma* were always coordination at the clausal level (with ellipsis of DP arguments in the left conjunct clause) we would not expect that the adverbial *foʻi* to the right of the conjoined VP could modify *both* VPs.

(38) *e   lē   taumate foʻi ʻoleʻā [ulaula ma inu   pia]* **foʻi** *lātou.*
     PRES NEG doubt   also FUT   smoke   and drink beer also   they.

[On the parents of children who smoke and drink beer]
They (the parents) will undoubtably also smoke and drink beer. (DIfP)

Multiple pieces of evidence converge on the notion that the fronted constituent in Samoan is larger than just a V. The constituent can be syntactically complex including both modifiers and coordination. This observation follows directly from the VP-fronting account of verb initial word order.

4 VP-fronting in structures with multiple VPs

The previous subsections rely on the assumption that the movement operation employed in VP-fronting only targets the largest (least embedded) VP. For example, in structures with VP-adjoined adverbials, only the largest VP, including the adjoined adverbials, fronts. I suggest that this assumption may be derived from standard assumptions in phase theory. If we assume, following much previous work, that *v* is a phase head (e.g., Chomsky 1999, 2001; Legate 2003), we gain an understanding of why only the largest VP fronts. According to phase theory, if a constituent XP occupies the complement position of a phase head, it is 'impenetrable', in the sense that syntactic operations triggered by material higher in the syntactic structure cannot apply to constituents properly dominated by the XP node. Only the XP node itself is targettable by syntactic operations. This accounts for why we only see fronting of the least embedded VP in structures with multiple VPs.

The largest-VP generalization extends to other kinds of data besdies VP adjuncts. For example, the following data set involves a set of lexical items in Samoan which occur directly to the left of the verb. Their meanings closely match the meanings of restructuring predicates (in the sense of Wurmbrand 2001) cross-linguistically. Their embedded predicate is directly adjacent to the restructuring predicate. The predicate may be syntactically complex as in (40c).

(39) *fia*, 'want'; *tau*, 'try'; *amata*, 'start'; *ʻuma*, 'finish'; *sāga*, 'continue'; *faʻatagā*, 'pretend'; *iloa*, 'know how to'

(40) a. *e   lē   [fia   mafaufau] Elena ʻi   lona tagi.*
       PRES not want think   Elena DAT her   cry
    Elena does not want to think of her crying. (MH:7.294)

b. *'ua   [tau fa'alogo] fo'i   'i   le   tagi a   le   tama'ia'i*
   PERF try   hear   EMPH DAT SPEC cry   GEN SPEC child

   [He] tried to hear the crying of the child. (Mo)

c. *sā   [tau [[tofi su'e] ma [fa'apa'ū mai] vave]] e   Simi*
   PAST try   cleave open   and CAUS.fall DIR   quickly ERG Simi

   le   lā'au.
   SPEC tree

   Simi tried to cut open the tree and make it fall down quickly.

Wurmbrand analyzes restructuring predicates cross-linguistically as being of category V, embedding a phrasal constituent in their complement position. A version of this analysis is sketched in (41). A predicate *try* selects for a phrasal constituent, such as a VP, headed by the embedded verb *cut*.

(41)
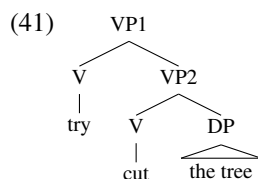
Applying Wurmbrand's analysis of restructuring predicates to Samoan, we can understand the data in (40) are expected under an analysis where these predicates take a VP-complement, and the largest VP undergoes VP-movement.[20,21] (43) models the sentence in (42)

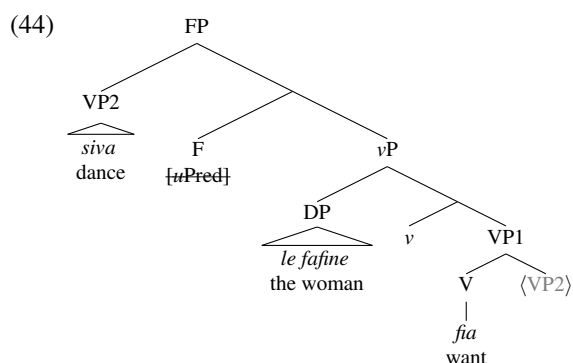(42) *e   [fia   siva] le   fafine*
     PRES   want dance SPEC woman

     The woman wants to dance.

(43)
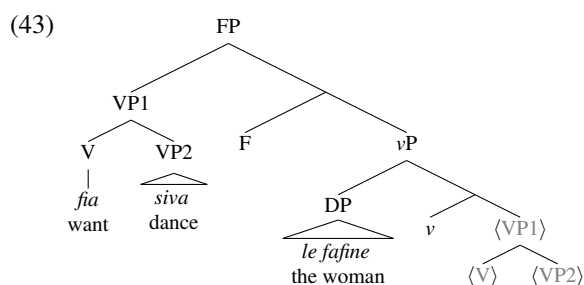
The assumption that the largest VP fronts is crucial in structures with restructuring VPs. If we allow smaller VPs to undergo VP-fronting, we wrongly predict that the restructuring predicate will be stranded. Fronting the embedded VP generates the ungrammatical structure in (44).

---

[20]Wurmbrand (2015) suggests restructuring predicates in some Austronesian languages select for a *v*P headed by a agent-less *v*. This alternative account can be adopted without any adverse effects for the VP-movement account.

[21]See Clemens 2014 for an account of restructuring predicates in Niuean assuming head movement. Under her account, the main verb and restructuring verb form a complex head which head-moves to a position higher than the subject. Extending this analysis to Samoan forces us to say that complex predicates such as (40c) consist of a single X^0-sized constituent.

(44)

```
                        FP
           _____
          |                                |
        VP2                 _____|_____
        /\                 |                                 |
      siva                 F                                 vP
      dance            [uPred]                 _____|_____
                                              |                             |
                                             DP                   _____|_____
                                             /\                  |                     |
                                         le fafine               v                    VP1
                                        the woman                              _____|_____
                                                                              |               |
                                                                              V             ⟨VP2⟩
                                                                              |
                                                                             fia
                                                                             want
```

This structure predicts the wrong word order, placing the restructuring predicate sentence-finally, contrary to the observed data.

(45) *e   lē   siva   le   fafine   fia
      e   lē   fia siva   le   fafine
      PRES   not want dance SPEC   woman   want

The woman does not want to dance.

Chung (2005: 15-16) points out that complement clauses pose a very similar problem for the VP-fronting account of verb initiality cross linguistically: the predicate XP in the subordinate clause competes with the matrix predicate XP for the initial predicate position in the matrix clause. There is nothing explicit in the theory of VP-fronting preventing the subordinate VP-fronting to a landing-site in the matrix clause. Chung considers a potential solution to this problem, namely that movement will always target the closest XP in terms of c-command. Under this account, it might be expected that the attracting head always picks the undominated predicate. However, Chung also notes that this solution contradicts previous work (McCloskey 2000: 59-60) which count two XPs as equally close in terms of c-command when one XP dominates the other.

Resolving this point depends crucially on the definition of the feature [uX] which triggers the copying operation. Under the definition in (16), repeated in (46), if a VP is copied into Spec,FP, then F must c-command a structurally identical copy by clause (ii). Additionally, there can be no intervening VP, which interrupts the c-command relation between F and the lower copy of the VP. The question is whether or not the higher VP (VP1 in (44)) counts as an intervener under clause (iii), blocking the copying of VP2 into the higher position, thereby correctly rendering (44) ungrammatical.

(46) **[uX]:**
   If a head H has a [uX] feature, then:
   i. a constituent α, with a categorial feature [X], appears in a specifier of H.
   ii. H c-commands β, a structurally identical copy of α.
   iii. There is no γ which is the same category as α (and β), and H
        asymmetrically c-commands γ, and γ asymmetrically c-commands β.

This problem requires a precise definition of c-command which is independently stipulated. If the following definition of c-command is employed which explicitly

excludes domination (as in Langacker (1969): 167), the ungrammatical structure in (44) should be possible, deriving the wrong result.

(47) **C-command:** (v1)

A node α c-commands β iff:

i. neither α nor β dominates the other

ii. the first branching node which dominates α also dominates β.

Neither VP1 nor the lower copy of VP2 in (44) c-commands the other under this definition. As VP1 dominates the lower copy of VP2, they are excluded from the (47) definition of c-command by clause (i) of (47). Thus, there is no constituent of category VP which asymmetrically c-commands the lower copy of VP2, and it satisfies all constraints in (46), and therefore the ungrammatical structure in (44) is incorrectly permitted.

I suggest the solution to this problem lies in a proper formulation of the copy theory of movement which includes a treatment of phases. The following is an additional constraint added to the definition in (46). It states that H cannot copy a constituent across a phase head (defined as any of the heads C, D, or v). Anything properly contained within the complement of a phase head is unable to enter into a syntactic dependency with any object outside the maximal projection of the phase head.

(48) **[uX]:**

If a head H has a [uX] feature, then:

i. a constituent α, with a categorial feature [X], appears in a specifier of H.

ii. H c-commands β, a structurally identical copy of α.

iii. There is no γ which is the same category as α (and β), and H asymmetrically c-commands γ, and γ asymmetrically c-commands β.

iv. ("Phase Impenetrablity Condition" (PIC))

There is no head δ, such that[22]

a. H c-commands the maximal projection of δ, and

b. the complement of δ properly dominates β[23], and

c. δ is C, D, or v.

The statement of the condition in (iv) captures the intuition spelled out in Chomsky (1999; 2001). According to Chomsky, if an XP merges as the complement of a phase-head, it is spelled out, completing the syntactic derivation of the XP. Thus, material which is internal to the complement of the phase head is unable to undergo further syntactic operations, including entering into syntactic dependencies outside the phase (defined here as the maximal projection of the phase head).
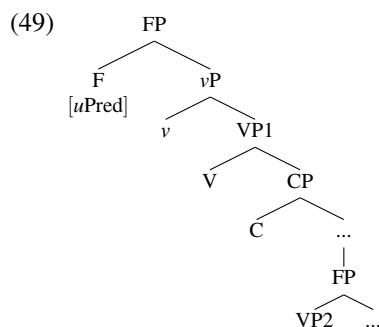
Now we have an understanding of why only the largest VP in (43) may be targetted for movement. F is not able to trigger movement of VP2, the embedded VP,

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[22]Clause (a) ensures that the phase is defined as a maximal projection (CP, DP, vP), however, only the complement of the phase-head is inadmissible to higher operations (by clause (b)), specifiers and adjuncts are able to enter into syntactic dependencies with higher operators (as per Chomsky 1999; 2001). Clause (c) may be an incomplete list of lexical categories which trigger this kind of syntactic barrier. Furthermore, clause (c) may be subject to cross-linguistic variation.

[23]Even though in a VP-fronting structure, the VP *does* front across the phase head v, this is permitted, as the complement of a phase-head *itself* is able to enter into syntactic dependencies. Only material properly contained within the phase-head's complement is inadmissible.

as it is properly contained within the complement of the phase head v, as per clause (iv) of (48). Therefore, VP2 cannot be a target for VP-fronting, correctly ruling out the ungrammatical structure in (44) and addressing Chung's (2005) worry about the VP-fronting analysis in structures with multiple, embedded VPs.

The PIC also does work in excluding other ungrammatical structures. Chung (2005) wonders why there seems to be no VP-fronting across a distance. Why is VP raising across clause boundaries not observed? In (49), a matrix V selects for a CP complement. The CP contains a VP (VP2), which undergoes VP-fronting within the embedded clause. But why is fronting to the matrix clause not possible?

(49)
```
              FP
             /  \
            F    vP
         [uPred] / \
               v   VP1
                  /   \
                 V     CP
                      /  \
                     C    ...
                          |
                          FP
                         /  \
                       VP2   ...
```

As in the restructuring case, VP1 and VP2 count as equally "close" in terms of c-command, given that neither VP1 nor VP2 c-command the other. I suggest that VP2 may not front across the clause boundary due to the PIC as defined in (48). As VP2 is dominated by the sister of a phase head, C, it is unable to be targetted by F in the matrix clause, outside the relevant phase boundary.

Combined with a well defined theory of locality of extraction, the VP-fronting account as described in this paper predicts that VPs contained within embedded clauses should not be able to front across the clause boundary. Likewise, only the complement of v should be targetted for fronting, correctly predicting that adjoined adverbials and restructuring predicates are not stranded by VP-fronting.

5 The position of the predicate's landing site

Two fronting operations have been employed in this paper in order to account for Samoan VSO ordering: fronting of the internal argument and fronting of the VP. What drives these two operations? Several authors (including Massam 2000, 2001; Chung 2006; Clemens and Polinsky to appear) discuss VP-fronting as being triggered by the EPP: the requirement that a constituent must move to the specifier position projected by a particular functional head. I argue that an analogous process is active in Samoan, triggering the fronting of the predicate XP, however it is enforced by a functional head lower than T.

To what extent does the analogy between verb initiality, and subject initiality in languages like English hold? A prevalent view in the verb initiality literature (see Chung 2006:704–707; Clemens and Polinsky to appear:§6) is that languages are parametrized to move either DPs or XP-sized predicative constituents to Spec,TP

in order to satisfy the EPP.[24] Under this account, Samoan T would be parametrized to trigger movement of the VP to its specifier. This section explores this proposal, and concludes that the landing site for the fronted VP is not T in Samoan, but rather a functional head below T. In light of this conclusion, the proposition that the difference between subject initial and verb initial languages can be reduced to a parameter on T is too strong. Instead I advocate for the more permissive view that a variety of functional heads within the same clause may each have their own EPP requirement that their specifier by filled by particular constituents. I argue that T in Samoan, as in English, triggers movement of DPs (albeit only pronouns), while a lower functional head (labelled F) triggers movement of the predicate. This analysis correctly generates SVO order in clauses with subject pronouns, and VSO order with full DP subjects.

In order to derive verb initiality via fronting an XP-sized constituent, the XP must front higher than the subject. But different analyses differ on its exact landing site. Several analyses of VP-fronting including Pearson 2000 and Aldridge 2002 argue that predicates in Malagasy and Seediq respectively front to the specifier of a functional projection in the left periphery above C (and T). Other analyses, such as Lee 2000, place the fronted predicate in Spec,TP. Still others, like Massam 2001, put the predicate in a specifier position below T. Faced with this variation, careful investigation is needed to probe the landing site of predicate fronting in Samoan. This section examines particles in the T-C domain of the clause. The section determines that the fronted constituent must be located below T.

Samoan has a clause initial interrogative particle *pē* (phonologically conditioned allomorph *po*) appearing in both matrix and embedded interrogative clauses. *pē* always precedes the fronted predicate (50). This can be taken as evidence that the predicate does not front outside the constituent headed by the interrogative particle. Assuming constituents headed by interrogative particles are structurally at least as big as clausal constituents like CP and TP, we have preliminary evidence that the predicate does not front to the left periphery. Supporting this hypothesis, (50b) shows that the fronted predicate also follows topicalized DPs, which presumably have fronted to the left periphery.

(50) a. *e   lē   iloa   **pē**   'o   [fai   falesā]*$_{VP}$ *i   se   nu'u*
          PRES   NEG   know   Q   PROG   make   church   LOC   NSPEC   village

      It was not known whether they were building a church in a village.
      (MH:15.34)

    b. ***po*** *'o   ai   na   [fasia]*$_{VP}$ *le   maile*
          Q   FOC   who   PAST   hit.INA   SPEC   dog

      Who hit the dog? (MH:10.176)

A similar point can be made using sentence initial adverbials. These include attitudinal adverbials, expressing a modal attitude toward the propositional content of the modified clause such as *'ailoga* (doubtful) and *'anei* (likely). All adverbs of these

---

[24]This analysis has its roots in Alexiadou and Anagnostopoulou 1998, who posit a similar parameter, although in their system, T's features may be satisfied by head movement of the verb, rather than phrasal movement. See also Massam and Smallwood 1997 and Davies and Dubinsky 2001 for similar proposals.

types precede the TAM marker, and therefore the fronted predicate. These adverbs follow topicalized DPs and fronted *wh*-DPs (51), and thus are structurally lower than the left periphery. The positioning of these adverbs to left of the fronted predicate suggests the predicate's landing site is beneath the left periphery.

(51) *'o   Sala ma Lata 'ailoga   na   [momoe]*$_{VP}$ *anapo*
　　 FOC Sala and Lata <u>doubtful</u> PAST   sleep.PL   last.night

　　 It's doubtful that Sala and Lata slept last night. (MH:4.445)

I assume that Samoan TAM markers, such as the past tense marker *na* in (51), instantiate the head T. Massam (2000; 2001) makes the same assumption for Niuean TAM markers, and Otsuka (2005) for Tongan TAM markers. The fronted predicate is always to the right of the TAM marker. Does this then suggest that the landing site of the fronted predicate is located lower than T? Not necessarily. The fronted predicate could occupy Spec,TP, while the T head itself fronts to a higher position, such as C.

Samoan TAM markers show morphosyntactic properties of both T and C. Patterning with T, they mark tense and aspect, and following the analysis of Collins (2014), they control the distribution of nominative case. They also show properties of complementizers. For example, the TAM markers appear at the left edges of relative clauses serving as a relativizing complementizer.

(52) a. *'o   ipu [e   lua]*
　　　　 FOC cup PRES two

　　　　 The two cups (lit. the cups which are two)
　　 b. *e   leai   se   mea   [na   totoe]*
　　　　 PRES NEG.exist NSPEC thing PAST left

　　　　 Nothing was left. (lit. there wasn't anything that was left.)

Furthermore, in complement clauses, the syntactic position of the TAM marker may instead be occupied by a complementizer. Complement clauses selected by certain verbs (such as *'āmata* 'begin', *'uma* 'finish', *leva* 'long time', *taunu'u* 'happen') are marked by the complementizer *ona*, which is unmarked for tense and aspect. *ona* is in complementary distribution with TAM markers (53a), and like TAM markers, appears adjacent to pre-verbal subject pronouns (53b).

(53) a. *'ua   siliga   **ona** (*sā/e/'a)   taunu'u mai le   tama*
　　　　 PERF too.late COMP (PAST/PRES/FUT) arrive   DIR SPEC man

　　　　 The man was overdue coming back. (lit. it was too late that the man came back) (Mo)
　　 b. *e   mafai   **ona** <u>'e</u>   talanoa mai 'ia mātou*
　　　　 PRES possible COMP 2SG   chat   DIR DAT 1PL.EXC

　　　　 You can come chat to us. (lit. It's possible that you chat with us.) (BFP)

How do we account for the generalization that a single series of particles serves the functions of both T and C in Samoan? Massam (2000) suggests that TAM markers in Niuean instantiate a hybrid T-C category. Otsuka (2005) suggests that TAM

markers in Tongan are derived via T-to-C head movement,[25] and Massam (2010) proposes a similar account for Niuean. I follow Otsuka and Massam in proposing that Samoan TAM markers are merged in T, but undergo head movement from T to the immediately higher head C.

If we understand TAM markers as moving from T to C, we gain an understanding of the relative ordering of TAM markers and pre-verbal subject pronouns. I propose that T has a feature which triggers the movement of the subject DP to its specifier, but only if the subject is instantiated by a weak pronoun.[26] Thus, I posit a [uD[+pro]] feature on T, which copies the nearest D via the definition in (16) to Spec,TP, so long as the D is a weak pronoun. Next, T copies to adjoin to C, above the pronoun. This proposal is sketched in (54).[27]
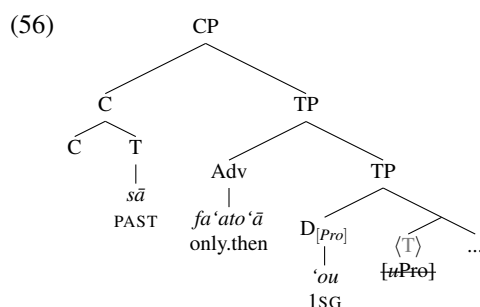
(54)
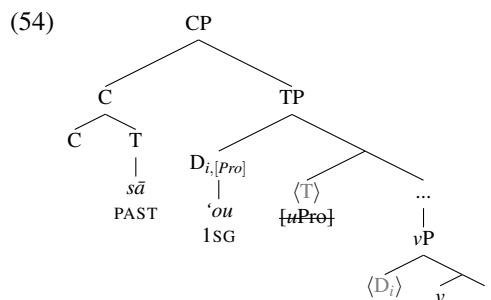
There is additional evidence that there is a maximal projection between the TAM marker and the subject pronoun (in (54), the TP projection), as certain adverbs may intervene between the subject pronoun and the TAM marker, such as *fa'ato'a* (only then) and *tālī* (nearly, almost). I propose these adverbs are TP-adjuncts. They interrupt the linear adjacency of the TAM marker and subject pronoun (56).

(55) a. *'ua   fa'ato'ā   na   iloa   loa   ona   mātua*
            PERF   only.then   3SG   know   then   her   parent.PL

         She only then became aware of her parents. (MH:7.10)

      b. *na   fa'ato'ā   'ou   toe   asia   ai   laufanua   o   Salafai*
           PAST   only.then   1SG   again   visit.INA   LOC   fields   GEN   Salafai

          I only then visited the fields of Salafai. (MH:7.284)

---

[25]In fact, Otsuka's analysis involves V-to-T-to-C movement, contra the VP-fronting account in this paper.

[26]I use the term 'weak pronoun' to distinguish pre-verbal subject pronouns from post-verbal, case-marked pronouns. I remain neutral as to whether subject pronouns in Samoan are better analyzed as clitics or weak pronouns in the sense of Cardinaletti and Starke 1999, leaving this issue as a topic for future research.

[27]There is a worry that T-to-C movement does not fall within the definition of copying in (16), as the movement is not to a specifier position, and the higher copy does not c-command the lower copy. I leave open the question of how head movement is incorporated into the copy theory of movement within this paper, though I suggest it could be insightful to adopt Matushansky's (2006) proposal that head movement *is* in fact movement to a specifier position, followed by morphological concatenation of the dislocated head to the attracting head during the linearization procedure via *m-merger* (cf. the formulation in Harizanov 2014b, 2014a).
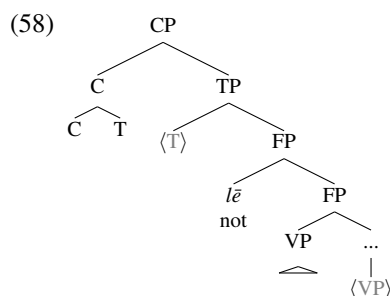
(56)
```
                    CP
            _____|_____
           C                 TP
         __|__         _____|_____
        C     T       Adv             TP
        |     |        |         _____|_____
        sā           fa‘ato‘ā  D_[Pro]        TP
       PAST         only.then    |        ____|____
                               ‘ou      ⟨T⟩       ...
                               1SG     [uPro]
```

Given the structure in (56), is it now possible to propose that the fronted predicate's landing site is Spec,TP? The landing site will have to be an inner specifier of T in order to ensure that the fronted predicate is structurally lower than the subject pronoun, which also occupies a specifier of T under this analysis.

Maintaining this analysis for Samoan faces some problems. The first problem relates to the position of the negative particles *lē* (not) and *le‘ai* (not yet) which occur between the TAM marker and the fronted predicate.

(57) | *‘ua* | *lē* | *[maua mai]_XP* | *ni* | *fesoasoani* | *mai* | *o lātou* | *‘āiga* |
|------|------|------|------|------|------|------|------|
| PERF | NEG | get | DIR | NSPEC.PL help | | for | 3PL.GEN | family |

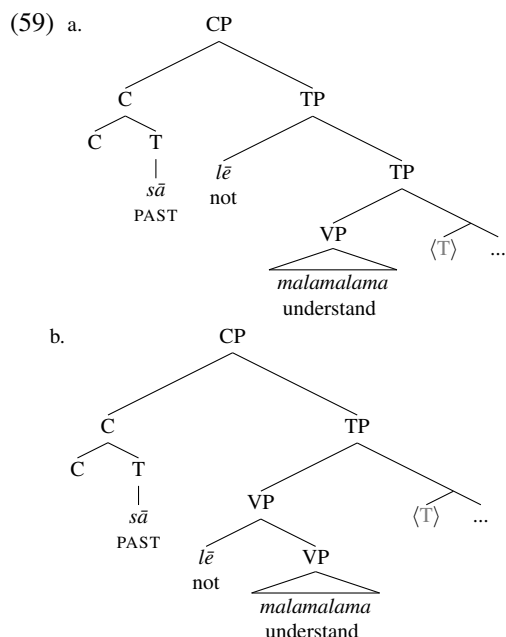[They] don't get any help for their families. (BFP)

If negation is syntactically positioned below T as in (58), this would constitute evidence that the fronted predicate's landing site is below negation, and therefore below T.

(58)
```
               CP
          _____|_____
         C           TP
        _|_      _____|_____
       C   T    ⟨T⟩         FP
                       _____|_____
                      lē            FP
                      not        ___|___
                               VP       ...
                              /__\       |
                                       ⟨VP⟩
```

In order to argue for the structure in (58), and thus that the landing site for the fronted predicate is below T, evidence is needed that negation syntactically intervenes between T and the fronted predicate. Two alternate structures are provided in (59) which maintain the correct linear order of [TAM + Neg + VP], but are nevertheless compatible with the notion that the VP fronts to Spec,TP. In order to argue for the structure in (58), these structures must be argued to be incorrect. The first (59a) has negation adjoined to TP, above the fronted predicate in Spec,TP. The second (59b) has negation within the fronted predicate itself, here adjoined to VP.[28] I will show

---

[28]The latter analysis has precedent in analyses of negation in Polynesian which take negatives to be main verbs which select for the negated clause as a complement (e.g., see Hohepa 1969; Chung 1978; Bauer et al. 1997 on Māori)

that neither of these structures are compatible with the observed data, and we should instead adopt the structure in (58).

(59) a.

```
                CP
           /          \
          C            TP
        /   \        /     \
       C     T      lē      TP
             |      not    /    \
            sā          VP      ⟨T⟩  ...
            PAST       /  \
                  malamalama
                  understand
```

b.

```
                CP
           /          \
          C            TP
        /   \        /     \
       C     T      VP     ⟨T⟩  ...
             |     /  \
            sā    lē    VP
            PAST  not  /  \
                  malamalama
                  understand
```

The analysis (59a) has negation syntactically housed at the edge of TP. Evidence against this hypothesis comes from the relative position of subject pronouns and negation, as in (57). If subject pronouns are in Spec,TP, we would expect negation to precede them, contrary to the observed [Pro + Neg] order in (60).

(60) *‘ole‘ā ‘ou lē alu*
FUT 1SG NEG go

I will not go.

Further evidence against (59a) comes from nominalized clauses. A particular variety of nominalized clause in Samoan is formed by simply combining the verbal predicate with a determiner, without additional nominalizing morphology. Examples follow in (61). A crucial point is that the tense marking auxiliary is excluded from occurring within nominalized clauses (61a-b). These kinds of nominalized clauses in Samoan demonstrate the same kinds of word order facts as verbal clauses (61). The nominalized predicate can appear with adjacent manner adverbials (61c-d), pseudo incorporated NPs (61d), and even non-verbal predicates such as the existential predicate.

(61) a. *le (*e) faigata o le galuega fa‘amatua*
SPEC PRES difficult GEN SPEC work parental

The difficulty of parental work. (BFP)

b. *‘o fa‘a-ali ... [le (*e) lē fafagaina lelei o ia]*
FOC visible the PRES NEG fed well GEN her

(lit.) That she wasn't being fed well ... was visible. (MH:13.159)

    c. *matagofie [le* ***pupula emoemo*** *o*   *fetu]*
      beautiful   SPEC shine   twinkle   GEN star.PL

      The twinkling of the stars was beautiful. (MH:13.76)

    d. *'o*   *[le* ***fai mea piopio*** *o*   *faifeau]*
      FOC the do thing wicked of pastor.PL

      The wicked things pastors do! (MH:13.114)

    e *le*   *i*   *ai*   *o*   *se*   *uō*   *e*   *faalogo mai*
      SPEC LOC there GEN NSPEC friend PRES listen   DIR

      The being there of a friend to listen. (BFP)

Given this data it is reasonable to hypothesize that these bare nominalizations are formed by combining a D with a constituent that is smaller than TP, in order to exclude the occurrence of a tense marking auxiliary in nominalizations. However, the constituent must be large enough to include the landing site of the fronted predicate, in order to generate the same verb initial word order effects observed in non-nominalized clauses (62).

(62)
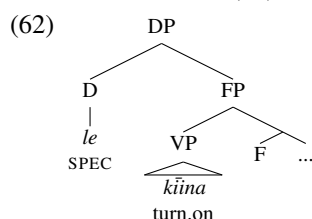
As the data in (61) constitutes evidence that VP-fronting occurs in nominalized clauses, this data is problematic for the view that VP-fronting is motivated by a requirement that the VP moves in order to satisfy the requirements of a feature on T (e.g., Lee 2000; Massam and Smallwood 1997), at least in Samoan, as VP-fronting occurs in these cases within a constituent which excludes tense.

If nominalizations involve embedding a constituent smaller than TP under a determiner as in (62), then negation cannot be positioned at the TP level as in (59a), as negation occurs within bare nominalizations.

(63) a. *lona* ***lē*** *fia*   *'ai* *...*
       her   NEG want eat

      [Because of] her not wanting to eat. (MH:13.171)

    b. *le*   ***lē*** *pese o* *le*   *teine*
      SPEC NEG sing GEN SPEC girl

      The not singing of the girl. (MH:13.160)

Thus a natural assumption can be made that the nominalization process involves embedding a constituent which is large enough to include both negation and the constituent which houses the fronted predicate, but small enough to exclude tense. This analysis excludes the possibility of (59a).

Arguments against the hypothesis that negation is contained within the fronted predicate, as in (59b), involve the relative scope of negation and indefinite subjects. Indefinite subjects headed by the determiner *se* obligatorily scope underneath negation.

(64) a. *e   lē   tagi   se   agelu*
         PRES   NEG   cry   NSPEC   angel

      No angels cry. *but not* An angel doesn't cry. (MH:6.68)

   b. *e   le'i   iloa   ā   e   se   isi   lena   mea*
      PRES NEG   know   EMPH   ERG   NSPEC   one   that   thing

      No one yet knows that thing. *but not* A (certain) person doesn't know that
      thing. (MH:18.262)

Under this paper's analysis, the subject DP is immotile, remaining within *v*P. Thus
the structural position of negation must be high enough so it is able to take scope over
the indefinite subject.

In this position, indefinite subjects should take scope underneath structurally
higher operators. This is indeed the case for indefinites in Samoan headed by the
determiner *se*, which take obligatory narrow scope (see Collins to appear for more
details about the scope-taking properties of Samoan indefinites).

However, in (59b), which assumes that negation is VP-internal, the subject is
syntactically higher than the merged position of negation. (65) is a structure in which
the VP (including negation) has copied into a structurally higher position than the
subject.

(65)
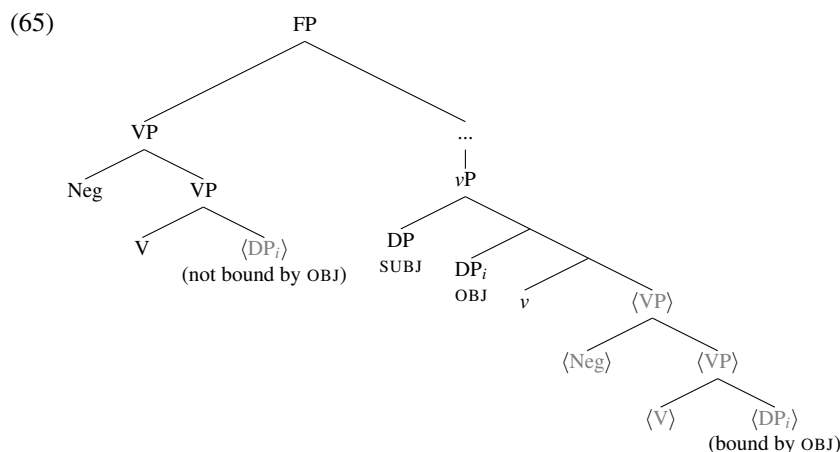
Both copies of the VP contain a copy of the object DP. However, following stan-
dard binding assumptions involved in movement phenomena (see, e.g., Heim and
Kratzer 1998), the copy of the object DP in the raised VP is not bound by the overt
object DP, as it has copied out of its potential binder's c-command domain. Therefore,
at LF, the VP must be interpreted under reconstruction in its low, merged position,
ensuring the copy of the object is properly bound.

The VP-adjunct analysis of negation in (65) does not accurately predict the rel-
ative scope of negation and indefinite subjects (64). As the merged position of the
subject (in Spec,*v*P) is structurally higher than the position in which negation is inter-
preted (adjoined to VP in the low position), we should expect that subjects outscope
negation. Under a view where the relative scope of quantificational noun phrases

and sentential operators like negation is determined structurally, the analysis in (65) wrongly predicts that the indefinite subject outscopes negation.

Both analyses in (59) encounter empirical problems. The analysis in (66) does not encounter the same problems. In (66), negation is adjoined to the maximal projection FP which hosts the landing site for the fronted predicate.[29] Under this analysis, negation forms a constituent with FP which excludes the TAM marker, and therefore, the FP constituent including negation can combine with a determiner forming a nominalized clause, including negation but excluding the TAM marker (63). Furthermore, negation occupies a structurally higher position than the subject, accounting for the fact that the indefinite subject scopes below negation.[30]

(66)
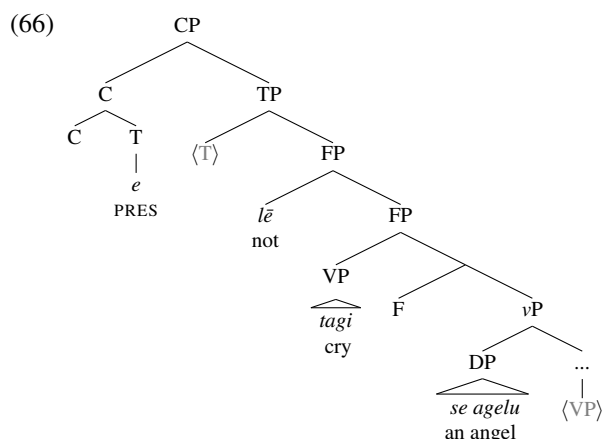
Although the analysis discussed so far is no closer to *identifying* a satisfying label for F, the account has come some way in locating the position of F relative to other functional heads within the clause. The relative position of fronted predicates and interrogative particles, topics, complementizers, and attitudinal adverbs provides evidence that fronted predicates are situated below C and the left periphery. The relative position of the fronted predicate and negation, as well as the possibility of VP-fronting in nominalizations, provides evidence that the fronted predicate is below T. While it is appealing to assume that the feature on T is parametrized cross-linguistically to either trigger movement of the subject or predicate, this account faces empirical problems raised in this section. In fact, evidence was presented from preverbal subject pronouns that the movement-triggering feature on T in Samoan *does* trigger movement of subjects (albeit only pronouns instantiated as weak pronouns), instead of predicates, generating SVO order.

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[29]Alternatively, negation may head its own projection which selects for FP as its complement, giving the finer grained structure $[_{TP}T$ $[_{NegP}Neg$ $[_{FP}F$ ...$]]]$. I leave the choice between these two approaches as an open issue.

[30]The scopal argument against the structure in (65) assumes that negation itself cannot take exceptional scope above an indefinite subject. Alternative accounts do not make this assumption. See, e.g., Barker and Shan (2014:90), who provide a lexical semantics for negation which can take exceptional scope. However, an analysis with such scopal flexibility must explain why negation *always* scopes above indefinite subjects. This fixed scopal ordering is accounted for under the analysis in (66) assuming the scope of indefinites headed by *se* is invariable.

These data motivate an account (following Pollock 1989, etc.) which assumes a finer grained set of functional heads higher in the clause (e.g., T, Asp, Agr). Under this account, features triggering movement of lower constituents can be distributed amongst these heads, each head being parametrized to either trigger movement of subjects or predicates. In English and Samoan, T triggers movement of DPs (though in Samoan only pronominal DPs undergo this movement). However in Samoan, but not English, a functional head lower than T additionally triggers movement of the predicate.[31]

6 Object positions: insight from coordination

The VP-fronting account of VSO necessarily involves two movements: movement of the VP to a clause initial position, and of a DP constituent into a clause medial position. The account requires the DP to be raised in order to get the correct word order. This is unsatisfying unless the movement can be independently motivated by empirical evidence. In this section I suggest that some Samoan data can be explained by this object movement. In particular I discuss the impossibility of coordinating certain pairs of intransitives which I argue may be understood as ruled out by a version of the Coordinate Structure Constraint (Ross 1967). The discussion highlights the central role that the syntax of coordination has as a probe into the clause structure of verb initial languages (Chung 1998; Davis 2005).

If we assume that the subjects of unaccusative intransitive verbs are underlyingly VP-internal (Perlmutter 1978), then unaccusative subjects must copy to a position outside of the VP, before VP-fronting takes place. This operation prevents ungrammatical word orders. For example, if the VP is fronted without first moving the unaccusative subject, we predict that unaccusative subjects appear within the fronted VP. This word order is impossible. Much like transitive subjects and objects, unaccusative subjects must appear to the right of particles which mark the right edge of the verb phrase, such as the locative pronoun *ai*.

(67) *le* *taimi* *'ua* *[taunu'u* *le* *fafine]$_{VP}$ *ai*
    le *taimi* *'ua* *taunu'u*   *ai* *le* *fafine*
    SPEC time PERF arrive   SPEC woman LOC SPEC woman

    The time that the woman arrived.

So far, the movement of patients (transitive objects and unaccusative subjects) has only been motivated by the word order facts. What other empirical evidence can we find for the movement of patients? Given that unaccusative subjects are fronted out of the VP, it is expected that they c-command a copy in the VP complement position. This intuition is sketched given the particular assumptions made in the previous

---

[31]Under this account, verb initiality in Samoan is derived by two independent factors: fronting of the predicate, and the lack of subject movement to Spec,TP. As two different functional heads are responsible for these properties, this system allows for the possibility of a language which has predicate fronting to the specifier of a lower functional head than T, and then subject raising (of both pronouns and full DPs) to Spec,TP, deriving SVO word order. Chung (2008) considers but rejects a similar hypothesis for the clause structure of Bahasa Indonesia.

sections about Samoan clause structure in (68). The subject in the specifier of vP c-commands a VP-internal copy.

(68)

```
        vP
       /  \
     DP_i   v'
           /  \
          v    VP
              /  \
             V   ⟨DP_i⟩
```
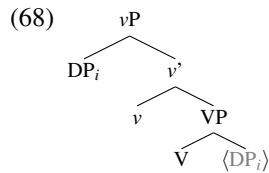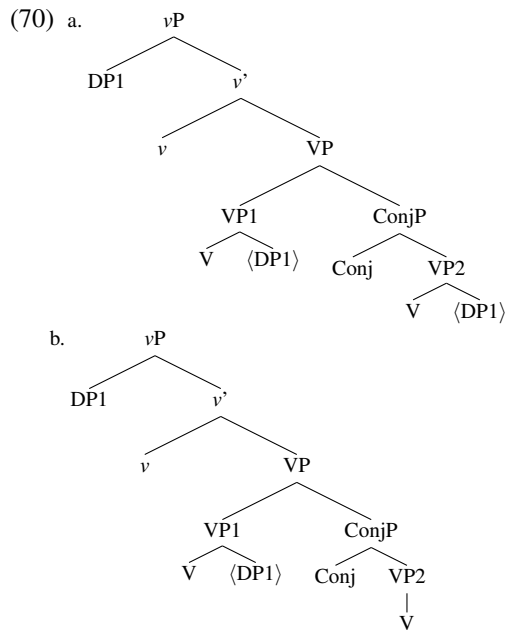
As the VP contains a silent copy of DP_i, it is expected that particular constraints are imposed with respect to the possibility of coordination. According to the Coordinate Structure Constraint (Ross 1967), the VP should not be able to coordinate with a constituent which does not also contain a copy of DP_i. (69) provides a version of the Coordinate Structure Constraint, reformulated into the copy theory of movement.

(69) **Coordinate Structure Constraint**:
For any coordination structure α, and constituent β which c-commands α,
if there is a conjunct in α which dominates a copy of β, then all conjuncts in α dominate a copy of β

The constraint allows the structure in (70a), but not the structure in (70b). In (70a), the two conjunct VPs, VP1 and VP2, each dominate a copy of the relevant DP, so the constraint is satisfied. In (70b), VP1 but not VP2 dominates a copy of the DP, so the constraint is not satisfied, so the structure is ungrammatical.

(70) a.

```
            vP
           /  \
         DP1    v'
               /  \
              v    VP
                  /    \
                VP1     ConjP
               /  \    /    \
              V  ⟨DP1⟩ Conj   VP2
                              /  \
                             V   ⟨DP1⟩
```

b.

```
            vP
           /  \
         DP1    v'
               /  \
              v    VP
                  /    \
                VP1     ConjP
               /  \    /    \
              V  ⟨DP1⟩ Conj   VP2
                              |
                              V
```

The Coordinate Structure Constraint can serve as a diagnostic for the presence of a silent copy of the VP-internal argument. Assuming unaccusative subjects are underlyingly VP-internal, and are copied into the higher position, while unergative

subjects are not underlyingly VP-internal, it is predicted that unergative predicates and unaccusative predicates should be unable to coordinate at the VP level. Coordinating unergative predicates and unaccusative predicates generates the impossible structure in (70b). This prediction is supported by the following examples of coordinated unergative and unaccusative predicates. These are judged as degraded by informants. The generalization holds with any choice of tense marking auxiliary, and with either order of the unaccusative and unergative predicates.[32]

(71) a. *{sā | na | ‘ua}   taunu‘u (mai) ma   siva   Simi.
          PAST1/PAST2/PERF arrive   DIR   and dance Simi
          Simi arrived and danced.   (✗ UNACC + UNERG)
      b. *{sā | na | ‘ua}   siva   ma   taunu‘u (mai) Simi.
          PAST1/PAST2/PERF dance and   arrive   DIR   Simi
          Simi danced and arrived.   (✗ UNERG + UNACC)

The hypothesis that unaccusative subjects bind a VP-internal copy is compatible with the possibility of coordinating two unaccusative predicates, as in (70a). As the specifier of *v*P c-commands a copy in each conjunct, the structure is admissible. Coordination of two unaccusative predicates is indeed possible (72a) in Samoan. Likewise, coordination of two unergative predicates is possible (72b).

(72) a. sā   taunu‘u (mai) ma   toefoi Simi.
          PAST arrive   DIR   and leave   Simi
          Simi was arriving and leaving.   (✓ UNACC + UNACC)
      b. sā   siva   ma   ta‘alo Simi.
          PAST dance and   play   Simi
          Simi was dancing and playing.   (✓ UNERG + UNERG)

Illicit examples with coordinated unaccusative and unergative predicates as in (71) are paraphrased by speakers with coordination at the clausal level or some kind of clausal level subordination.

(73) a. sā   taunu‘u mai Simi ma   toe   amata ‘ona siva.
          PAST arrive   DIR Simi and then start COMP dance
          Simi arrived and started to dance.

---

[32]This discussion refers to examples which employ the particle *ma*. *ma* doubles as both a conjunction and a comitative preposition in Samoan. Its latter use is exemplified in (32a). However Chung (1972) argues that *ma* has uses in Samoan which unambiguously show properties of conjunction, as in (32b), in which a conjoined subject triggers plural agreement. Chung (1972) also observes (*pace* Grinder 1969) that conjunctions with *ma* in Samoan trigger the Coordinate Structure Constraint.

(i)   a. ‘o le tamāloa na sau ma ana tamaiti
         FOC SPEC man PAST come with his children
         The man came with his children (Chung 1972:3)
      b. e pupu‘u Mele ma Ioane
         PRES short.PL Mary and John
         Mary and John are short (Chung 1972:13)

b. *na   amata mai le   siva   a   Simi i   le   taimi na*
   PAST start DIR SPEC dance GEN Simi LOC SPEC time PAST
   taunuʻu mai ai.
   arrive   DIR LOC

   Simi started to dance at the time that he arrived there.

The same pattern is also observed with pairings of other verbs.

(74) a. *sā   tī̄   ma toe pē̄   le   molī̄.*
        PAST turn.on and then turn.off SPEC light

        The light turned on and turned off.   (✓ UNACC + UNACC)

     b. **sā   tī̄   ma toe susulu malosi le   molī̄.*
        PAST turn.on and then shine strong SPEC light

        The light turned on and shined bright.   (✗ UNACC + UNERG)

(75) a. *sā   fua   ma pē̄ le   foalaʻau.*
        PAST bloom and wilt SPEC flower

        The flower bloomed and wilted.   (✓ UNACC + UNACC)

     b. **sā   fua   ma tete   le   foalaʻau.*
        PAST bloom and tremble SPEC flower

        The flower bloomed and trembled.   (✗ UNACC + UNERG)

(76) a. *e   fananau ma toe feoti   tagata.*
        PRES born.PL and then die.PL people

        People are born and then die.   (✓ UNACC + UNACC)

     b. **sā   mafatua ma oti le   toeina.*
        PAST sneeze and die SPEC old.man

        The man sneezed and died.   (✗ UNERG + UNACC)

These data naturally fall out of an analysis according to which unaccusative subjects, but not unergative subjects, are underlyingly VP-internal and front to a VP-external position, binding a VP-internal copy. The competing head movement account of verb initial word order does not impose any requirement that the unaccusative subject move. The paradigm presented in this subsection remains unexplained. Under the VP-movement account which requires the movement of any VP-

internal argument including unaccusative subjects, this coordination paradigm is predicted.[33],[34]

The unaccusative predicates which most robustly demonstrate this constraint on coordination are change of location (*taunu'u* 'arrive', *alu* 'go', *sau* 'come') and change of state predicates (*oti* 'die', *fua* 'bloom', *pē* 'turn off, die', *tī* 'turn on'). Sorace (2000) places event-types on a hierarchy according to how frequently they are lexicalized as verbs showing unaccusative or unergative properties. The particular property studied by Sorace (2000) is auxiliary selection in certain Romance languages. Her findings place change of state and change of location events at the very top of the hierarchy, meaning that these events are most likely to be lexicalized as verbs which show unaccusative properties (such as selecting for a *be* auxiliary in perfective constructions in French, for example).

Event-types at the opposite end of the scale are controlled or uncontrolled processes. These event-types are most likely to be lexicalized as verbs which demonstrate unergative properties, such as selecting for a *have* auxiliary in perfective constructions in certain Romance languages. The Samoan corollary is the constraint on coordination. Coordinating change of state/location verbs with process verbs (*mafatua* 'sneeze', *tete* 'tremble', *susulu* 'shine') leads to ungrammaticality. The data set observed in this subsection therefore has an explanation under a theory which posits that unaccusative subjects underlyingly occupy a VP-internal position, but raise to a VP-external position binding a VP-internal copy.

This generalization does not appear to hold across verb initial languages however. Chung (1998; 2006) notes that in Chamorro, a clause initial predicate which should under the present theory contain a gap left by the fronted DP may coordinate with a gapless predicate. In (78a) and (78b), a stative predicate combines with a transitive predicate (which under our theory should contain a gap left by the movement of the

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[33] A question arises as to whether unaccusative and unergative verbs are truly of the same lexical category. If they are of different lexical categories, they may head different constituent types, accounting for their inability to coordinate. The evidence in (79–83) below shows that both kinds of predicates are able to causativize using the same range of prefixes. Further, both are able to be marked with number agreement, suggesting they are of the same lexical category.

(77) a. *Matou te   galulue fa'atasi fo'i*
         1PL   PRES work.PL together also
         We also work together...
         (`http://www.community.nsw.gov.au/__data/assets/pdf_file/0019/321247/hwh_samoan.pdf`)
      b. *Matou te   o   nei i   le   nu'u   paia*
         1PL   PRES go.PL now LOCSPEC country holy
         We go now to the holy land. (`www.youtube.com/watch?v=C3EuLVRW7vQ`)

[34] Ko and Sohn to appear discuss a comparable coordination constraint in Korean serial verb constructions (SVCs), where verbs assigning an agent theta-role may only serialize with other verbs assigning an agent theta-role. Unaccusative and passive verbs, which do not assign an agent theta-role, may only serialize with other unaccusative and passive verbs. Their syntactic analysis of SVCs does not involve coordination, so the CSC is inapplicable. They stipulate a constraint on SVCs ensuring that only *v*s with matching thematic properties may serialize. Although the Korean and Samoan facts differ somewhat (in Korean, unergatives and transitives may serialize, but not in Samoan), an important avenue of investigation should be to what extent constraints on serialization and coordination cross-linguistically can reduce to the same set of principles.

object). Chung (2006) points out that the coordination structures are impossible when the left conjunct contains the gap (78).

(78) a. *[mu-ma'a'ñao] ya   [ha-yuti'] i   säkki i   salappi'*
          AGR.afraid   and.then AGR.drop   the thief the money

          The thief got scared and dropped the money. (Chung 1998: 134)   Chamorro

     b. *kao ligát   yan ti kontra   un lai yan Konstitusión*
          Q   AGR.legal and not AGR.opposed a   law with Constitution
          Marianas
          Marianas

          Whether a law is legal and not in conflict with the constitution of the
          Marianas.   Chamorro
                                                                      (Chung 1998: 135)

     c. **[ha-dandan] ya   [kumanta] si Juan i   gitala*
          AGR-play   and.then AGE.sing   Juan the guitar

          Juan played the guitar and sang. (Chung 1998: 45)   Chamorro

Chung uses this data to argue that Chamorro word order is not derived via movement of the predicate. I suggest the coordination diagnostic is a valuable tool in discovering detailed cross-linguistic variation in the structure of verb initial languages. Analyses which posit the movement of an object to derive VSO predict the impossibility of unaccusative-unergative coordinations as seen in Samoan. Analyses which do not posit object-movement (such as Chung's (Chung 1998) subject lowering account) do not predict the impossibility of such coordinations.

This coordination paradigm relies on the assumption that unaccusative subjects are VP-internal underlyingly, but are copied into a VP-external position. Is there independent evidence that unaccusative sole arguments (but not unergative sole arguments) are underlyingly VP-internal? I suggest that the following data are predicted by this hypothesis.

In Samoan, both change of state/location denoting verbs, and process denoting verbs are able to transitivize by means of a causative prefix. In the vast majority of cases, the prefix is *fa'a-* (though some verbs use other causative affixes, such as *pē* 'die', *ta-pē* 'kill'). Causativized verbs are transitive and therefore show standard properties of Samoan transitive verbs: assigning ergative case to the subject and showing the transitivity suffix, *-a/-ina*, when the subject appears to the left of the verb. However, only a subset of causative verbs are able appear with a bare NP object.

Where verbs denoting changes of state and changes of location are causativized, they may appear with a pseudo incorporated object.

(79) a. *e   fa'aalu   e   le   tama le   tupe*
          PRES CAUS.go   ERG SPEC boy SPEC money

          The boy wastes (lets go) the money.

     b. *e   fa'aalu   tupe le   tama*
          PRES CAUS.go   money SPEC boy

          The boy wastes money.

(80) a. *'olo'o tapē   e   le   tamāloa le   moa*
       PROG   CAUS.die ERG   SPEC man   SPEC chicken

      The man is killing the chicken.

   b. *'olo'o tapē   moa   le   tamāloa*
      PROG   CAUS.die chicken SPEC man

      The man is killing chicken(s).

On the other hand, when verbs denoting processes are causativized, they may not appear with a pseudo incorporated object.

(81) a. *e   fa'asiva   e   le   faiaoga   le   tama*
      PRES CAUS.dance ERG   SPEC teacher   SPEC boy

      The teacher makes the boy dance.

   b. **e   fa'asiva   tama le   faiaoga*
      PRES CAUS.dance boy   SPEC teacher

      The teacher makes boys dance.

(82) a. *e   fa'afaigaluega e   le   pule le   tama*
      PRES CAUS.do.work   ERG   SPEC boss SPEC child

      The boss makes the boy work.

   b. **e   fa'afaigaluega tama le   pule*
      PRES CAUS.do.work   child SPEC boss

      The boss makes boys work.
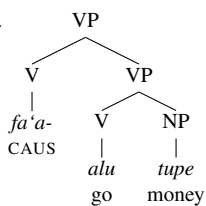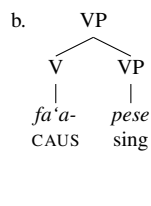
(83) a. *e   fa'apese   e   le   fafine le   manu*
      PRES CAUS.sing   ERG   SPEC woman   SPEC bird

      The woman makes the bird sing.

   b. **e   fa'apese   manu le   fafine*
      PRES CAUS.sing   bird SPEC woman

      The woman makes birds sing.

Under the view that change of state/location events are more likely to be lexicalized as verbs with unaccusative syntax, thereby selecting for their sole argument in a VP-internal position, this data set has a simple explanation. Change of state/location verbs are unaccusative, and therefore select for their sole argument in their complement position. The VP containing the unaccusative sole argument is embedded under the causative morpheme. As the unaccusative sole argument is VP-internal, it is low enough to appear as a pseudo incorporated object.

(84) a.

b.

Process events are lexicalized as unergatives, whose sole argument is external to the VP. Thus, the causative morpheme embeds a VP which does not contain a DP. As there is no VP-internal argument, there is no NP which is positioned low enough to appear as a pseudo incorporated noun. I take this paradigm to support the view that the sole argument of unaccusative predicates (which chiefly denote change of state/location) is projected underlyingly in a VP-internal position.

The VP-fronting analysis requires the fronting of unaccusative subjects in order to generate the observed word order. This section has explored independent empirical evidence for the movement of this argument. I have argued that the impossible sentences involving coordination of unaccusative and unergative verbs may be understood as being ruled out by the Coordinate Struture Constraint.

The analysis so far predicts that it should be impossible to coordinate transitive verbs, one of which selects for a pseudo incorporated object and one of which selects for a full DP object. As the full DP object fronts out of its VP, but the bare NP does not, the structure should run afoul of the Coordinate Struture Constraint.[35] Such examples (e.g., 85) are indeed judged as ungrammatical, as predicted.

(85) *sā   [[tofi   su'e] ma [su'e   ma'a]] e   le   teine le   lā'au
       PAST cleave open   and search rock   ERG SPEC girl   SPEC tree

      The girl cleaves open the tree and searches for rocks.

7 Conditional and unconditional copying features

So far, the analysis has raised several questions about how we should characterize the evacuation of the object DP out of the VP. This section explores these questions. In focus is the deceptively simple generalization that DP-movement only takes place when the VP contains a DP-complement. In cases where the VP does not contain any DP, such as in unergative and PNI structures, no DP-movement takes place. I investigate how to characterize this generalization in terms of features. I suggest the following account: in Samoan, the feature triggering movement on v is specified to attract *all* DPs in v's c-command domain. Thus, in structures in which v does not c-command any DPs (such as unergatives and PNI structures), the requirements of the feature are trivially satisfied. Further, in structures where v c-commands multiple DPs (such as double object structures and causativized transitives), the feature triggers the movement of multiple DPs. I argue that featural specifications of this type may vary parametrically across languages and across syntactic domains.

The theory of movement assumed in this paper employs a feature, $[uX]$. When this feature appears on a head, an XP constituent must appear in the specifier of that head. This XP must c-command a (sufficiently local) copy. In this section, I complicate this picture by arguing that the $[uD]$ feature on v in Samoan may in some cases be left unsatisfied. Only in cases where v c-commands a DP must the $[uD]$ feature on v be satisfied. This idea is comparable to Preminger's (2011) notion of "failure to agree". Under Preminger's theory, heads which ordinarily are required to enter an agreement relation with some XP can be absolved of this requirement in case

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[35]Thanks to an anonymous WCCFL reviewer for suggesting an example of this type.

the structural requirements of the agreement relationship are not met. The proposal in this section makes connections with this idea in the domain of word order and argument structure alternations.
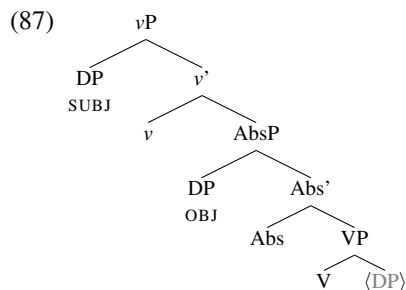
Under the VP-fronting account, VOS word order may be generated by leaving the object in-situ and thereby fronting the object along with the verb. (86) repeats Samoan examples from §2.

(86) a. *e   [su'e] pea   e   le   teine [le   maile ma   moa].*
         PRES   search continually   ERG   the   girl   SPEC   dog   and chicken

         The girl continuously searches for the dog and chicken.

      b. *e   [su'e   maile ma   moa]   pea   le   teine.*
         PRES   search dog   and chicken continuously   the   girl

         The girl continuously searches for dogs and chickens.

Under the analysis so far, in the PNI structure in (86b), no DP moves out of the VP to Spec,*v*P. If we are to understand ordinary VSO structures such as (86a) as being motivated via an EPP requirement on *v* attracting the object to its specifier, why does this same operation not occur with PNI structures as in (86b)?

7.1 The motivation for object movement: against a case-based account

Massam proposes for Niuean that case is the motivating factor which drives movement of the object. As bare NPs in pseudo noun incorporation structures do not require case, they remain low in the VP-internal position. Full DPs on the other hand require case and therefore front to a position where they may receive case. Massam proposes that the case licensing position for the direct object is the specifier of a phrasal category AbsP which occurs between VP and *v*P and serves to assign absolutive case to the DP in its specifier.

(87)

```
          vP
        /    \
      DP      v'
     SUBJ   /    \
          v      AbsP
               /      \
             DP       Abs'
            OBJ      /    \
                  Abs      VP
                         /    \
                        V     ⟨DP⟩
```

This analysis has the desired effect of ruling out [VO]S ordering with full DP objects: DPs must raise to "check the strong D feature associated with absolutive case in AbsP" (Massam 2001: 163). DPs which remain VP-internal (and thus front with the VP) do not check this strong case feature and the structure is thus ungrammatical. Additionally, the analysis unifies the movement of transitive objects with the movement of unaccusative subjects. Assuming unaccusative subjects start out VP-internally, and bind a VP-internal copy, they must undergo the same movement to the VP-external

position. The AbsP allows us to understanding this connection: both transitive objects and unaccusative subjects must receive absolutive case, and therefore move to Spec,AbsP to receive it, vacating the VP.

An analysis which motivates object movement via AbsP is strongly committed to the notion that DP movement necessitated by the VP-fronting analysis is tied to the notion of absolutive case. But how well does this generalize to languages related to Niuean and Samoan which demonstrate a nominative-accusative case marking pattern, such as Hawaiian?

According to Medeiros (2013), the Polynesian language Hawaiian demonstrates the same kind of VSO and VOS alternation as its relatives Niuean and Samoan, motivating a predicate fronting account for Hawaiian also. However, Hawaiian demonstrates a nominative-accusative case marking pattern, unlike Niuean or Samoan. The transitive object takes the object case marker *i*. Subjects of transitives, intransitives and subjects of pseudo incorporating verbs take the subject marking case *'o*.

(88) a. *inu   ana   'o   Noelani   i   ke   kope   hu'ihu'i*
          drink DIR   SUBJ Noelani   OBJ the coffee cold

          Noelani is drinking the cold coffee. (Medeiros 2013:10a)   Hawaiian

     b. *inu   kope   hu'ihu'i   'o   Noelani*
          drink coffee cold   SUBJ Noelani

          Noelani is drinking the cold coffee. (Medeiros 2013:10b)   Hawaiian

     c. *ua   hau'oli   'o   Kekoa*
          PERF   happy   SUBJ Kekoa

          Kekoa is happy. (Medeiros 2013:5d)   Hawaiian

Extending the AbsP analysis in (87) to Hawaiian, it is difficult to uphold the hypothesis that movement of intransitive subjects and transitive objects out of the VP is motivated by case reasons, i.e., to receive absolutive case in Spec,AbsP, as intransitive subjects and transitive objects receive different cases (88a,c). Medeiros 2013 reaches this conclusion and uses it to reject the hypothesis that Hawaiian object movement is motivated by case.[36]

Returning to Samoan, there are further issues which prove problematic for the hypothesis that the motivating factor for object movement is absolutive case. Some Samoan verbs take arguments which are marked with the locative case marker *i* or the dative case marker *'i*. Chung 1978 argues that Samoan verbs which appear with dative or locative case marked arguments (termed 'middle verbs') are syntactically transitive. This argument is based on the fact that the ordinarily case marked object in many cases may appear as a pseudo incorporated bare NP.

(89) a. *sā   mulimuli   **ta'avale** le   leoleo*
          PAST   follow   car   SPEC   police

          The policeman was following cars. (Chung 1978: 186)

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[36] An outstanding issue is how the subject and object receive ergative and absolutive case, as we have not employed Massam's AbsP projection. Collins (2014) provides a treatment of Samoan ergativity. See also Legate (2008) for an alternative account of Niuean ergativity.

b. *sā   mulimuli   le   leoleo **i**   **le**   **ta'avale***
   PAST follow   SPEC   police LOC   SPEC   car

The policeman was following the car.

(90) a. *sā   tilotilo **teine**   'oia*
   PAST watch   girl   3SG

   He was watching girls. (Chung 1978: 186)

b. *sā   tilotilo 'oia   **i**   **le**   **teine***
   PAST watch   3SG   LOC   SPEC   girl

   He was watching the girl.

Middle objects show the same VSO/VOS alternation as null case marked objects of canonically transitive verbs. If this alternation is to be understood as an alternation between whether or not O raises out of the VP, then the analysis that such movement is motivated by the checking of absolute case encounters a problem. Why should such movement target dative and locative case marked objects? If such objects are inherently case marked, they should not demonstrate any requirement to move in order to get case.

I propose that objects of middle verbs in the VP-internal position raise to the inner specifier of *v*P, in the same fashion as canonically transitive objects: a feature on *v* triggers movement of any VP-internal DP, regardless of the DP's morphological case. Given the arguments against an account where VP-internal arguments move to receive absolutive case, the structure is truncated by removing the AbsP projection from (87), and having middle objects fronting to the inner specifier *v*P. The following structure gives a unified analysis of middle verbs and regular transitives.[37]

(91)
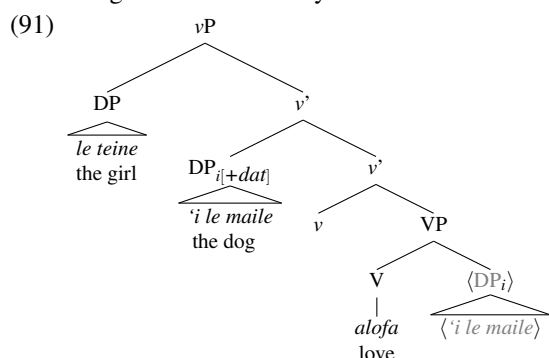
7.2 The EPP in Samoan: T and *v*

If DP objects do not move to receive case, what motivates object movement? I propose that Samoan *v* has an EPP requirement which triggers the movement of DPs.

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[37]It is possible that the case marking labelled in (91) as dative is in fact a preposition. Under this alternative analysis, the dative preposition selects for the DP in its complement: [$_{PP}$ P [$_{DP}$ D NP]]. If this view is taken, I suggest that *v* attracts the DP to its specifier position, and the preposition is "pied-piped" along with the DP to the higher position. Samoan in general lacks preposition-stranding, and so may independently require a pied-piping mechanism to handle cases of movement of DPs embedded within PPs. Deciding between the PP analysis and the DP analysis in (91) is a topic for future research.

This requirement is implemented as a [*u*X] feature on *v* which may trigger movement to Spec,*v*P. The EPP requirement on Samoan *v* is analogous to the EPP requirement on English T, which drives fronting of the structurally highest DP to Spec,TP.

However, there is a key difference between the two languages. The EPP requirement on English T *must* be satisfied. Structures in English which do not supply an eligible DP to front into Spec,TP are ungrammatical, unless the requirement is fulfilled by a semantically null expletive pronoun. The EPP requirement on Samoan *v* is weaker: it *must* be satisfied only if it *can* be satisfied. In transitive structures (with a VP-internal object), a DP is able to raise to satisfy *v*'s featural requirements, and therefore it must. In intransitive structures (with no VP-internal object), no DP is available to raise, but the featural requirements of *v* are satisfied nonetheless.

This distinction motivates a sub-classification of [*u*X] features referred to in this paper. I suggest that [*u*X] features may either be *unconditional* (e.g., on English T) or *conditional* (e.g., on Samoan *v*). The definition of *unconditional* features follows in (92).

(92) **Unconditional [*u*X]**:

If a head H has an unconditional [*u*X] feature, it *must* copy an XP into its specifier.

If (i) H does not c-command an XP in its local domain (i.e., without an intervening phase head), or (ii) it c-commands an XP in its local domain, but does not copy it into its specifier, then the structure is ungrammatical.

As the feature on English T is unconditional, it demands that a DP must be copied into Spec,TP. Even in cases where the clause's argument structure does not supply a semantically contentful DP, an expletive DP must copy into Spec,TP to satisfy T's featural requirements (see Deal 2009).

Compare this with the featural requirements of Samoan T, proposed in §2. Recall that Samoan T forces a subject pronoun to copy into Spec,TP, generating SVO order (93a). But how can we spell out this requirement? In cases where the subject is generated as a weak pronoun, it *must* move to the preverbal Spec,TP position as in (93a), blocking the generation of ungrammatical sentences like (93b).

(93) a. *sā*   *'ou*   *alofa*   ⟨*'ou*⟩   *i*   *le*   *fafine*
          PAST   1SG   love   DAT   SPEC   woman

          I love the woman.

      b. **sā*   *alofa*   *'ou*   *i*   *le*   *fafine*
          PAST   love   1SG   DAT   SPEC   woman

          I love the woman.

Should we then propose that Samoan T has an unconditional [*u*X] feature as in (92)? The feature would closely match the English feature, except that it would only attract weak pronouns (i.e., [*u*Pro]). This cannot be correct. If the feature were unconditionally satisfied, it would rule out as ungrammatical any structure without a subject pronoun in Spec,TP, such as a basic VSO sentence with full DP arguments as in (94).

(94) *sā   alofa   le   tamāloa   i   le   fafine*
    PAST   love   SPEC   man   DAT   SPEC   woman

The man loves the woman.

Can the [uX] feature on Samoan T then simply be optional? It *can* be satisfied, but it need not be (compare the optional EPP requirements in Dholuo proposed in Cable 2012). This does not work either. Although this configuration correctly allows (94), it also admits ungrammatical structures like (93b). As the pronoun-attracting feature on T is only optionally satisfied, it is able to leave a c-commanded subject pronoun in its merged position, generating the unattested structure in (93b).

Instead I suggest that EPP requirements of functional heads may be *conditionally* satisfied. If the syntax delivers a structure in which the feature *can* be satisfied, then it *must* be satisfied. If the syntax does not deliver such a structure, the feature may remain unsatisfied. A pre-final definition of *conditional* [uX] features follows in (95). The definition is amended in the following subsection in order to deal with cases in which the head triggers the movement of multiple constituents.[38]

(95) **Conditional [uX]** (non final):
If a head H has a conditional [uX] feature, if it *can* copy an XP constituent into its specifier, then it *must* do so.
   – If H c-commands an XP in its local domain (i.e., without an intervening phase head) but does not copy it into its specifier, the structure is ungrammatical.
   – If H does not c-command an XP in its local domain, the requirements of [uX] are satisfied.

I propose that the copying feature on Samoan T which requires a subject pronoun in its specifier is *conditional* as in (95). This correctly allows structures like (94). The syntax does not deliver a subject pronoun in T's c-command domain, therefore T's conditional copying feature cannot apply and nothing goes wrong. It also correctly rules out (93b); here the syntax *does* deliver a structure in which T's conditional copying feature *can* apply, therefore the subject pronoun cannot remain low. This generates the right results: SVO word order in cases where the subject is a weak pronoun (93a), and VSO word order when the subject is any other kind of DP (94).

I suggest that Samoan *v* also bears an EPP requirement. Like the EPP requirement of English T, Samoan *v* triggers the fronting of DPs. Unlike English T, Samoan *v*'s EPP is *conditional*. It *must* be enforced in structures in which *v* c-commands a DP, such as transitive and unaccusative structures. However, in structures where *v* does not c-command a DP, as in unergative, pseudo incorporation, and weather verb structures, no copying procedure takes place.

To provide some examples, compare the following structures. (96a) has a full DP object, while (96b) has a bare NP object. The [uD] feature on *v* is "conditional", and demands that a DP copy into its specifier if a DP is available to be copied (abbreviated as $\diamond \rightarrow \square$, or "if-possible-then-necessary").
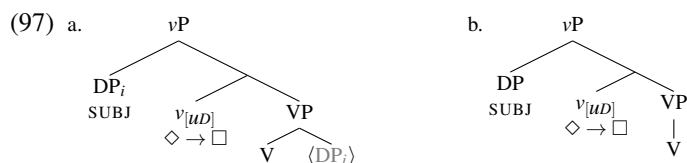
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[38] The distinction between conditional and unconditional features does not correspond to the distinction between weak and strong features in previous work. These terms have previously applied to optionally vs. obligatorily satisfied features, or features which apply in the narrow syntax vs. covert syntax. Neither of these notions corresponds to the distinction I make here.

(96) a. (✗)
```
              vP
            /    \
         DP        \
        SUBJ    v_[uD]    VP
               ◇ → □     /  \
                        V    DP
                            OBJ
```
b. (✓)
```
              vP
            /    \
         DP        \
        SUBJ    v_[uD]    VP
               ◇ → □     /  \
                        V    NP
                            OBJ
```
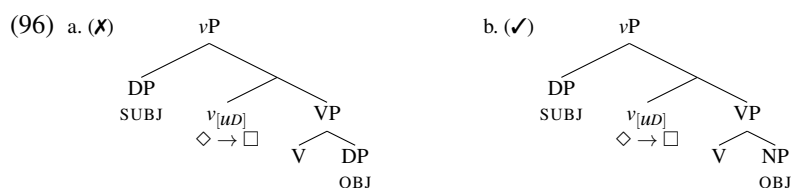
(96a) is an ungrammatical structure in Samoan. The full DP object remains within the VP, fronting to the clause initial position, generating [VO]S word order. Its ungrammaticality is correctly predicted by the present system. The syntax delivers a structure in which the copying of a DP to Spec,vP is possible, but does not occur, leaving the [uD] on v feature unsatisfied. The structure would be remedied by copying the VP-internal DP into an inner specifier projected by v.

On the other hand, the structure in (96b) is grammatical, it correctly predicts the bare NP object stays within the VP, fronting along with the VP, generating [VO]S word order, as in a pseudo incorporation structure. The syntax does not deliver a structure in which the [uD] feature on v can apply (as v does not c-command a DP), therefore nothing goes wrong. The feature fails to apply. The NP fails to vacate the VP, fronting along to the pre-subject position.

Intransitive structures work in much the same way. In unaccusative structures (97a), v c-commands a DP. Therefore, the [uD] feature can apply and therefore must. The DP is thus copied into v's specifier position. In unergative structures (97b), v doesn't c-command a DP, therefore the feature [uD] need not trigger any movement.[39,40]

(97) a.
```
              vP
            /    \
        DP_i       \
        SUBJ    v_[uD]    VP
               ◇ → □     /  \
                        V   ⟨DP_i⟩
```
b.
```
              vP
            /    \
         DP        \
        SUBJ    v_[uD]    VP
               ◇ → □      |
                          V
```

Employing conditional and unconditional features gets the right results. A question arises as to whether the feature on F which triggers VP-fronting is conditional

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[39] A discrepancy between v heads is whether they select for an external argument (transitives, unergatives, pseudo incorporation structures) or not (unaccusatives). See Collins (2015) for a discussion of this discrepancy and how it bears on issues of argument structure and case assignment in Samoan.

[40] See Van Urk and Richards 2015:§2.2, who also posit an EPP feature on v in order to capture intricate word order facts in the Nilotic language Dinka. As in Samoan, the EPP feature on Dinka v may fail to attract any DP in unergative structures. Van Urk and Richards argue that the Dinka EPP on v only attracts DPs to which v has assigned Case, correctly excluding the possibility that (subcategorized and non-subcategorized) locatives raise to Spec,vP. As we have seen in §7.1, the same cannot be said of Samoan EPP on v, which triggers the movement of (subcategorized and non-subcategorized) inherently Case marked DPs/PPs (91). For this reason, I argue that the EPP feature on Samoan v is always 'active', indiscriminately triggering the movement of phrases to which it has assigned Case and those which it has not.

A further difference between the Samoan and Dinka EPP on v is evident when we look at structures with multiple DPs in the c-command domain of v. As I argue in §7.3, in Samoan, all DPs evacuate the VP constituent to raise to the higher position. In contrast, where the Dinka v c-commands two DPs in a double object construction, just one DP may move. Van Urk and Richards (2015:fn26) propose that v assigns Case to both DPs, and v triggers the movement of exactly one DP to which it assigns Case. I propose Samoan v is more permissive, triggering multiple evacuation of DPs regardless of their source of Case.

or unconditional. I suggest that the empirical data underdetermines. The crucial case which distinguishes the two types of features are cases in which the syntax delivers structures in which the featural requirements may not be satisfied. As far as the data from this paper goes, there are no such structures, so positing an unconditional or conditional feature on F triggering VP-fronting will amount to the same results.

The system here thus builds a typology of EPP requirements (here implemented as features on functional heads), which may vary in at least the following ways: (i) on which head they occur, e.g., T or v, (ii) the lexical category of the constituent attracted (full DPs or only pronouns), (iii) whether the feature is conditionally or unconditionally satisfied. The following is a table for the copying features on T and v in English and Samoan. Using this schema, we can provide characterizations of other languages, such as Niuean, which has the same kind of DP/NP object alternation as Samoan (motivating the same specification on v), but lacks pre-verbal pronouns.

(98)

	T	v
English	[uD], unconditional	ø
Samoan	[uPro], conditional	[uD], conditional
Niuean	ø	[uD], conditional

Having focused on the syntactic positions of DP objects, an outstanding question is the status of complement clauses in this system. In general, CP subjects and objects appear in the same syntactic configurations as DP subjects and objects. (99) is a basic example of a clausal object in a matrix clause with V-S-CP ordering.

(99)   *na*   *lagnoa*   *[e*   *le*   *tinā]$_{Subj}$*   *['olo'o*   *tagi*   *le*   *pepe]$_{CP}$*
     PAST   hear   ERG   SPEC   mother   PROG   cry   SPEC   baby

The mother heard that the baby was crying.

I hypothesize that the EPP requirement of Samoan vPs may be satsified by a CP as well as by a DP, in much the same way that the EPP requirement of English TPs may be satisfied by CPs or DPs.[41] Thus, the [uD] feature as defined in this paper should be expanded, allowing it to copy constituents bearing either the CP or DP label. As the operation triggering VP-fronting is specified in Section 2 to attract constituents bearing the categorial feature [Pred], it is possible that an analogy can be made for object fronting – the operation triggers fronting of a generalized "argument" category, including CP and DP.

In this section, I have provided an explicit analysis of alternations in Samoan object positions and how they interact with the theory of VP-fronting proposed in this paper more broadly. The approach I have employed construes argument structure alternations as being determined by feature structures on a functional head v which controls the positioning of the external and internal arguments. I have suggested that the clause-medial position of transitive objects and unaccusative subjects necessitated by the VP-fronting account can be controlled by a feature on v analogous to

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[41]Though see Koster (1978), Alrenga (2005), for arguments that subject CPs in English are structurally higher than Spec,TP, which is filled by a null pronoun, in which case the EPP requirement of English TPs is universally satisfied by DPs. An interesting avenue of inquiry is to investigate whether Samoan CP and DP objects occupy the same structural position, and if not, whether the Koster-Alrenga analysis can be extended to the domain of Samoan objects.

the EPP requirement commonly associated, for example, with the English T head. I explained a theoretical problem with such accounts, namely positing that the EPP requirement on v is *obligatorily* satisfied undergenerates, predicting that structures where the object movement has not taken place are ungrammatical (incorrectly ruling out unergative and pseudo noun incorporation structures). Further, positing that the copying feature is *optionally* satisfied overgenerates, incorrectly predicting that unaccusative subjects and transitive objects should optionally be able to stay in-situ. The solution I have proposed is that the copying feature on v is a *conditional* feature, applying if v c-commands a DP, and inactive elsewhere.

7.3 The problem of multiple evacuation

In this subsection, I wish to deal with examples which appear to require the movement multiple DPs from a VP-internal position to a VP-external position. These examples include double object constructions and causativized intransitives. In such cases, it appears that "multiple evacuation" is required. Based on this data, I ask how the notion of multiple evacuation should be integrated into the present account. I suggest the data is accounted for by a slight reformulation of the structural requirements of the conditional feature in (95), repeated here.

(100) **Conditional [uX]** (non final):
If a head H has a conditional [uX] feature, if it *can* copy an XP constituent into its specifier, then it *must* do so.

Instead I suggest that the head H triggers the movement of *all* XPs it c-commands in its local domain. Thus, in cases where H doesn't c-command any XP, H's featural requirement is trivially satisfied. This maintains the results of the previous subsection, as well as accounting for cases of multiple evacuation.

So far, the analysis has focused on structures in which the VP contains at most one argument. But what happens when multiple VP-internal arguments are present? Samoan has several verbs which appear with an absolutive object and a dative or locative nominal. Such verbs include verbs of location transfer, such as *tu'u* 'put/leave something somewhere.' which select for an absolutive argument and a locative argument. In (101), the temporal modifier *loa* marks the right edge of the fronted predicate, providing evidence that the three arguments of *tu'u* are not contained within the fronted predicate.

(101) *sā* *[tu'u]$_{VP}$* *loa* *e* *le* *fafine* *le* *i'a* *i* *le* *'apa*
     PAST put   then ERG SPEC woman SPEC fish LOC SPEC can
The woman was putting the fish in the can then.

How do we know whether the locative argument of *tu'u* is merged VP-internally? Mosel and Hovdhaugen (1992:394–395) discuss examples demonstrating that such verbs may incorporate their locative argument, providing preliminary evidence that the locative is a true argument of the verb, rather than an oblique.

(102) *sā*   *[tuʻu ʻapa]ᵥₚ loa*   *e*   *le*   *fafine*   *le*   *iʻa*
       PAST put   can   then ERG SPEC woman SPEC fish

The woman was canning fish then.

If *tuʻu* does indeed select for two arguments, then the VP is occupied by multiple DPs. Thus, in order to generate the right word order facts, all of these DPs must vacate the VP. I suggest the following structure in (103) for (101). The theme and goal arguments are merged within the VP, in a structural configuration following Baker (1997) for verbs which select for both a theme argument and a goal argument. *v* c-commands multiple DPs, and for each of those DPs, a copy appears in a specifier projected by *v*.

(103)
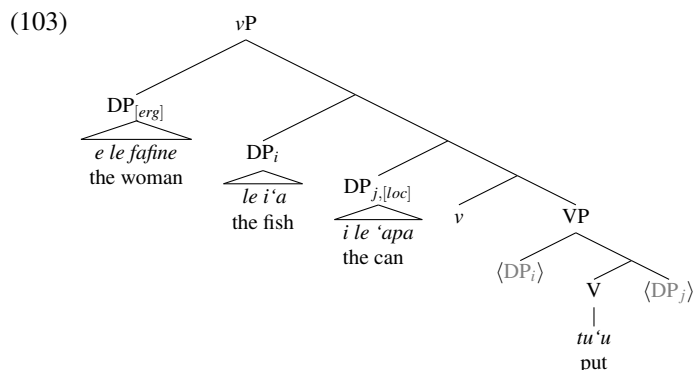
As stated, (100) gets the wrong result. So far, the definition of [*u*X] assumes a version of Attract Closest. Therefore, only the closest DP (the theme, *le iʻa*) in (103) will copy into the higher position. The feature on *v* is unable to trigger the movement of the lower DP (the locative, *i le ʻapa*). This is due to the fact that the higher DP acts as an intervener. Formulating the featural requirements in this way wrongly predicts that the goal DP is stranded within the VP, fronting along with the predicate, generating the ungrammatical (104). It must be ensured that all DPs c-commanded by *v* copy into the higher position.

(104) **sā*   *[tuʻu i*   *le*   *ʻapa] loa*   *e*   *le*   *fafine*   *le*   *iʻa*
        PAST put   LOC SPEC can   then ERG SPEC woman SPEC fish

The woman was putting the fish in the can then.

Causativized transitives provide a very similar paradigm. Samoan has only a few transitives which may causativize, including *ʻai* 'eat', and *susu* 'suck'. The causee takes absolutive case in the causative construction (105b), and the theme may incorporate or take an oblique case. I leave the proper analysis of Samoan causatives as an open question, merely pointing out that there is good evidence for predicates (such as *faʻasusu*) which take multiple internal arguments, and thus under the VP-fronting account sketched in this paper, it is required the DP-copying operation apply to multiple DPs as in (103).

(105) a. *ʻoloʻo susu*   *e*   *le*   *tama* *le*   *fagu*
           PROG   CAUS.suck ERG SPEC child SPEC bottle

       The child is sucking on the bottle.

b. *'olo'o fa'asusu   e   le   teine le   tama i   le   fagu*
   PROG CAUS.suck ERG   SPEC girl SPEC child LOC SPEC bottle

   The girl is feeding the child with the bottle.

c. *'olo'o fa'asusu   fagu e   le   teine le   tama*
   PROG CAUS.suck bottle ERG   SPEC girl SPEC child

   The girl is bottle feeding the child.

The data above motivate a notion of multiple evacuation of VP-internal DPs. I suggest that the featural requirements of conditional features may be restated as in (106): the feature is satisfied only if *every* XP of the requisite category in the relevant syntactic domain is fronted to the applicable specifier position(s).

(106) **Conditional [*u*X]** (alternate formulation with universal quantification):
If a head H has a conditional [*u*X] feature, then:
for every α, such that (i) α is of category XP, and (ii) H c-commands α in its local domain (i.e., within H's phase), a copy of α must appear in a specifier projected by H.

This formulation does not alter the results of the previous subsection. If H does not c-command any XP, as in unergative and PNI structures, then the universal statement in (106) is trivially satisfied. If H only c-commands one XP, as in transitive and unaccusative structures, then a copy of that XP must appear in H's specifier. However, in cases where X c-commands more than one XP, copes of *each* of those XPs must appear in specifiers projected by H, as in (107).[42]

(107)
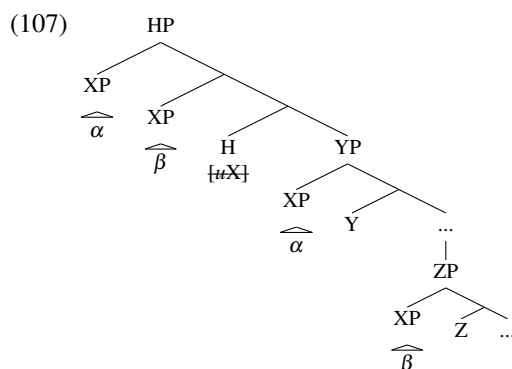
The formulation of the conditional copying feature in (106) requires that the copying procedure applies universally to the XPs eligible to be copied. A question arises as to whether the specification in (106) is the right approach for all copying phenomena. I suggest it is not. Features may alternatively be parametrized to only attract the closest constituent. A clear case of this in action is English multiple *wh*-questions. Data such as (108) are well known.

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[42] An open question is whether the multiple specifiers are subject to any ordering constraints. Following previous work on multiple *wh*-fronting (e.g., Richards 1997; Boškovic 2002), the relative order of moved constituents should be maintained post-movement. The rule in (106) must be refined in order to incorporate this insight, however thorough investigation of the facts in Samoan remains to be undertaken.

(108)   a. What did Mary think Sue bought ⟨what⟩?
        b. Who did Mary think ⟨who⟩ bought the car?
        c. Who did Mary think ⟨who⟩ bought what?
        d. *Who what did Mary think ⟨who⟩ bought ⟨what⟩?
        e. *What did Mary think who bought ⟨what⟩?

In English, *wh*-words copy into the left-periphery. If there are multiple *wh*-words, there is a superiority effect: only the structurally highest *wh*-word copies into the left periphery, while less high *wh*-words remain in their merged position. Multiple fronting of *wh*-words, and fronting of non-highest *wh*-words is not possible. This kind of data suggests an alternate procedure to the one stated in (106): in cases with multiple candidates for copying, only copy the structurally highest candidate, rather than all candidates.[43]

On the other hand, other languages *do* allow multiple *wh*-fronting, for example, several Slavic languages (see Rudin 1988; Richards 2001; Boškovic 2002; Gribanova 2009, and many others). In these languages, multiple *wh*-words may appear in the left periphery. Several analyses of such phenomena state that the mutliple *wh*-words occupy different specifier projections of C. The following Bulgarian example is from Rudin (1988:456), who analyzes the fronted *wh*-words as occupying Spec,CP.

(109) ***koj   kŭde***   *misliš*   *če*   *Boris*   *iska*   *da*   *kažeš*   *če*   *šte*
         who   where   think.2SG   that   Boris   wants   to   say.2SG   that   will

        otide   ⟨*koj*⟩   ⟨*kude*⟩
         go.3SG

        Who do you think Boris wants you to say will go where?   Bulgarian

A clear parallel emerges between instances of multiple evacuation of VP-internal arguments in Samoan and multiple *wh*-movement in languages like Bulgarian. The extent to which this parallel holds remains to be explored in future work. However, what is clear is that multiple fronting of DPs into multiple specifier positions projected by the attracting head has precedence in previous analyses of disparate phenomena.

8 Conclusion

This paper has built an explicit system deriving verb initial word order in Samoan. The word order facts are taken to be due to the combination of several interacting syntactic properties, including the lack of movement of full DP subjects to a clause initial position, the movement of any VP internal DP to a clause medial position, as well as movement of the predicative XP to a clause initial position. The paper cites several converging pieces of evidence for this kind of analysis, as opposed to other kinds of analyses of verb initiality proposed in previous literature, such as the head movement account. I suggest that data involving verbal modifiers is problematic for the head movement account. I further suggest that the constraints on intransitive

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[43]An open question is whether there is a language which demonstrates a feature on *v* which triggers movement like in Samoan, but parametrized to only attract the closest DP, rather than all DPs.

coordination detailed in Section 6 are readily explained by the movement of the VP-internal DP.

I addressed a claim in previous literature that the structural distinction between verb-initial and subject-initial languages is driven by a feature on T, which is parametrized to trigger movement of either the subject or a verbal projection to the specifier of T. I argue that the basic intuition behind this parameter is correct, but empirical evidence from Samoan suggests the picture is not so simple. I argued that Samoan T, like English T, does attract DPs, albeit only pronouns, thereby generating SVO order when the subject is realized as a pronoun. I further argue that evidence from the ordering of pre-verbal constituents suggests that the predicate in Samoan does not front as high as T, but to a position below T. Therefore, I suggest the parameter as previously stated is too strong, and should allow for a range of functional heads each with their own EPP requirements, satisfied by constituents of different types.

I argue that the Samoan data motivate a particular characterization of features which trigger movement, including a subvariety of features which trigger movement only if the syntax provides material which can undergo the movement operation. This theoretical notion has two applications in Samoan generating observed word order alternations: the movement of pronouns to Spec,TP generating SVO order with pronominal subjects, and the movement of any VP-internal DPs to Spec,vP. The latter movement ensures that such DPs do not front along with the VP.

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