Optional V2 and the Left Periphery in Tuvaluan*

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Tuvaluan (Polyensian) word order is relatively flexible. However, the restrictions on it that exist are very revelatory about the sort of clause structure which must underlie them. Here I will investigate how Tuvaluan word order is like and unlike other languages within and without Polynesian; specifically I will be looking at the connection between Verb Initial (V1) and Verb Second (V2) orders in Tuvaluan and cross-linguistically.

The talk will be organized as follows:

1 The data in Tuvaluan
   - Data from matrix and complement clauses showing varying optionality in DP fronting.

2 Background theoretical assumptions about V1/V2
   - Discussing the location to which verbs raise in V1 and V2 languages, and cross-linguistic principles requiring each or both; An outline of how V raising works in the framework of the expanded C-system (Rizzi 1997[22])

3 A sketch of Tuvaluan clause structure, and its consequences
   - Building on the data presented and existing theories, a suggested derivation and representation of word order phenomena in Tuvaluan.

4 A formalization of the difference between mandatory (German) and optional (Tuvaluan) V2
   - Using Optimality Theoretic Syntax (Prince and Smolensky 1993[21]), an explanation of varying optionality in terms of the ranking of Topic-requirement and Economy constraints.

All Tuvaluan data come from Besnier (2000[1]).

1 The data in question

1.1 Matrix word orders

Tuvaluan allows a number of different word order permutations, though VSO is considered the most basic (if not the most common) (Besnier 2000). However, there are restrictions: More than one argument cannot occur before the verb (d).[1]

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[1]Glosses are mostly per Besnier. Uncommon gloss abbreviations are: NPS for Non-past; INC for Inceptive aspect; CMP for Complementizer; TR for Trial number; INCL for Inclusive; and CNT for Contrastive particle.

(1) a ***ne*** ***ffuti*** *nee Niu te atu teelaa*
PST pull ERG Niu DEF bonito that
'Niu landed that Bonito'
b *Niu* ***ne ffuti*** *te atu teelaa*
c *te atu teelaa* ***ne ffuti*** *nee Niu*
d **Niu te atu teelaa* ***ne ffuti***

Further, both subjects and objects can be dropped; however, if the subject is fronted, the object cannot be dropped. (2d) is ungrammatical on the same reading as (a-c), and must be interpreted as something like 'Niu fished'.

(2) a *ne ffuti nee Niu Ø*
b *ne ffuti Ø te atu teelaa*
c *te atu teelaa ne ffuti Ø*
d **Niu ne ffuti Ø*

Besnier analyzes preverbal nominals as topics when unmarked. He also lists another prenominal construction, which he terms focalization, using the clitic *ko*. The identity of *ko* is something of a puzzle; more on it below.

(3) a ***ko niu*** *ne ffuti te atu teelaa*
b ***ko te atu teelaa*** *ne ffuti nee Niu*

Notably, Fronted nominals of this type are distinct from fronted nominals in a copular construction, which exist in the absence of verbs (or TAM).

(4) a *a faiaakoga katoa ne tino Tuuvalu*
CNT teacher all some person Tuvalu
'All teachers (were) Tuvaluans'
b *te fafine Kilipati teenaa ko Maalia*
the woman Gilbertese that FOC Maria
'That Gilbertese woman (was (named)) Maria'

Variation also exists between post-verbal argument orders.

(5) *ne ffuti te atu teelaa nee Niu*

Adverbs in Tuvaluan vary in occuring either post-verbally or between TAM and the verb; none occur before TAM.

(6) a *...koo* ***tau*** *ttala nee ttino te mataloa*
...INC persistently open ERG the.person the door
'...because someone had been opening (and closing) the door'
b *kooi ttino e folifoli* ***saale*** *i tua*
FOC.who the.person NPS fly.about often at outside
'Who is that loitering outside?'

Summary:	Word order is mostly free; A maximum of one nominal may be fronted; Subject fronting blocks object drop Adverbials do not occur before tense or far from verb

1.2 Complementizers and embedded clauses

A number of patterns exist in embedded clauses. Different complementation strategies have different restrictions on word order. Both the complementizer *o* and the subjunctive marker *kee* disallow topic DPs (though the latter allows *ko* phrases).

(7) a *ne aumai nee Logo a uttanu kolaa* ***o*** ***kai*** *nee au*
PST bring ERG Logo DXS coconut those [CMP eat ERG 1SG]
'Logo brought those germinated coconuts and I ate them'

b **... o au kai*
... CMP 1SG eat

c **... au o kai*
... 1SG CMP eat

(8) a *E see talia nee ia* ***kee*** ***taa*** *nee tena aavaga*
NPS NEG allow ERG she [SUBJ strike ERG her spouse]
'She does not allow her husband to strike (someone else)'

b **... (kee) tena avaga (kee) taa*

c *ne fakatonu mai nee Iaakopo* ***ko*** ***au*** *kee toe gaalue*
PST order DXS ERG Iaakopo [KO 1SG SUBJ again work]
'Iaakopo ordered me to work again'

The complementizer *ia* allows - in fact, requires - a topic DP come between it and the verb.

(9) a *koo tagi* ***i*** ***tena kulii*** *koo galo*
INC cry [IA his dog INC disappear]
'He's crying because his dog died'

b **... i koo galo (tena kulii)*

The last strategy of complementization, which according to Besnier is sometimes interchangeable with the *o* form, is with a null complementizer. In this case, as well, topics are disallowed.

(10) a *taatou koo ssiu valevale* ***ne*** ***ttoo*** *nee te vaiua*
1TR-INCL INC wet all.over [PST fall ERG the rain]
'I'm hurt (because of) coconuts falling on me

b *... te vaiua ne ttoo

The complementizer *me* optionally allows *ko*-marked nominals. and, in fact, it seems to allow *ko*-phrases even in the absence of anything like a verb phrase. This might follow from an analysis of *ko* as a cleft marker (and not a pseudo-cleft marker or preposition, cf Paul 2000; Massam, Lee, and Rolle 2006[16], Paul 2001[20]).

(11) a *... mo ko au ne fano o tao manogi*
... ME KO 1SG PST go CMP pick fragrant
'... because I had gone to pick flowers'

b *. . . me seeai ne mea peelaa i nukulaelae nei*
. . . ME NEG some thing thus on Nukulaelae this
'. . . because here on Nukulaelae there isn't anything like that '

c *koo-ne fakaasi a ia mo ko ia*
INC reveal CNT he [ME KO he]
'He's already said that it was he (who'd done it)'

Summary:	Optionality eliminated in embedded clauses; nominals either must or cannot front, varying by complementizer

2 Assumptions about V raising and clause structure

2.1 V2

Obligatory V2 languages like German require the second element in any tensed clause to be the tense-bearing element, following any XP (DP, PP, adverbial). (12) demonstrates this variation.

(12) a *Peter **hat** dieses Buch gelesen*
Peter has this book read
'Peter has read this book'

b *Dieses Buch **hat** Peter gelesen*

c *Vielleicht **hat** Peter dieses Buch gelesen*
Maybe has Peter this book read
'Maybe Peter has read this book'

d *Die kinder **sahen** den Film*
The children saw the film
'The children saw the film'

Vikner (1995[28]) analyzes this pattern as raising of the Tense node to C proceeding V to I raising where possible; evidence for this comes from blocked V2 in the environment of an overt C. When verbs are given a conditional interpretation, we see a V1 order.

(13) Er sagt (*He said . . .*)

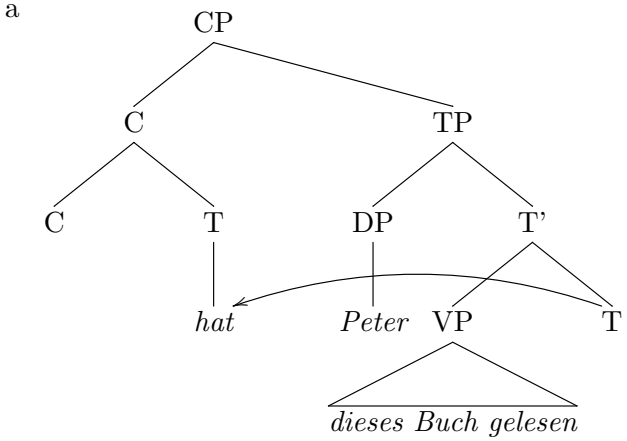
a *. . . daß die Kinder diesen Film gesehen **haben***
. . . that the children this film seen have
'...that the children have seen this film'

b *. . . (*daß) die kinder **haben** diesen Film gesehen*
. . . that the children have this film seen

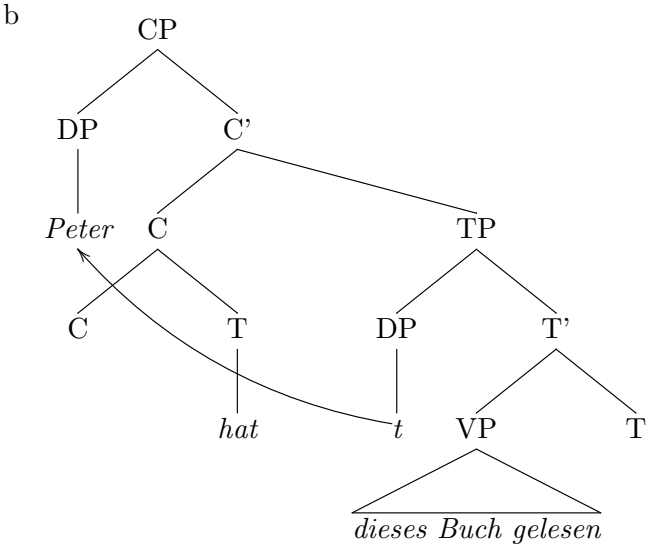
c *Hätte ich mehr Zeit gehabt ...*
Had I more time had ...
'Had I had more time, ...'

These data lead to a derivation for main clause word order something like (14a-b)

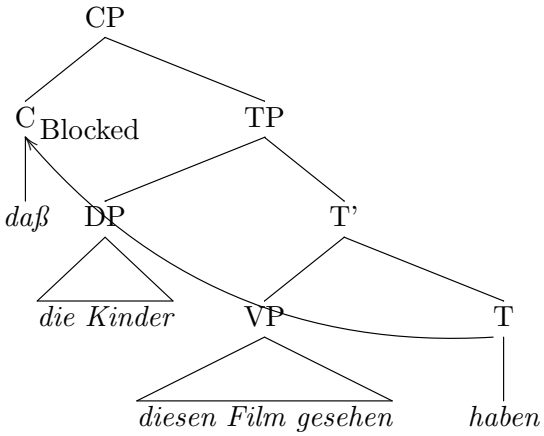
(14) a



b



(15)



A key claim for our purposes about V2 clauses is that the first position is reserved for Topics (Vikner 1995; Schwartz and Vikner (1996[26]).

2.2 V2 and V1

The intuition that V-raising should be a unified phenomena has inspired a few different attempts to analogize V1 and V2. Some formalizations of this follow:

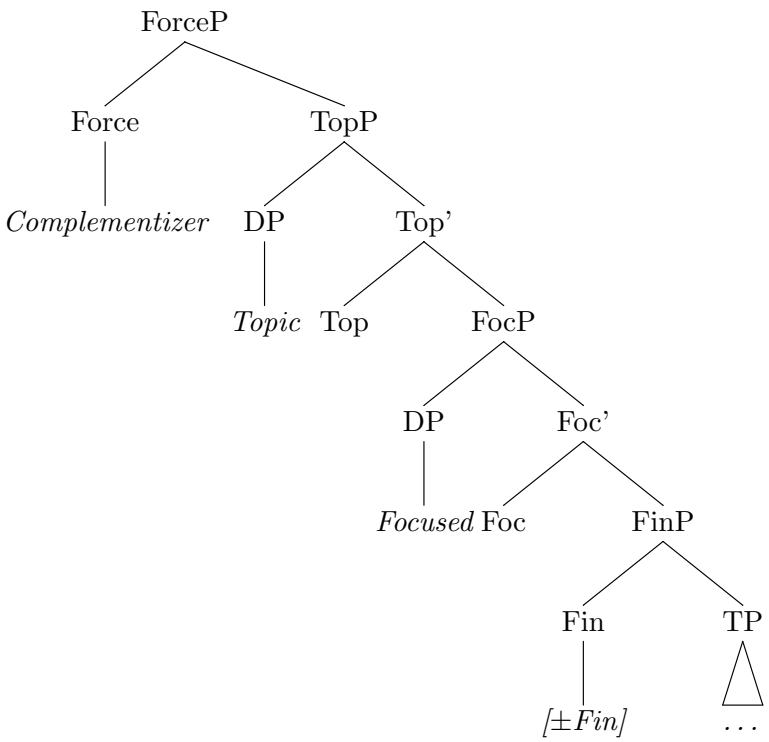
- All languages mark tense/type in the 'second' position (C) of the main clause (Koster 2003[13])
- *T/*V in the first position of a clause (Jouitteau 2007[9], Massam 2010[15]).
- Movement is barred into the highest node of a(n embedded) clause (Rizzi and Roberts 1996[23])

These all get at similar concepts: There is something in the left periphery that attracts Tense, but it isn't necessarily the first thing. Given the data seen above from Tuvaluan embedded clauses, something further is needed to formalize this notion a little more clearly.

2.3 The expanded Left Periphery

A challenge to the V-to-C analysis of V1 comes from complementers failing to block the order (McCloskey 1996[17], Carnie Harley and Pyatt 2000[3]), particularly with the assumption that the Comp position is singular. However, recent work, starting with Rizzi (1997), develops an expanded C system, shown in (16).

(16)



This has been adopted in analyses of V2 and V1 phenomena by, among others, Massam (2010) for Niuean and Roberts (2005) for Welsh, and, as a strawman, Koeneman (2010[12]) for the variation between Germanic and Celtic. In the following section I will outline how this schema may be used to capture phenomena in Tuvaluan.

3 An analysis of Tuvaluan clause structure

3.1 Topicalization

Four key facts bring us to an analysis of Tuvaluan main clauses:

1 Fronted nominals have a distinct morphological requirement

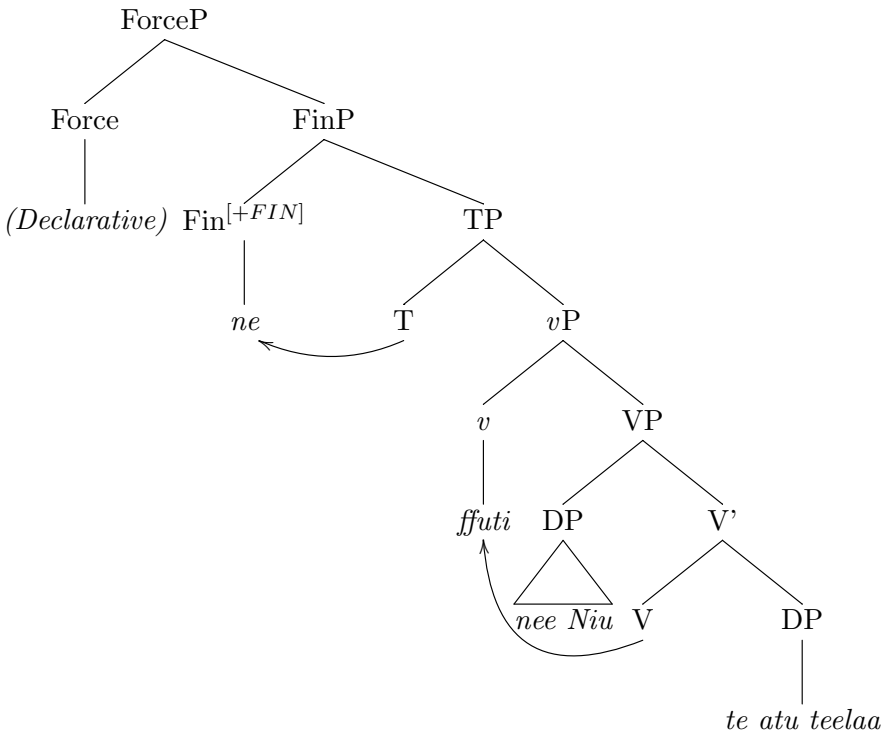
2 Fronted nominals are given a topic interpretation

3 Fronted subjects block object drop

4 Only topics and *ko*-phrases occur left of TAM

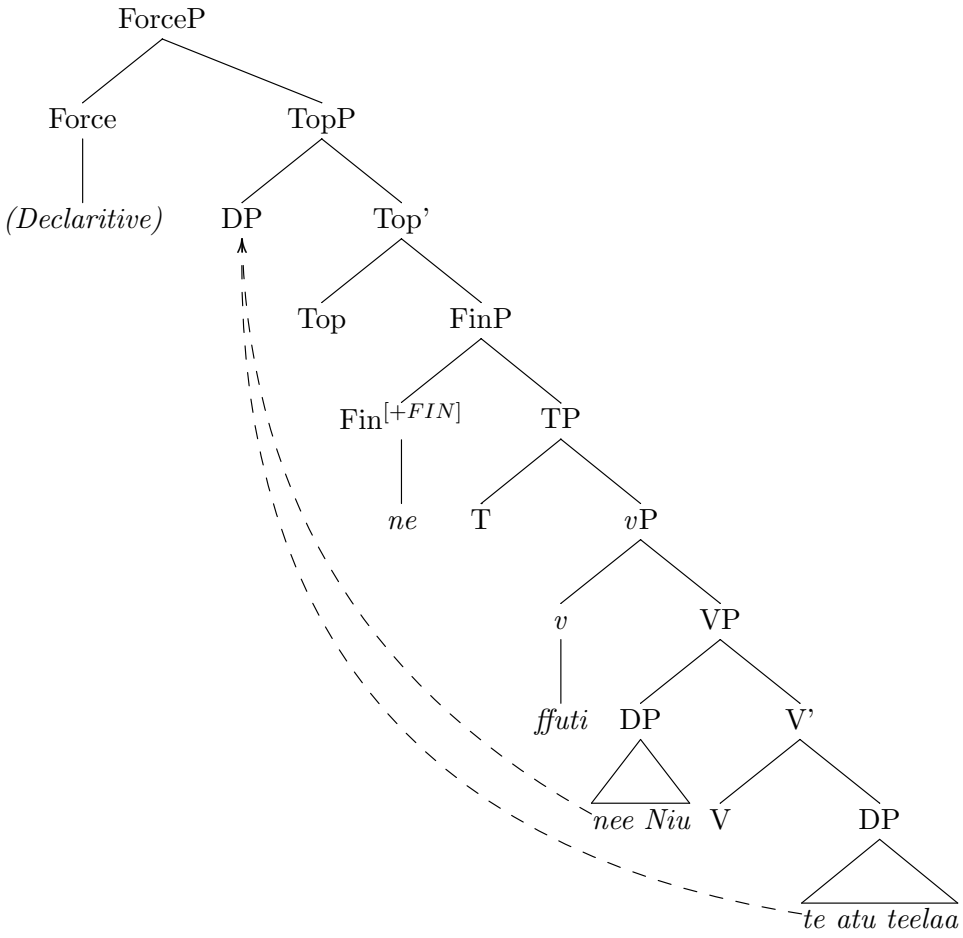
These follow from an assumption that Tuvaluan has distinct topic- and pro-drop processes, as discussed in Otsuka (2001). Item 3 falls out, specifically, from subject topicalization preventing object topicalization, and thus object drop. So with the assumption that Topics must be in Topic position to be interpreted/dropped as such, we can outline the derivation of both V1 and V2 orders in Tuvaluan.[2]

(17) a V1



[2]The exact structure of the space between T and V and final place of the V head still needs to be determined, based on closer inspection of the adverbs which are allowed on either side of the verb in surface order, in keeping with ideas from, among others, Cinque (1999[6]).

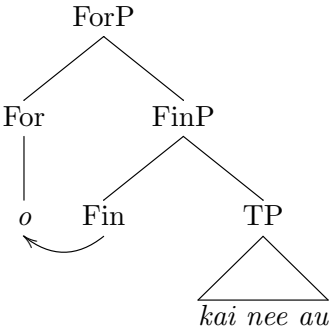
b V2 with topicalization



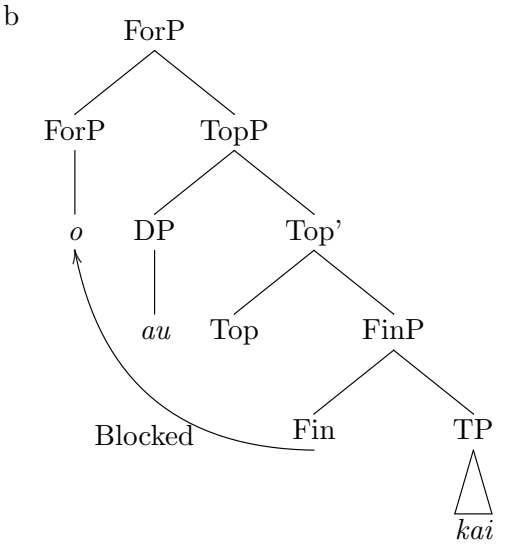
3.2 Complementizers

To capture the behavior of word order in embedded clauses, we need only appeal to the Head Movement Constraint (HMC; Travis 1984[27]): required movement of Fin^0 heads into For^0 is blocked if they must pass over a Topic projection. This follows Roberts's (2005[24]) account of the behavior of German *daß* as moving in this path; it is evidenced further by the complementary distribution of *o* and tense, and the similar behavior of null-C embedded clauses.

(18) a

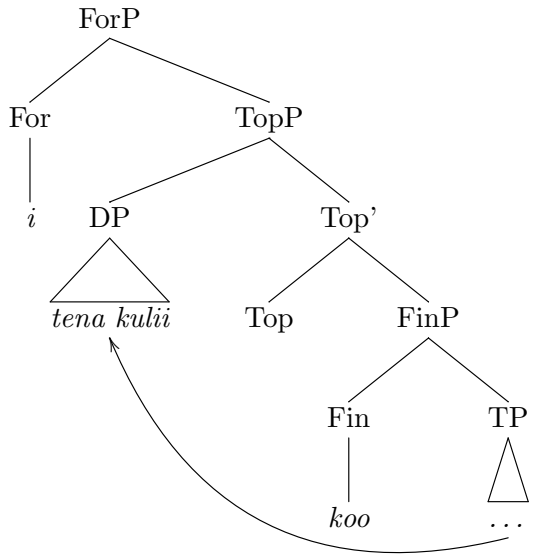


b



For *ia*, things are simpler: the particle is a For^0 head and selects a TopP.

(19)

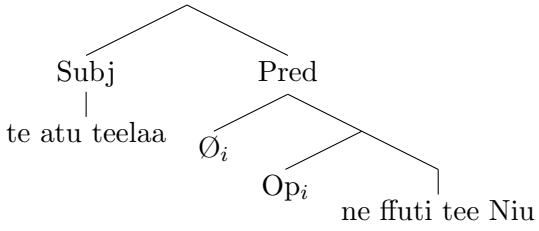


Summary:	A DP may front to Spec,TopP Fin^0 raising to Force^0 blocks TopP projection by HMC

4 Consequences of this analysis

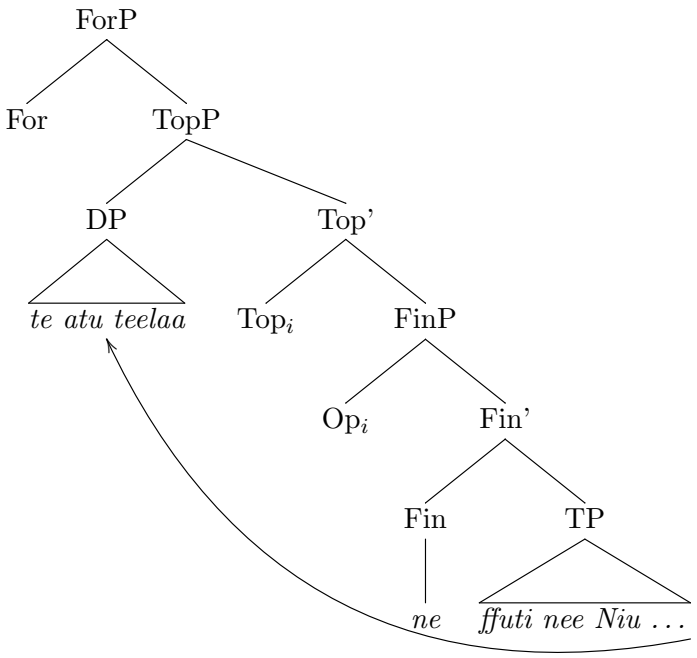
Otsuka (2001[18]; 363) analyzes sentences with DP topicalization as semantically equivalent to equational constructions. Below is Otsuka's 37.

(20)



We can translate this structure to the syntax developed here, if we assume Top^0 has similar semantics to the predicating operator in Otsuka.[3]

(21)



Another consequence is the lack of appeal to *T1 (Jouitteau 2007, Massam 2010). Indeed, I will show in the next section that this effect can be derived from two other, interacting processes.

5 Optimality and Optionality in V2 structures

From the data above, we can see it is not immediately clear at what level of representation *T1 applies. The language of the constraint would imply a PF constraint, but its intended interaction with silent functional structure implies otherwise. Conversely, if we restrict ourselves to syntactic (nonlinear) representation, we can get all of the effects in the above phenomena without reference to *T1.

5.1 Necessary Constraints

In OT Syntax, output representations are evaluated based on a set of universal constraints with language specific rankings (Prince and Smolenksy 1993[21], Grimshaw 1997[7]). Word orders in OT are often described in terms of alignment constraints (Grimshaw 2001[8], Samek-Lodovici 2001[25]). However, given the assumption that syntactic representations are non-linear in nature (cf Kayne 1994[10]) I make reference instead to pre-PF constraints on syntactic structure, specifically those in (22).

(22) a Topic: Clauses must have a Topic
b Economy$_{\text{proj}}$: *XP if XP is not selected
c Topic→Top: Topic XPs must be in the Specifier position of TopP.

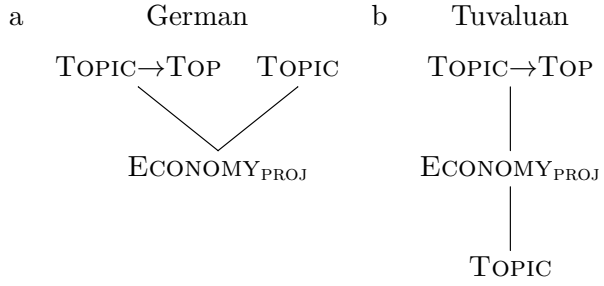
[3]This is, however, also Otsuka's analysis of *ko*-constructions, which, in terms of embedded clauses do not behave alike to Topic constructions

Constraints are based on those in Grimshaw (1997): TOPIC is based on SUBJ, requiring subjects; TOPIC→TOP is based on OBSPEC, requiring operators in Spec positions; ECONOMY$_{\text{PROJ}}$ is adapted from FULLINT, originating conceptually in Chomsky (1995[4]).

5.2 Constraint rankings

The ranking needed for the two languages is shown in (23).

(23)



The key difference between the two being the relative ranking of TOPIC and ECONOMY$_{\text{PROJ}}$. (24) shows the behavior of these constraints in German, and (25-26) for Tuvaluan.

5.3 Constraints in interaction

An idea in OT syntax is to take argument structure as the input (Grimshaw 1997, Vikner 2001[29]); we can formalize this in terms of Phase theory (Chomsky 2001[5]), wherein *v*Ps are the input to the higher phase. With this in mind, (24) shows the interaction at the evaluation of left-peripheral structures in German, and (25-26) shows them in Tuvaluan.

(24) *Peter hat dieses Buch gelesen* (Peter has this book read)

	***v*P**	TOPIC→TOP	TOPIC	ECON
	$[_{ForP}\ [_{FinP}$ hat $[_{TP}\ \ldots]]]$		*!	
⇒	$[_{ForP}\ [_{TopP}$ Peter $[_{FinP}$ hat $[_{TP}\ \ldots]]]]$			*
	$[_{ForP}\ [_{TopP}\ [_{FinP}$ hat $[_{TP}$ Peter$_{[+T]}\ \ldots]]]]$	*!		

(25) *Ne ffuti nee Niu te atu teelaa* (pulled Niu that bonito)

	***v*P**	TOPIC→TOP	ECON	TOPIC
⇒	$[_{ForP}\ [_{FinP}$ pulled $[_{TP}\ \ldots]]]$			*
	$[_{ForP}\ [_{TopP}$ Niu $[_{FinP}$ pulled $[_{TP}\ \ldots]]]]$		*!	

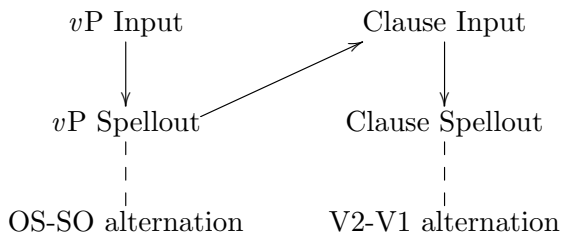
(26) *Niu ne ffuti te atu teelaa* (Niu pulled that bonito)

	***v*P**	TOPIC→TOP	ECON	TOPIC
	$[_{ForP}\ [_{TopP}\ [_{FinP}$ pulled $[_{TP}$ Niu$_{[+T]}\ \ldots]]]]$	*!		
⇒	$[_{ForP}\ [_{TopP}$ Niu $[_{FinP}$ pulled $[_{TP}\ \ldots]]]]$		*	

5.4 A more thorough derivation

As mentioned above, VSO and VOS are both licit orders in Tuvaluan. While accounts vary on how this sort of variation should be dealt with (Otsuka 2005[19], Massam 2000[14]), within the framework developed here an interesting proposal is that of Bury (2010[2]), wherein OS-SO alternations is due to PF flexibility. If we take this tack, we can start to understand more clearly the nature of derivation in OT syntax:

(27)



This may have to assume different constraints operating on either phase; this would make OT syntax Stratal, in the sense of Kiparsky (2008[11]); in any case development of this paradigm could lead to a better picture of what derivation in general should look like in OT syntax.

Summary:	Mandatory vs. Optional V2 is derived from Topic vs. Econ All V2 languages have highly ranked Topic→Top No need in this model to appeal to linearization

6 Concluding discussion

Having demonstrated that (i) Tuvaluan is apparently more akin to Germanic than to other V(P) fronting Polynesian languages like Niuean, and (ii) the differences existing between Tuvaluan and German can be derived in terms of OT constraints on Economy and Topics, a number of questions remain which may require more extensive data:

- What is the semantic status - entities or predicates - of fronted nominals? Are these DPs (as I have analyzed them here) or NPs (predicates, after Massam)?
- Cross-linguistically, are different phases subject to different word order requirements? That is, could Bury's (2010) analysis of VSO-VOS scrambling be unified with my analysis of Tuvaluan?
  - This might explain the existence of languages like German, which are head final only in the lower functional fields.
  - Further this might be a way into analyzing the optionality in raising verbs or DPs seen in Breton (Jouitteau 2007).
- Can the behavior of different complementizers with respect to licencing ko-phrases and topics be derived from their semantics? (Though behavior of *i* may follow from history specifically, it having been derived from a P according to Besnier)
- What is the status of *ko* phrases in Tuvaluan? The current data suggest that they might be best analyzed as something more like T heads, introducing something bigger than the sort of pseudo-clefts seen in other Polynesian languages.
- What, if anything, needs to be added to the OT account of V2 optionality in order to account for the full range of word order phenomena seen in Austronesian and elsewhere?

References

[1] N. Besnier. *Tuvaluan*. Routledge, London, 2000.

[2] D. Bury. Verb-second, particles, and flexible verb-initial orders. *Lingua*, 120:303–314, 2010.

[3] A. Carnie, H. Harley, and E. Pyatt. Vso order as raising out of IP? In Carnie and Guilfoyle, editors, *The Syntax of Verb Initial Languages*, pages 39–59. Oxford University Press, 2000.

[4] N. Chomsky. *The Minimalist Program*. The MIT Press, Cambridge, 1995.

[5] N. Chomsky. Derivation by phase. In Michael Kenstowicz, editor, *Ken Hale: A Life in Language*, pages 1–37. The MIT Press, Cambridge, 2001.

[6] G. Cinque. *Adverbs and Functional Heads*. Oxford University Press, 1999.

[7] J. Grimshaw. Projection, heads, and Optimality Theory. 28:373–422, 1997.

[8] J. Grimshaw. Economy of structure in OT. 2001.

[9] M. Jouitteau. The Brythnoic reconciliation. *Linguistic Variation Yearbook*, 7, 2007.

[10] R. Kayne. *The Antisymmetry of Syntax*. The MIT Press, Cambridge, 1994.

[11] P. Kiparsky. Fenno-Swedish quantity: Contrast in Stratal OT. In Vaux and Nevins, editors, *Rules, Constraints, and Phonological Phenomena*, pages 185–219. Oxford University Press, 2008.

[12] O. Koeneman. Verb movement in Germanic and Celtic languages: A flexible approach. *Lingua*, 120:210–231, 2010.

[13] J. Koster. All languages are tense second. In Koster and van Riemsdijk, editors, *Germania et Alia: A Linguistic Webschrift for Hans den Besten*. University of Groningen, 2003.

[14] D. Massam. VSO and VOS: Aspects of Niuean word order. In Andrew Carnie and Eithne Guilfoyle, editors, *The Syntax of Verb Initial Languages*, pages 97–116. Oxford University Press, New York, 2000.

[15] D. Massam. V1 or V2? on the left in Niuean. *Lingua*, 120:284–320, 2010.

[16] D. Massam, J. Lee, and N Rolle. Still a preposition: The category of *ko*. *Te Reo*, 49:3–38, 2006.

[17] J. McCloskey. Subjects and subject positions. In Borsley and Roberts, editors, *The Syntax of the Celtic Languages*, pages 241–283. Cambridge University Press, 1996.

[18] Y. Otsuka. Empty categories in tuvaluan: NP trace, PRO, pro, or variable? *Oceanic Linguistics*, 40:342–365, 2001.

[19] Y. Otsuka. Scrambling and information focus: VSO-VOS alternations in tongan. In Sabel and Saito, editors, *The Free Word Order Phenomenon: Its Syntactic Sources and Diversity*, pages 243–279. Mouton de Gruyter, New York, 2005.

[20] I. Paul. Concealed pseudo-clefts. *Lingua*, 111:707–727, 2001.

[21] A. Prince and P. Smolensky. *Optimality Theory: Constraint Interaction in Generative Grammar*. Rutgers University Center for Cognitive Science, 1993.

[22] L. Rizzi. The fine structure of the left periphery, 1997.

[23] L. Rizzi and I. Roberts. Complex inversion in french. In Adriana Belletti and Luigi Rizzi, editors, *Parameters and Functional Heads*, pages 91–116. Oxford University Press, New York, 1996.

[24] I. Roberts. *Principles and Parameters in a VSO Language: A Case Study in Welsh*. Oxford University Press, New York, 2005.

[25] V. Samek-Lodovici. Crosslinguistic typology in optimality theory. In Jane Grimshaw Geraldine Legendre and Sten Vikner, editors, *Optimality Theoretic Syntax*, pages 315–353. The MIT Press, Cambridge, 2001.

[26] B. Schwartz and S. Vikner. The verb always leaves IP in V2. In Belletti and Rizzi, editors, *Parameters and Functional Heads*, pages 11–63. 1996.

[27] L. Travis. *Parameters and Effects of Word Order Variation*. PhD thesis, MIT, 1984.

[28] S. Vikner. *Verb Movement and Expletive Subjects in the Germanic Languages*. Oxford University Press, New York, 1995.

[29] S. Vikner. V to I movement and do-insertion. In Jane Grimshaw Geraldine Legendre and Sten Vikner, editors, *Optimality Theoretic Syntax*, pages 427–464. The MIT Press, Cambridge, 2001.