Samoan predicate fronting:  
Constructing word order alternations

1 Introduction

- Between 10-19% of the world’s languages have dominant verb-initial word order (van Everbroeck 2003, Dryer 2005), including many unrelated languages (from Semitic, Celtic, Polynesian, Mayan, Salish, etc.).
- According to generative syntax, verb-initial languages pose a challenge (see Sproat 1985; McCloskey 1991; Chung 2005; Clemens and Polinsky to appear, etc.). How do we maintain the assumptions of:
  - constituency of [V+O]?
  - endocentricity? (i.e., phrases are projected by a head of a corresponding category)
  - binary branching structures?
- In this talk, I compare two prominent generative analyses which preserve these core assumptions:
  a. \( V^0 \)-Movement: Head movement of the \( V^0 \) to a position higher than the subject.
  b. VP-Movement: Phrasal movement of the VP to a position higher than the subject.
- Each analysis seems suited to different groups of languages.
- Generative theories of syntax provide at least two paths to verb-initiality, predicting at least two types of verb-initial languages, VP-initial and \( V^0 \)-initial, each with different syntactic properties.
- Furthermore, previous theories of verb-initiality assume two possible positions of the direct object, inside and outside the VP, providing a way of understanding observed variations in the linear position of the object.

(1) Basic word order

Subject-initial \( \begin{array}{c} \text{Verb-initial} \\ \ldots \end{array} \) \( \begin{array}{c} \text{VP-initial} \\ \text{\( V^0 \)-initial} \end{array} \) \( \begin{array}{c} \text{Obj. in-situ} \\ \text{Obj. ex-situ} \end{array} \)

- In the face of this diversity of potential analyses, reliable tests are necessary to determine whether a given verb-initial language is VP-initial or \( V^0 \)-initial.
- I propose a series of such diagnostics and apply them to Samoan (Polynesian), a language with basic VSO order, which has previously had little attention from formal syntax.1

(2) ‘\( ua \ [mele]_V \ [e \ A’opo]_S \ [le \ vai]_O \)’
PERF throw.away ERG A’opo the water
‘A’opo threw away the water.’

1Examples without a source are from consultation sessions with native speakers.
I argue that Samoan verb-initiality is best understood as being derived via VP-movement, using data collected from native speaker consultation and naturally occurring data.

This analysis ties together a host of seemingly unrelated phenomena, including:

- the placement of verbal modifiers,
- restructuring predicates,
- productive alternations between VOS and VSO ordering,
- constraints on verbal coordination

Having established that verb-initiality in certain languages (including Samoan) is derived via VP-fronting, what is the nature of this derived position of the VP?

One potential answer already proposed by previous work (see Clemens and Polinsky to appear for an overview): the VP fronts in order to satisfy “the EPP”, the same mechanism behind subject-initial word order in languages like English.

According to this theory, VPs move to Spec,TP in VP-initial languages, blocking the movement of the subject to that position (and vice versa in subject-initial languages).

I argue against this structural dichotomy, based on two observations:

a. The Samoan VP moves to a position lower than T.

b. Subjects do raise to T if they are pronominal.

Thus, it is not true that VP-movement and subject movement should reduce to a binary parameter.

In sum, I will argue for the clause structure for Samoan sketched in (4).

Agenda

§2: VP-movement predicts several aspects of Samoan word order more accurately than V-movement.

§3: DP object movement, assumed by the VP-movement account, provides a way of understanding clauses with VOS order, and constraints on VP-coordination.

§4: The landing site for VP-movement is lower than T, contra the EPP-based theory of verb-initiality.
2 In Favor of a VP Movement Account

- Some preliminaries about Samoan:
  - Polynesian (Austronesian)
  - >400,000 speakers, esp. in Samoa and American Samoa.
  - Primary data from consultants from Moto’otua (Samoa), Sydney, and San Francisco.
  - So far, it has had little attention from formal syntax.

- Basic properties of Samoan morphosyntax:
  - Analytic language (very little inflectional morphology)
  - Ergative case marking system.
  - Basic VSOX word order (though VOSX orders are possible).

\[
\text{\textsf{\textendash \textnormal{ua} \textsf{su’e}\textsf{a m¯atou t¯ane}\textsf{ sina susu}}}
\]

Our husbands have searched for some milk.

- Various verb-initial languages have been argued to be derived via either V\textsuperscript{0}- or VP-movement. In some cases, both analyses have been independently proposed for a single language (e.g., Tagalog).

\[
\begin{array}{ll}
\text{\textsf{\textsuperscript{\textnormal{V}\textsuperscript{0}-movement}} } & \text{\textsf{\textsuperscript{\textnormal{VP-movement}}}} \\
\text{\textsuperscript{\textnormal{V}\textsuperscript{0}} \text{ moves via head-movement to a position higher than the subject.}} & \text{\textsuperscript{\textnormal{VP or a bigger constituent moves to a specifier position higher than the subject}}} \\
\text{McCloskey 1991 (Irish)} & \text{Massam 2001 (Niuean)} \\
\text{Guilfoyle et al. 1992 (Cebuano, Tagalog)} & \text{Pearson 2007 (Malagasy)} \\
\text{Ouhalla 1994 (Arabic)} & \text{Cole and Hermon 2008 (Toba Batak)} \\
\text{Otsuka 2000 (Tongan)} & \text{Coon 2010 (Chol)} \\
\text{Aldridge 2004 (Tagalog)} & \text{Mercado 2008 (Tagalog)} \\
\end{array}
\]

- We need robust diagnostics to decide which category in (6) Samoan belongs to.

- In this section, I argue that the presence of a complex VP-sized constituent to the left of the subject supports the VP-movement account over the V-movement account.
2.1 The two accounts of verb-initiality

- **V0-Movement** account: move the V0 (cyclically) to a position higher than the subject. Subjects and objects remain in their thematic positions.

\[(8)\]

- **VP-Movement** account: move the VP to a position higher than the subject.
- If subjects and objects remain in their thematic positions, we predict VOS order (not VSO).\(^2\)

\[(9)\]

- As Samoan has basic VSO order (not VOS), we might expect that V-movement is the superior analysis.
- However, the VP-movement account also provides a path to VSO. In order to get VSO, we need to move the object out of the VP first, to a position lower than the subject.
- Next, the VP, containing the trace of the object, moves to a position higher than the subject, deriving VSO.

\[(10)\]

- Both analyses have the advantage of predicting that the subject asymmetrically c-commands the object, correctly predicting the following data involving binding.

\(^2\)This has been proposed as an analysis for various languages with basic VOS order, see Chung 2006 for an overview.
However, the **VP-movement** approach (but not **V\text{0}-movement**) gets the right results when we look at new kinds of evidence, such as:

- The (pre-subject) placement of VP-internal material (adverbs, resultatives, etc.).
- The possibility of pre-verbal restructuring predicates.
- The possibility of VP-coordination.
- Non-verbal XP-predicates (e.g., PPs and NPs).

### 2.2 The placement of VP-internal material

- The two theories make different predictions about the placement of VP-internal or adjoined verbal modifiers.

  a. **V\text{0}-Movement**: VP-internal material remain low, post-subject.
  
  b. **VP-Movement**: VP-internal material moves with the VP, pre-subject.

### 2.2.1 Resultatives

- XPs denoting the eventual state of the internal argument (unaccusative subject or transitive object) as a result of the event denoted by the main verb.

  a. Joe wiped the table clean.
  
  b. The table\textsubscript{i} was wiped \textit{t}\textsubscript{i} clean.

- In Samoan, resultative secondary predicates show up adjacent to the verb: \([V\text{-XP} \text{ SUBJ OBJ}]\), as predicted by the **VP-movement** account, but not by **V-movement**.
• Secondary predicates in (14) show hallmarks of resultatives: stage-level predicate, denoting result state directly caused by the event denoted by the main verb (Rappaport Hovav and Levin 2001; Levin 2013).3

\[(14)\]

\[\begin{align*}
\text{a. } sā & \text{ tapena } fa’a-māmā \{e \ le \ teine\}_S \{le \ ta'avele\}_O \\
\text{PAST} & \text{ clean} \quad \text{CAUS-clean} \quad \text{ERG} \quad \text{SPEC} \quad \text{girl} \quad \text{SPEC} \quad \text{car} \\
\text{The girl cleaned the car “spick and span”}. \\
\text{b. } sā & \text{ vali } fa’a-māmā \{e \ le \ fafine\}_S \{le \ fale\}_O \\
\text{PAST} & \text{ paint} \quad \text{CAUS-red} \quad \text{ERG} \quad \text{SPEC} \quad \text{woman} \quad \text{SPEC} \quad \text{house} \\
\text{The woman painted the house red.}
\end{align*}\]

• Resultatives cross-linguistically predicate of internal arguments only (unaccusative subjects, transitive objects) Simpson 1983; Levin and Rappaport Hovav 1995.

• There is converging cross-linguistic syntactic evidence that adjectival resultatives occur VP-internally (Carrier and Randall 1992; Levin and Rappaport Hovav 1995).

2.2.2 Directional particles

• Samoan frequently uses post-verbal particles which (often) signal direction of motion of the event.

• Directional particles have been argued to occur VP-internally cross-linguistically (Emonds 1972; Neeleman and Weerman 1993; Harley and Noyer 1998).

• As expected by the VP-movement account, directional particles occur to the left of the subject.

\[(15)\]

\[\begin{align*}
\text{a. } na & \text{ [maua mai] } \{e \ fafine\}_S \{o latou tagata oti\}_O \\
\text{PAST} & \text{ get} \quad \text{DIR} \quad \text{ERG} \quad \text{women} \quad \text{their} \quad \text{person} \quad \text{dead} \\
\text{The women received their dead.} \\
\text{b. } a & \text{ [alu ae] } \{le \ sasao o le \ afi\}_S \\
\text{when} & \text{ go} \quad \text{DIR} \quad \text{SPEC} \quad \text{blaze} \quad \text{GEN} \quad \text{SPEC} \quad \text{fire} \\
\text{When the fire’s blaze went up.}
\end{align*}\]

from Web

2.2.3 Object-oriented depictives

• Depictives are secondary predicates, modifying arguments. They have been argued to appear structurally adjacent to the thematic position of their argument (Williams 1980; Bowers 1993; Hale and Keyser 2002).

• This predicts they should occur inside the VP when modifying internal arguments.

• As expected by the VP-movement account, object-oriented depictives occur to the left of the subject.

\[(16)\]

\[\begin{align*}
\text{a. } na & \text{ [su’esu’e telefua] } \{e \ le \ foma’i\}_S \{le \ tama\}_O \\
\text{PAST} & \text{ examine} \quad \text{naked} \quad \text{ERG} \quad \text{SPEC} \quad \text{doctor} \quad \text{SPEC} \quad \text{boy} \\
\text{The doctor examined the boy in naked.} \\
\text{b. } ‘ole’ā & \text{ [’ai ola] } \{’oe\}_S \\
\text{FUT} & \text{ eat} \quad \text{alive} \quad \text{you} \\
\text{(It) will eat you alive.}
\end{align*}\]

Polinsky 2009

Mosel 2004

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3Resultatives in Samoan generally show overt causative morphology (e.g., the fa’a- causative morpheme) (see Kratzer 2005: syntactic composition of resultatives includes CAUSE morpheme). See Collins 2017 for more discussion.
2.2.4 Manner adverbs

- Adverbs describing the manner in which an event is enacted are often cited as being structurally low, structurally adjacent to the verb (Jackendoff 1972; Sportiche 1988; Cinque 1999, etc.).

- As predicted by the VP-fronting account, manner adverbs occur to the left of the subject.

(17) a. ‘ua [sau vave] [le teine]\(_S\)
    perf  come quickly  spec  girl
    The girl came quickly.

b. e lē [iloa lelei] [e le tagata]\(_S\) [o le finagalo o le Atua]\(_O\).
    pres  not  know well  erg  spec  person  foc  spec  will  gen  spec  God
    Man doesn’t know the will of God well.

Interim summary:

- VP-modifiers are predicted to front along with the VP, according to a VP-fronting account of verb-initiality.

- The theory correctly predicts that VP-modifiers should occur to the left of the subject in Samoan.

2.3 Restructuring predicates

- What happens with a VP that takes another VP as a complement (restructuring predicates (Wurmbrand 2001))?  

(18) VP\(_1\)
    V\(_1\)  VP\(_2\)
    V\(_2\)  DP

- Samoan has a class of lexical items which occur directly to the left of the verb with meanings looking very much like the meanings of restructuring predicates cross-linguistically.

(19) Restructuring predicates

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><em>fia</em></td>
<td>want</td>
</tr>
<tr>
<td><em>tau</em></td>
<td>try</td>
</tr>
<tr>
<td><em>amata</em></td>
<td>start</td>
</tr>
<tr>
<td><em>‘uma</em></td>
<td>finish</td>
</tr>
<tr>
<td><em>sāga</em></td>
<td>continue</td>
</tr>
<tr>
<td><em>fa’atagā</em></td>
<td>pretend</td>
</tr>
</tbody>
</table>

(20) a. e lē [fia [mafaufau]] Elena ‘i lona tagi
    pres  not  want think  elena  dat  her  cry
    ‘Elena does not want to think of her crying.’

    (Mosel and Hovdhaugen 1992; 383)

b. na ia [tau [fa’ase’e mai]] a’u
    past  3sg.nom try  flatter  dir  1sg.acc
    ‘He tried to flatter me.’

    (Milner 1966; 246)

- These data are expected under an analysis where:
- these predicates take a VP complement & the biggest VP undergoes VP-movement.

(21)

```
FP
  VP  F'
    V  VP  F  vP
      V  (OBJ)  SUBJ  v'  v  t_{VP}
```

- Examples like (22) provide evidence that the restructuring predicate embeds a phrasal constituent, as in (21).

(22) `se tasi e [fia [malamalama ma aoaoina atu]] le savali o le Feagaiga Tuai`
    SPEC one PRES want understand and appreciate DIR the message GEN the New Testament
    Someone who understands and appreciates the message of the New Testament.

- Clemens 2014 offers an analysis of Niuean (also Polynesian), using a V-movement account.

- For Clemens, the restructuring predicate and the embedded V concatenate, and raise together to the higher position above the subject. This accounts for word orders like (20).

(23)

```
TP
  T  vP
    SUBJ  v'  v  VP
      V  VP  V  (OBJ)
```

- However, this account predicts that the restructuring predicate embeds only a V^0.

- Data like (22) are unexplained by a V-movement analysis like (23), but expected under a VP-movement analysis like (21).

### 2.4 VP-coordination

- V-movement and VP-movement make different predictions about the possibilities of verbal coordination (24).
  - V-movement: Coordination at the VP-level should be blocked – two distinct heads should be unable to vacate distinct VPs.
  - VP-movement: Coordination at the VP-level is not blocked.
In Samoan, coordination is possible at the VP level, as predicted by the VP-movement account.

(25) a. *vP
fai say
ta’u tell
ma and
talatalele
'I say to and bring this good word to you. from Web
b. F’
taunu’u arrive
ma and
toefoil Simi
Simi was arriving and going back.
c. vP
le le (‘o se pepe) le teine lea
faatonuga
You understand and follow the instructions. from Web

2.5 Non-verbal predicates

- While I have been using the term “VP-fronting”, evidence suggests that this part of a more general pattern.
- Predicates of various categories appear clause initially, including PPs, DPs, and NPs.

(26) a. *vP
SUBJ v’

PAST in Apia our mother at that time
Our mother was in Apia at that time. PP predicate (Mosel and Hovdhaugen 1992)

b. F’
SUBJ v’

PAST old chief Pili
Pili was an old chief. NP predicate (Mosel and Hovdhaugen 1992)

c. vP
le le (‘o se pepe) le teine lea

PRES NEG FOC a baby SPEC girl that
That girl is not a baby. DP predicate (Mosel and Hovdhaugen 1992)

- It is unclear how the V⁰-movement account would handle these kinds of data.
- Previous V⁰-movement accounts of non-verbal predicates (e.g., Carnie 1995; Otsuka 2005) have employed non-standard constituency rules in order, as in (27), where phrasal material is treated syntactically like a head.
However, if we alter the VP-movement operation to actually target XPs of various types, these kinds of data are expected.

2.6 Interim summary

- Generative syntax provides two paths to verb-initial word order: V-movement and VP-movement.
- Here I have provided a set of diagnostics designed to tease apart whether a given verb-initial language can be understood as employing V-movement or VP-movement.
- Samoan appears to fit the characteristics of a VP-movement language, setting it apart from putative V-movement languages like Irish, Welsh, Arabic, and so on.

<table>
<thead>
<tr>
<th></th>
<th>V-movement</th>
<th>VP-movement</th>
<th>Samoan</th>
</tr>
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<tbody>
<tr>
<td>resultatives &gt; SUBJ</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>directionals &gt; SUBJ</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>depictives &gt; SUBJ</td>
<td>x</td>
<td>✓</td>
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<td>manner adv. &gt; SUBJ</td>
<td>x</td>
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<tr>
<td>restructuring predicates &gt; SUBJ</td>
<td>x</td>
<td>✓</td>
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<tr>
<td>VP-coordination</td>
<td>x</td>
<td>✓</td>
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<tr>
<td>non-verbal predicates</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

3 Supporting the object movement

- According to the VP-movement theory of VSO, the fronted VP contains the trace of certain arguments:
  - Direct objects start out as VP-complements, so must move out of the VP.
  - Unaccusative subjects start out as VP-complements (Perlmutter 1978, Levin and Rappaport Hovav 1995)
  - See Collins 2017 and Tollan 2017 for more discussion of this view for Samoan.
- Can we find evidence for these traces?
Here I argue that the VP-fronting account of Samoan sheds light on two seemingly distinct phenomena:

- So-called pseudo noun incorporation
- Argument structural constraints on verb-coordination.

Both of these phenomena have structural explanations if we assume that internal arguments originate in a VP-internal position, as in (30).

### 3.1 Pseudo incorporated NPs

- Massam 2001: Niuean (also Polynesian) demonstrates a reasonably productive alternation between VSO and VOS ordering.
- In Niuean, clauses have VOS ordering if the O is a nonspecific, bare NP indefinite.
- Samoan demonstrates the same kind of alternation: bare NPs appear inside the “verbal complex”, separated from full DP arguments by adverbial material.

(31) a. \(e\) [faitau] pea [\(e\ le\ fafine\)]\(_S\) [\(le\ tusi\)]\(_O\)
   PRES read always ERG the woman the book
   The woman is always reading the book.

b. \(e\) [faitau tusi] pea [\(le\ fafine\)]\(_S\)
   PRES read book always the woman
   The woman is always reading books.

(32) a. \(le\ fale\ e\) [faitau] ai [\(e\ le\ fafine\)]\(_S\) [\(le\ tusi\)]\(_O\)
   the house PRES read LOC ERG the woman the book
   The house where the woman is reading the book.

b. \(le\ fale\ e\) [faitau tusi] ai [\(le\ fafine\)]\(_S\)
   the house PRES read book LOC the woman
   The house where the woman is book-reading.

- According to the VP-movement account: bare NP object fail to raise out of the VP. Therefore, they front along with the VP, deriving VOS word order.
We can establish that the [V NP] complex is a constituent, as predicted by (33), using coordination.

(34) a. sā [inu pia] ma [tā pe'a] le tama
    PAST drink beer and strike tattoo the boy
    The boy drank beer and got tattoos
b. sā [ulaula sikareti] ma [inu kofe] Simi
    PAST smoke cigarette and drink coffee Simi
    Simi smoked cigarettes and drank coffee.

At least some cases of this VOS structure cannot be derived via N0-to-V0 incorporation as in Baker 1988.

(35) a. e [inu [lauti ma kofe]] le teine
    PRES drink tea and coffee the girl
    The girl drinks tea and coffee.
b. e [tausi [maile e faatau]] le aiga
    PRES keep dog to sell the family
    The family keeps dogs to sell.
c. ona o le [fai [mea piopio]] o faifeau
    COMP PROG SPEC do thing wicked priest
    ...because of the priests doing wicked things. Mosel and Hovdhaugen 1992
    ...because of the priests doing wicked things.
d. e [faitau [tusi ta'uta'ua]] le fafine
    PRES read book famous the woman
    The woman is reading famous books..

These data provide evidence for the VP-internal origin of direct objects: a direct object is able to appear in a VP-internal position (deriving VOS), or in a VP-external position (deriving VSO).

This VSO/VOS alternation reduces to a syntactic differentiation of DPs and NPs: DP objects move, but NP objects don’t.

Similar NP/DP syntactic splits in Nez Perce (Deal 2010), Sakha (Baker and Vinokurova 2010), Russian, Norwegian (Pereltsvaig 2006), Tatar (Lyutikova and Pereltsvaig (2015)) and many other languages.
3.2 Constraints on coordination

- The hypothesis that (certain) fronted VPs contain the traces of DP-arguments (repeated in (36)) has the potential to explain constraints on coordination in Samoan.

(36)

- The Coordinate Structure Constraint (Ross 1967; Gazdar 1981, etc.): XPs containing a trace cannot coordinate with XPs not containing a trace.
- The VP-movement account predicts that in Samoan we should be unable to coordinate:
  - Unergative VPs and unaccusative VPs.
  - VPs with bare NP objects, and VPs with (moved) DP objects.
- The following data suggest that this prediction is borne out.
- Unaccusatives may be coordinated, and unergatives may be coordinated.

(37)  

a. sā siva ma ta’alo Simi.
   PAST dance and play Simi
   ‘Simi was dancing and playing.’  ✓ Unerg + Unerg

b. sā taunu’u (mai) ma toefoi Simi.
   PAST arrive there and leave Simi
   ‘Simi was arriving and leaving.’  ✓ Unacc + Unacc

- However, coordination of unaccusatives and unergatives is ruled out.

(38)  

a. ?*{sā | na | ‘ua} [taunu’u (mai) ma siva] Simi.
   PAST1/PAST2/PERF arrive DIR and dance Simi
   ‘Simi arrived and danced.’  X Unacc + Unerg

b. ?*{sā | na | ‘ua} [siva ma taunu’u (mai)] Simi.
   PAST1/PAST2/PERF dance and arrive DIR Simi
   ‘Simi arrived and danced.’  X Unerg + Unacc

- Speakers paraphrase the ill-formed examples with multiple clauses.

(39)  

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.’

   PAST start DIR the dance of Simi at the time PAST arrive DIR LOC
   ‘Simi started to dance at the time that he arrived there.’
• Additional examples with other predicates:

(40)  
PAST turn.on and then turn.off the light  
‘The light turned on and turned off.’ ✓ Unacc + Unacc  
b. ?*Sā [kī ma toe susulu malosi] le moli.  
PAST turn.on and then shine strong the light  
‘The light turned on and shined bright.’ ✓ Unacc + Unacc  

(41)  
PRES born.PL and then die.PL people  
‘People are born and then die.’ ✓ Unacc + Unacc  
b. ?*Sā [mafatu ma oti] le toeina.  
PAST sneeze and die the old.man  
‘The man sneezed and died.’ ✓ Unacc + Unacc  

• VP-movement provides a way for us to understand why coordinated predicates need to “agree” in terms of their argument structures in Samoan.

• The coordination of pre-subject verbal predicates involves VP-coordination. By the CSC, it’s not possible for one VP to contain a trace, but not the other, thus ruling out structures like (42).4

• This analysis has the potential to explain similar argument structural constraints on coordination in other languages, e.g., see Ko and Sohn to appear on Korean serialization.

(42)  
\[
\begin{align*}  
\text{VP} & \quad \& \quad \text{P} \\
\text{VP} & \quad \& \quad \text{VP} \\
\text{V} & \quad \text{t}_i \quad \& \quad \text{VP} \\
\mid & \quad \mid \\
\text{Unacc.} & \quad \text{V} \\
\mid & \quad \mid \\
\text{Unacc.} & \quad \text{Unacc.}  
\end{align*}
\]

• We also explain why we cannot coordinate VPs containing pseudo incorporated objects with properly transitive VPs.

• As properly transitive VPs contain the trace of the moved object, they cannot coordinate with [VP V-NP] phrases which do not contain a trace (43b).

(43)  
a. sā [[ulaula sikareti] ma [ini kofe]] Simi  
PAST smoke cigarette and drink coffee Simi  
Simi smoked cigarettes and drank coffee. ✓ V-NP + V-NP  
b. ?*sā [[ulaula sikareti] ma [ini ti] e Simi [le kofe]]  
PAST smoke cigarette and drink ERG Simi the coffee  
Simi smoked cigarettes and drank the coffee. ✓ V-NP + V-DP

4Contrast predicate coordination in English which does not require argument structural agreement between the conjuncts. This can be explained if English predicate coordination involves coordination at a level above the underlying position of the subject (McNally 1992, Burton and Grimshaw 1992, McCloskey 1996).
• The same analysis doesn’t hold across verb-initial languages. For example, Chung 2006: Chamorro allows coordination of verbal complexes with unlike argument structure.

• Chung 2006 uses these data as evidence against the VP-fronting account for Chamorro, and for a subject lowering account.

(44) a. [Mu-ma’aña] /ya [ha-yutit'i] i sáikki i salappi’,
afraid and drop the thief the money
The thief got scared and dropped the money. Chamorro (Chung 2006)

b. [ligát] yan [ti kontra t'i] un lai yan Konstitusión
legal and not opposed a law with constitution
(Whether) a law is legal and not in conflict with the Constitution. Chamorro (Chung 2006)

• Coordination therefore provides a diagnostic for distinguishing alternative analyses of verb-initiality.

Interim summary:

• Two disparate phenomena:
  – VOS ordering with pseudo noun incorporation,
  – argument structural constraints on coordination,

have ready explanations if we assume that internal arguments bind a trace inside the fronted VP. Under competing accounts (such as V₀-movement), they would remain mysterious.

• Positing two object positions further diversifies the possibilities for verb-initial structures.

(45) Basic word order

4 The landing site of the VP and the EPP

• I argue that the VP constituent fronts to a position below T, as in (46).

(46)

These theories argue that:

– VP-movement and V⁰-movement in verb-initial languages are triggered by a feature on T⁰
– In subject-initial languages, this feature on T⁰ triggers the movement of the subject.
– Therefore, there is a linguistic parameter which determines whether a single feature on T⁰, termed “the EPP”, exclusively triggers the movement of either the subject or the predicate.

(47)

TP

DP

Subject

T

XP

T'

Subj.-initial lgs.

TP

VP

Predicate

T

XP

T'

VP-initial lgs.

TP

T

V

XP

Verb

V-initial lgs.

It’s important to clarify exactly what is meant by “EPP”:

– The “classical” definition (e.g., Chomsky 1981): The EPP determines that every clause must have a subject. This is spelled out structurally as the requirement that Spec,TP is filled.
– The “minimalist” definition (e.g., Chomsky 2000): The EPP is simply a name for a category of features, appearing on potentially any functional head, which trigger movement.
– The classical view can be subsumed under the minimalist view by positing an EPP feature on T.

Clemens and Polinsky to appear: “In SVO languages, the EPP feature is commonly assumed to be a [D] feature associated with T⁰, which triggers the overt movement of a DP into Spec,TP. Proponents of V⁰- and VP-raising analyses assume that the EPP is universal and motivate V⁰/VP movement by modifying the way in which a language satisfies the EPP.”

This analysis predicts that VP-initiality in Samoan should be derived by VP-movement to T’s specifier.

– I argue that this prediction does not pan out in Samoan, and that the VP raises to a position below T.
– Moreover, I propose that (pronominal) subjects do raise to T’s specifier in Samoan, suggesting that VP-fronting should be taken to be orthogonal to T’s movement triggering features.

4.1 The VP is lower than the left periphery

– Previous predicate fronting accounts (e.g., Pearson 2000 on Malagasy, Aldridge 2004 on Seediq) claim that the predicate-XP fronts to the left periphery.

– The fronted VP in Samoan occurs to the right of material standardly analyzed as occupying the left periphery, such as interrogative particles (48a), fronted topics and sentence-level adverbials (48b).

– This suggests that in Samoan, the VP does not front as high as the left periphery.
(48) a.  E lē iloa pē 'o [fai falesā]VP i se nu'u
   PRES NEG know Q PROG make church at a village
   It was not known whether they were building a church in a village. Mosel and Hovdhaugen 1992

   b.  'O Sala ma Lata 'ailoga na [momoe]VP ana po
   FOC Sala and Lata doubtful PAST sleep last night
   As for Sala and Lata, it’s doubtful that they slept last night. Mosel and Hovdhaugen 1992

4.2 The VP is lower than T/C

- Below I will argue that the VP fronts to a position below T, based on the relative word order of tense-marking auxiliaries, negation, and complementizers, deriving the observed order [T > Neg > VP], as in (49).

(49)

```
TP
   T
      FP
      Neg
         FP
         VP F'
      PRED
```

- In Samoan, tense is marked by pre-verbal auxiliary particles (e.g., na PAST, e PRES, 'olo'o PROG, and so on).

- These particles demonstrate prototypical properties of T: they mark tense and control the presence of nominative case (following Collins (2014)). We can assume that these particles instantiate T (Massam 2000, 2001 makes the same claim about Niuean, and Otsuka 2005 about Tongan).

- Do VPs front to the specifier projected by these particles, thereby conforming to the EPP-based view?

- VPs occur to the right of the auxiliary. Thus, preliminary evidence suggests the hypothesis in (51) isn’t correct.

(50) sā [inu pia] le tama
   PAST drink beer the boy
   The boy drank beer.

(51)

```
TP
   VP
      T'  
        T
          XP
             inu pia
                  sā
```

- Could the analysis in (51) be rescued by positing another movement operation: T-to-C movement?

- Auxiliaries show properties of T, but they also show properties of C, e.g., they introduce relative clauses.

(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 not.exist a thing PAST left
   There wasn’t anything that was left.  Mosel and Hovdhaugen 1992

- Furthermore, complement clauses are introduced by the complementizer *ona*, which is in complementary distribution with the tense marking auxiliaries.

(53) ‘ua siliga ona (*sā) taumu’u mai le tama
   PERF too.late COMP PAST arrive DIR SPEC man
   It was too late that the man came back.  Mosel and Hovdhaugen 1992

- This can be explained if we take them to occupy the same syntactic position.

- T-to-C movement would explain why the T-auxiliaries appear to the left of the VP. Thus, we rescue the account in (51), where the VP moves to the specifier of TP.

(54)

- Unfortunately, this account also runs into problems, when we introduce negation.

- With negation, the ordering of constituents is [Auxiliary + Negation + VP].

(55) ‘ua lē [maua mai]VP ni fesoasoani
   PERF NEG get DIR any help
   (they) don’t get any help from Web

- Can this observation be reconciled with the picture in (54)? I propose that:
  - Negation cannot be situated higher than T (based on nominalization data).
  - Negation cannot be situated lower than VP (based on the relative scope of negation and indefinites).
  - Thus both negation and the VP must be lower than V.

4.2.1 Negation is lower than T⁰

- I will argue against the analysis in (56), which gets the surface word order correct, and has negation higher than T.

(56)
• Evidence against this hypothesis comes from nominalized clauses.
• Samoan nominalized clauses are formed by embedding the VP and its arguments inside a DP.
• Crucially, they do not contain tense-auxiliaries.

(57) a. Le (*e) [faigata]\textsubscript{VP} o le galuega fa’amatua
   SPEC PRES difficult GEN SPEC work parental
   The difficulty of parental work.

b. matagofie [le (*e) [pupula emoemo]\textsubscript{VP} o fetu]
   beautiful SPEC PRES shine twinkle GEN star
   The twinkling of the stars was beautiful.

• We can understand the absence of auxiliaries if we take nominalized clauses to embed a constituent smaller than TP (but large enough to allow for VP-raising).
• Going along with this hypothesis, nominalized clauses also lack the reflexes of tense, i.e., nominative case (see Collins 2014).
• Thus, if negation is \textit{higher than} \textit{T}\textsubscript{0}, then we predict that negation should be excluded from nominalized clauses. As nominalized clauses exclude TP, they should also exclude particles which are “higher” than TP.
• This prediction is not borne out, nominalized clauses \textit{do} contain negation.

(58) ‘o fa’a-ali ... [le (*e) lē fafagaina lelei o ‘ia]
   PROG visible the PRES not feed well GEN her
   Her not being fed well was visible.

• Upshot: nominalized clauses suggest there is a constituent which (a) contains negation, but (b) excludes T, contra the analysis in (56), entailing that negation is \textit{lower} than tense in Samoan.

4.2.2 Negation is higher than VP

• Next, I argue against (59). This gets the word order right, and preserves the view that the VP moves to Spec,TP.

(59)
• However, this hypothesis makes the wrong predictions about the relative scope of negation and subjects. The structure of vP in (60) has the subject structurally higher than negation.

\[(60) \quad \begin{array}{c}
\text{vP} \\
\text{DP} \\
\text{Subject} \quad \text{v} \quad \text{VP} \\
\text{Neg} \quad \text{VP} \\
\text{lē} \quad \text{Pred.}
\end{array} \]

• However, the following evidence suggests that negation obligatorily scopes over indefinite subject. These data are unexpected if negation occurs within the syntactic scope of the subject.

\[(61) \quad \begin{array}{l}
a. \quad \text{e le tagi se agelu}_S \\
\text{PRES NEG cry a angel} \\
\text{No angels cry (NOT: an angel doesn’t cry)}
\end{array} \]

\[\begin{array}{l}
b. \quad \text{e le'i iloa ā se isi}_S \text{lena mea}_O \\
\text{PRES not know EMPH ERG a one that thing} \\
\text{No one yet knows that thing (NOT: a certain person doesn’t know that thing).}
\end{array} \]

• Upshot: placing negation in VP doesn’t account for the relative scope of negation and indefinite subjects.

4.2.3 The resulting picture

• I argue instead for the following structure (omitting T-to-C movement for simplicity).

\[(62) \quad \begin{array}{c}
\text{TP} \\
\text{T} \\
\text{'}ua \\
\text{Neg} \\
\text{lē} \\
\text{VP} \\
\text{SUBJ} \quad \text{v} \quad \text{tvp}
\end{array} \]

• This structure gets the right results:

- If we assume that FP, but not TP, is included in nominalizations, we explain why negation is included in nominalizations, but not tense.
- If we assume that subjects are in the syntactic scope of negation, we explain why indefinite subjects always scope under negation.
4.3 Taking stock: The status of EPP-based theories of verb-initiality

- EPP-based theories of verb-initiality assume that verb-initial languages and subject-initial languages differ by a feature on T, which either attracts the subject or predicate to Spec,TP.

- The findings of this section suggest that the landing site of VP-fronting in Samoan is lower than T.

- Samoan does not fit into either category of languages defined by EPP-based theories.

- What, then, is the status of T’s EPP feature in Samoan? Evidence comes from the position of subject pronouns.

- In Samoan, clauses with subject pronouns are SVO: the pronoun occurring between tense and negation.

  (63)  
  PAST 1SG not sell DIR SPEC ice.cream  
  I didn’t sell the ice cream.  
  b. Sā [‘ou]S [taunu’u mai]V  
  PAST 1SG arrive DIR  
  I arrived.

- In Collins 2017, I proposed that the subject pronoun moves from its thematic position to Spec,TP. The relative order of the tense auxiliary and pronoun is derived by T-to-C movement.

  (64)  
  CP  
  C          TP  
  C          T      DP      T’  
  sā ‘ou  tT  FP

- If this analysis is on the right track, it suggests that Spec,TP in Samoan is associated with subjects after all.

- Where does this leave the EPP-based theory of verb-initiality?
  - VP-fronting in Samoan moves the VP lower than T, suggesting it is not driven by T’s EPP feature.
  - Furthermore, subject pronouns can be understood as being moved to Spec,TP.
  - VP-fronting and movement to Spec,TP should be understood as mutually independent processes.

- The upshot: Samoan provides evidence against the view that subject-initial and verb-initial languages can be reduced to a parameter which determines whether the subject or predicate raises to Spec,TP.

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5In Collins 2017, I proposed that T bears a feature which attracts every subject pronoun in its c-command domain. In clauses which do not contain subject pronouns, the requirement is satisfied vacuously.
5 Conclusion

- Generative syntax provides ways to derive verb-initiality which preserve core assumptions about syntactic structure. These analyses predict different kinds of verb-initial structures.

(65)

Verb-initial

VP-initial V₀-initial

Obj. in-situ Obj. ex-situ

- Clusters of syntactic properties can distinguish one type of verb-initial language from the other.

- The data presented today contribute to an inventory of diagnostics for the best analysis for any given verb-initial language.

- Moreover, we can use fine-grained investigations of verb-initial languages to investigate how they parametrically differ from subject initial languages. Does the difference reduce to a single parameter: the EPP?

- Here I argue that Samoan VP-fronting provides evidence against this reduction: VP-fronting is not triggered by an EPP feature on T in Samoan, contra the predictions of previous accounts of verb-initial languages.

- The emerging picture is one which supports the broadly minimalist view of EPP and movement: under this view, ostensibly any functional head can trigger the movement of constituents, giving rise to the broad array of word orders observed cross-linguistically.

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References


Clemens, Lauren Eby. 2014. Prosodic noun incorporation and verb-initial syntax. PhD diss, Harvard University.
