5

Syntactic ergativity as absolutive movement in Tongic Polynesian

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5.1 Introduction

The Tongic branch of the Polynesian family (Austronesian > Malayo-Polynesian) consists of two languages: Tongan and Niuean, which are spoken primarily on the south Pacific islands of Tonga, Niue, and New Zealand. In this chapter, we identify and analyze a correspondence between two ways in which Tongic languages vary, as shown in Table 5.1. First, we consider the ability or inability of the ergative argument to undergo A'-movement (otherwise known as the absence or presence of *syntactic ergativity*). The ergative argument can undergo movement in Niuean, but not in Tongan. We then connect this with the availability, or lack thereof, of post-verbal word order variation: while Niuean word order is strictly VSO, Tongan allows either VSO or VOS.

Table 5.1 Tongic extraction and word order patterns

	Syntactic ergativity	Word order variation
Tongan	✓	✓
Niuean	✗	✗

We provide a unified account of syntactic ergativity and variable word order in Tongic Polynesian based on the locus of absolutive case assignment, adopting an 'Absolutive Inversion' approach to syntactic ergativity. In Tongan, but not in Niuean, the absolutive object must undergo A-movement to a position above the ergative argument in order to be case licensed (Campana 1992; Bittner & Hale 1996a; Aldridge 2004; Coon et al. 2014; a.o.). This, we propose, is because absolutive case is assigned low—by Voice^0—in Niuean, but high—by T^0—in Tongan. Movement of the absolutive in Tongan means that (i) the ergative argument is trapped in its base position, giving rise to syntactic ergativity, and (ii) the absolutive object can be pronounced in one of two positions: either the higher *case* position, or the lower *base* position. In Niuean, the absolutive object does not

move; this means that the ergative can freely extract, but the object only has the option to be pronounced in its low base position.

This chapter is organized as follows: Section 5.2 introduces morphological ergativity in Tongan and Niuean and discusses variation in the presence or absence of syntactic ergativity. Section 5.3 introduces differences in post-verbal word order—demonstrating, crucially, that VOS word order is indeed derived via A-movement—and develops an analysis to account for both of the aforementioned points of variation. In Section 5.4, we present data from coordination differences between Tongan and Niuean, which dovetails in an interesting way with the Absolutive Inversion approach to syntactic ergativity. Section 5.5 addresses the mechanics of how A-movement of the absolutive object traps the ergative subject following Tollan (2019) and Tollan & Clemens (2019). Section 5.6 concludes.

5.2 Morphological and syntactic ergativity

Niuean and Tongan are both morphologically ergative, non-head marking languages; however, they differ with respect to whether they show ergative alignment in a wider range of syntactic phenomena. Whereas Tongan can be described as syntactically ergative for only allowing the A'-movement of absolutive arguments, in Niuean, both absolutive and ergative arguments freely undergo A'-movement. This section considers the ergativity profile of Niuean and Tongan.

5.2.1 Morphological ergativity

While both Niuean and Tongan are morphologically ergative, many other Polynesian languages show accusative alignment. Whether Tongic languages are among the Polynesian family's most conservative or most innovative is the subject of unresolved debate. Notable examples of authors who argue for change in the direction of ergative → accusative include Clark (1976); Dixon (1994); and Kikusawa (2002). The opposing view—that morphological ergativity was innovative for the Tongic branch of the Polynesian family—has been defended by Hohepa (1969a); Chung (1978); Seiter (1980); and Ball (2007).

A chart summarizing the Tongic case markers, including Proto-Tongic, is shown in Table 5.2. Proto-Tongic and its daughter languages directly reflect Proto-Polynesian *e, which is the ergative marker under the ergative→accusative hypothesis or an oblique marker under the accusative→ergative hypothesis. Proto-Polynesian's personal article *a was reanalyzed as the absolutive marker in Proto-Tongic, replacing the *∅ absolutive marker on the ergative→accusative analysis or the subject maker on the accusative→ergative analysis of Proto-Polynesian (Hohepa 1969a; Clark 1976; Chung 1978; Seiter 1980; Dixon 1994; Kikusawa 2002; Ball 2007).

As shown in Table 5.2, the case series for common nouns in Niuean is the more divergent of the two daughter languages. In Proto-Tongic *he and *e were allomorphs of the specific article, which were reanalyzed as case markers in Niuean (Hohepa 1969a; Seiter 1980).

Table 5.2 Tongic case markers

		Absolutive	Ergative
Proto-Tongic		*a	*e
Tongan		'a	'e
Niuean	common	e	he
	proper/pronoun	a	e

Although the Tongic Polynesian case markers are largely cognate, in practice, the case marking system for both languages reveals its own nuance.

In Tongan, the subject of intransitive clauses and the object of transitive clauses follow the absolutive case morpheme *'a*, while the subject of transitive clauses appears with the ergative case morphoeme *'e*. In (1) and subsequent examples, absolutive case is shown in bold, while ergative case is underlined.

(1) a. Na'e 'alu **'a** **Sione**.
       PST   go   ABS Sione
       'Sione went.'

    b. Na'e kai 'e Sione **'a** **e** **mango**.
       PST   eat ERG Sione ABS DEF mango
       'Sione ate the mango.'   (Otsuka 2000: 50)

As previewed in Table 5.2, Niuean's case marking system has the added compli-cation of differentiating common nouns from proper nouns and pronouns. The common noun series is illustrated in context in (2), where intransitive subjects and transitive objects are marked *e* and transitive subjects are marked *he*. The proper noun and pronoun case series is shown in (3), where intransitive subjects and transitive objects are marked *a* and transitive subjects are marked *e*.

(2) a. Ne fano **e** **tehina** **haaku**.
       PST go   ABS brother   POSS
       'My little brother went.'

    b. Ne kai he puti ia **e** **moa**.
       PST EAT ERG cat DEM ABS chicken
       'That cat ate the chicken.'   (Seiter 1980: 29)

(3) a. Ne   fano   **a**   **au**.
         PST   go   ABS   1SG
         'I went.'

     b. Ne   kitia   e   Sione   **a**   **koe**.
         PST   see   ERG   Sione   ABS   2SG
         'Sione saw you.'   (authors' notes)

The next subsection addresses more substantial variation that arises when comparing the behavior of core arguments in Tongan and Niuean with respect to certain syntactic processes.

5.2.2 Syntactic ergativity

In a subset of morphologically ergative languages, ergative subjects are unable to undergo one or more types of A'-movement including *wh-* and focus movement. These languages are described as syntactically ergative (see Deal 2016 and Polinsky 2017 for recent overviews on syntactic ergativity). The Tongic languages differ on this dimension: Tongan on one hand, meets the criteria for syntactic ergativity, while Niuean does not.

   Beginning with Tongan, Otsuka (2000) has shown that only absolutive arguments relativize with a gap. This generalization can be illustrated by comparing the examples in (4). In (4a), *e fefine* 'the woman' is coindexed with a gap in the position where one would otherwise find an absolutive argument in the relative clause. In contrast, in (4b), *e fefine* 'the woman' is coindexed with a resumptive pronoun in the position associated with ergative arguments (Otsuka 2000).

(4) a. e   fefine$_i$ [RC 'oku   'ofa'i   'e   Sione ___$_i$].
         DEF   woman   PRS   love   ERG   Sione
         'the woman whom Sione loves'

     b. e   fefine$_i$ [RC 'oku   *(ne)$_i$ 'ofa'i   'a   **Sione**].
         DEF   woman   PRS   RP   love   ABS   Sione
         'the woman who loves Sione'   (Otsuka 2000: 116)

Additional indication that Tongan is a syntactically ergative language comes from Polynesian's so-called raising construction. Important for our purposes is that this construction involves an argument that surfaces in one clause and is interpreted in another. In Tongan, absolutive arguments freely appear as the clause-mate of raising verbs, e.g. *totonu* 'is advisable', as illustrated in (5a). In this example, the DP *'a e tamaiki pau'u* 'the naughty children' is able to surface in the higher clause even though its θ-role is assigned in the lower clause, because the relevant DP is

associated with an absolute gap in the lower clause. In contrast, note the ungrammaticality of (5b), which arises due to the fact that *'a e faiako* 'the teacher' is coindexed with an ergative gap in the lower clause.

(5) a. 'oku totonu   'a e tamaiki pau'u$_i$ [ke   taa'i <u>'e he</u> <u>faiako</u> __$_i$].
        PRS   advisable ABS children naughty SBJV hit   ERG   teacher
        'It is advisable that the teacher hit the naughty children.'

    b. *'oku totonu   'a e faiako$_i$ [ke   taa'i ___$_i$ **'a e tamaiki pau'u**].
        PRS   advisable ABS teacher COMP hit   ABS children naughty
        Intended: It is advisable that the teacher hit the naughty children.

        (approx. Otsuka 2000: 183)

To summarize what we have seen so far (i) absolute arguments in Tongan relativize with a gap and (ii) DPs in raising constructions can be coindexed with an absolute gap in the lower clause. Ergative arguments behave differently: they relativize with an obligatory resumptive pronoun and they must stay in their θ-role position even when they occur with raising verbs. Thus, because absolute arguments (and gaps) behave differently from ergative arguments (and gaps), Tongan is a syntactically ergative language.

Turning to Niuean, both absolute and ergative arguments relativize with a gap (Seiter 1980; Longenbaugh & Polinsky 2018). In object relative clauses (6a) and in transitive subject relative clauses (6b), the relativized noun—*e tagata* 'the person' in these examples—is coindexed with a gap.

(6) a. e   tagata$_i$ [ne   moto   <u>e</u>   <u>koe</u> ___$_i$].
        ABS person NFUT punch ERG 2SG
        'the person who you punched'

    b. e   tagata$_i$ [ka   kai ___$_i$ **e**   **talo**].
        ABS person FUT eat   ABS taro
        'the person who will eat the taro'   (approx. Seiter 1980: 94)

Furthermore, unlike in Tongan the Niuean raising construction does not differentiate between absolute and ergative arguments. In both (7a) and (7b), *e ekekafo* 'the doctor' is the clause-mate of the raising verb *maeke* 'is possible'. In (7a), *e ekekafo* is coindexed with an absolute gap, while in (7b) it is coindexed with an ergative gap. Recall that for Tongan, the second possibility results in ungrammaticality (5b).

(7) a. To   maeke   e   tama$_i$ [ke   lagomatai <u>he</u>   <u>ekekafo</u> ___$_i$].
        FUT possible ABS child   SBJV help   ERG doctor
   'The doctor could help the child.'

b. To   maeke   e   ekekafo$_i$ [ke   lagomatai ___$_i$ e   **tama**].
   FUT   possible   ABS   doctor   SBJV   help   ABS   child
   'The doctor could help the child.'   (Seiter 1980: 158)

To conclude this subsection, Tongan displays ergativity both morphologically and syntactically. The same cannot be said for Niuean, which does not show any of the telltale signs of syntactic ergativity. The next subsection presents the aspects of our account that we adopt from the literature on syntactic ergativity, which ultimately allow us to account for the correlation between syntactic ergativity and post-verbal word order variation in Tongic Polynesian.

5.2.3 Towards an account of syntactic ergativity

We begin our account of the presence (and absence) of syntactic ergativity in Tongic by considering case assignment. We maintain that ergative case assignment applies uniformly across Tongic Polynesian languages. We adopt the predominant account of ERG case assignment for these languages and treat ERG as an inherent case assigned by Voice^0 to the external argument (Woolford 1997, et seq.; Legate 2002, 2008; Alridge 2004; Collins 2014b),[1] as illustrated in (8).

(8)   Tongic ERG assignment
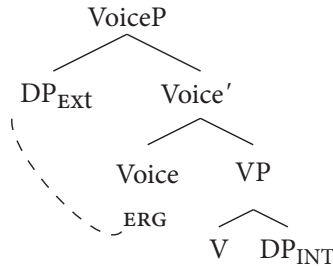
While ERG case is assigned uniformly, these languages differ with respect to the assignment of absolutive case. For reasons that will shortly become clear, we adopt an 'Absolutive Inversion' approach to ABS case assignment for Tongan (Campana 1992; Bittner & Hale 1996a; Aldridge 2004; a.o.).

The main components of the analysis are as follows: ABS is assigned by T^0, but in order for case assignment to take place, the DP that is to receive ABS case must first move into a local configuration with T^0. When the would-be ABS-marked DP

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[1] See also Assmann et al. (2015), where ERG is a structural case, assigned via spec-head Agree.

is a direct object, it must move past the intervening ERG-marked DP in order to arrive at a location configuration with T^0 and receive absolutive case.

The process of assigning case in a transitive clause for Tongan is schematized in (9). The tree in (9) is a replication of the phrase structure posited by Coon et al. (2014), in which the functional head Voice introduces the external argument (drawing from Harley 2013), the functional head v takes VoiceP as its complement, and the specifier of vP serves as the target of case-driven movement, despite not being the case assignor in this analysis. Thus, the function of v in this structure is not especially well-articulated, which is a problem that we inherit, but as Coon et al. (2014) themselves note: the key to the analysis is that the landing site for the absolutive DP is higher than the merge position of the ergative DP.

(9)   Tongan ABS assignment
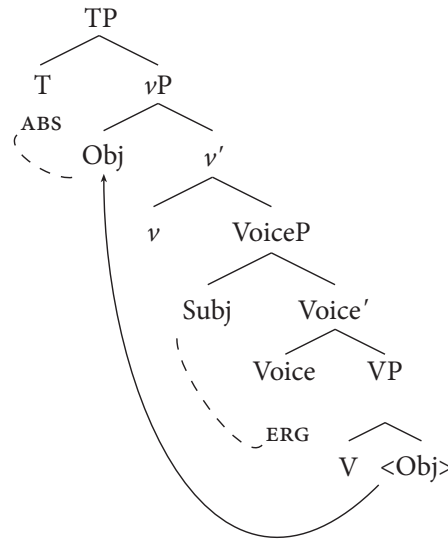
The account of absolutive case assignment sketched in (9) underpins the account of syntactic ergativity that we apply to Tongan. As shown in (9), the ABS argument moves around the ERG argument. This movement effectively traps the ERG argument in its base-generated position. As such, the the ERG argument is unavailable for movement-based operations, including relativization and raising, as shown in Section 5.2.2.

This style of account has been called the 'inaccessible ergative' approach to syntactic ergativity (Deal 2016). The literature contains a number of related proposals that differ in terms of the specific constellation of facts they explain and the mechanisms they invoke in order to do so. Inaccesible ergative accounts include, but are not limited to, Campana (1992); Ordóñez (1995); Bittner & Hale

(1996a); and Coon et al. (2014). In particular, Coon et al. (2014) use this style of approach to explain the covariance of syntactic ergativity and the position of the absolutive marker in Mayan languages (Tada 1993), which precedes the ERG marker in so-called High ABS Mayan languages, e.g. Q'anjob'al, and follows the ERG marker in so-called Low ABS Mayan languages, e.g. Ch'ol.

The account in Coon et al. (2014) can be summarized as follows: in High ABS languages, ABS is assigned 'high' by T^0 and the ABS marker precedes the ERG marker. In Low ABS languages, ABS is assigned 'low' by $Voice^0$ (Legate 2002, 2008; Aldridge 2004) and the ABS marker follows the ERG marker. Crucially, in High ABS languages, movement of the ABS argument, motivated by the need to be in a local configuration with T^0, traps the ERG argument in its base position. Subsequently, High ABS languages are syntactically ergative. In contrast, in Low ABS languages, neither the ERG nor the ABS argument moves for case. Both arguments, but more crucially the ERG argument, are available for extraction, and thus these languages do not display syntactic ergativity.

Coon et al. (2014) appeal to phases in formalizing the idea that the movement of the ABS argument traps the ERG argument in situ in High ABS languages. On their account, the phase introduced by v^0 projects only one specifier. The ABS argument moves into a case-licensing position, occupying the vP phase edge. Subsequently, no other vP internal elements can escape the phase, and so the ERG argument is trapped in its base position. Low ABS languages avoid this problem: because neither argument moves to the phase edge for case-checking purposes, the phase edge is available to facilitate the A'-movement of either the ABS or the ERG argument. Thus, either of these arguments can be extracted from their base position in low ABS languages. In Section 5.5, we discuss an alternative account of what it means for the ERG argument to be trapped in its case position that does not appeal to the phase edge (Tollan 2019; Tollan & Clemens 2019).

In order to apply the 'inaccessible ergative' style of approach to variable syntactic ergativity in Tongic languages, we propose that ABS in Tongan is high, as in Q'anjob'al, and specifically that the locus of ABS in these languages is T^0. Although there is no morphological ordering to support this claim as there is in the Mayan languages, we find that data from coordination suggest we are on the right track (see Section 5.4). For now, note that while the ABS argument is free to undergo additional movement after case is assigned (10a), the ERG argument is blocked from moving higher in the clause by the movement of the ABS argument for case (10b).
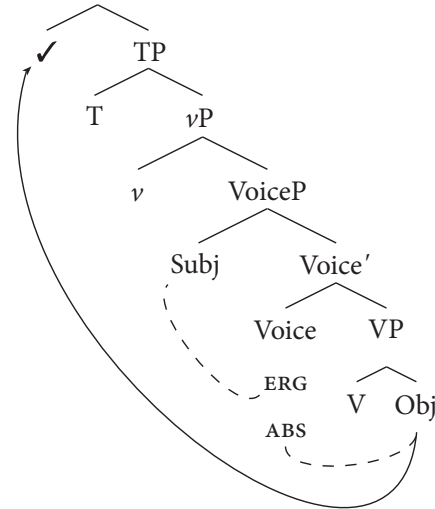
(10)   Tongan
   a. ABS extraction
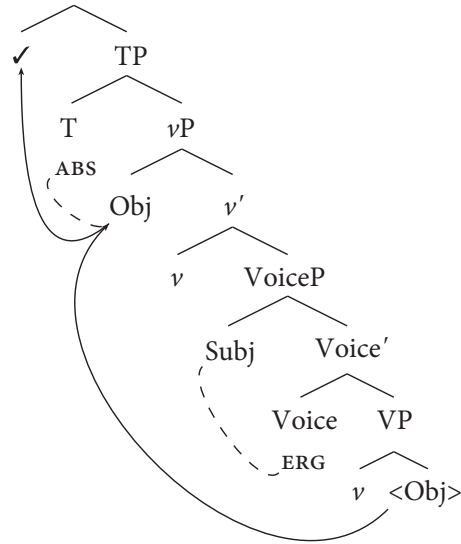
        b. No ERG extraction
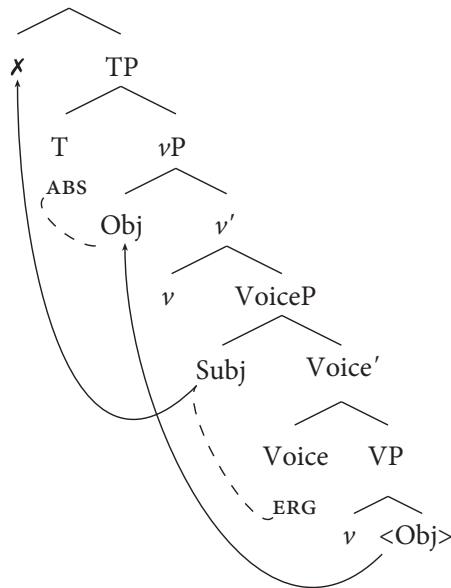
In contrast to Tongan, ABS case is assigned low in Niuean by Voice^0 (cf. Massam 2006). Because the ABS argument does not move for case-checking purposes, both of the core arguments freely extract. The structures in (11) illustrate how ERG and ABS case is assigned in Niuean and furthermore that either argument is freely available to undergo A'-movement.

(11)   Niuean
a. ABS extraction

b. ERG extraction
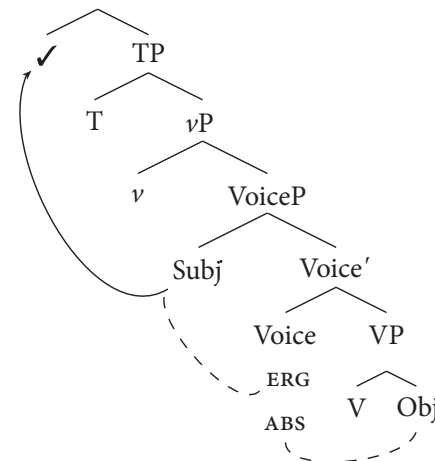
To summarize what we've seen so far, data from relativization and raising show that Tongan, but not Niuean, are syntactically ergative. While both ERG and ABS arguments relativize with a gap in Niuean, only ABS arguments can do so in Tongan. In Tongan, ERG arguments require a resumptive element. Futhermore, in Niuean, both ERG and ABS arguments can raise out of an embedded clause. In Tongan, ABS arguments can raise, but ERG subjects cannot.

Next, we presented a well-established view that ABS case assignment and syntactic ergativity are connected. For Tongan, we argued that the object moves into a local configuration with T^0 in order to check ABS case. High ABS languages, i.e. those for which case checking requires movement, are syntactically ergative, because the movement of the ABS argument blocks the ERG argument from

moving out of *v*P. In Niuean, both core arguments receive case locally from the Voice head. Thus, in a low ABS language like Niuean, where case checking does not require movement, either core argument can undergo raising. In the next section we connect the account of syntactic ergativity presented in Sections 5.2.2 and 5.2.3 to word order variation in the Tongic languages.

5.3 Word order variation

The fact that Polynesian languages are mainly verb-initial (V1) notwithstanding, there is considerable word order variation in the family. Three primary generalizations emerge about the order of the major sentential constituents in Polynesian languages.

First, VSO may or may not be the most common word order for transitive clauses depending on the language, but every Polynesian language allows VSO order in some contexts, including the few that have been described as basically SVO, e.g. Kapingamarangi (Lieber & Dikepa 1974); West Futunan (Dougherty 1983); and Vaeakau-Taumako (Næss & Hovdhaugen 2011). Second, SVO is a frequently occurring, secondary word order in all Polynesian languages (modulo the few just mentioned that are primarily SVO). Because the clause-initial position is associated with both topic and focus in Polynesian, as in many V1 languages, it is quite common to find SVO clauses even in robustly V1 languages. Finally, for a subset of Polynesian languages, both VSO and VOS orders occur in fully transitive clauses. In this type of language, VSO~VOS alternations are largely determined by information-structural considerations, such that given information appears relatively closer to the verb, whereas new information is placed farther to the right (See Clemens & Polinsky 2017 for a recent overview on VSO~VOS alternating languages).

Another way of generalizing across Polynesian word order patterns is to categorize an individual language as belonging to one of three sub-types: (i) VSO, (ii) VSO/VOS, and (iii) SVO/VSO. Within Tongic Polynesian, two of these patterns are represented and will be discussed in greater detail in the remainder of this section: Tongan allows both VSO and VOS order, while Niuean is predominantly VSO. One extension of the approach to syntactic ergativity outlined in the previous section is to account for the word order differences in the Tongic Polynesian languages.

5.3.1 VSO and VOS

Beginning with Tongan, in transitive clauses with two DP arguments, both VSO (12a) and VOS (12b) order is allowed; although, since Churchward (1953), the consensus in the Tongan literature is that VSO is the more discourse-neutral

option. Here, as before, the ergative argument is underlined and the absolute argument is shown in bold.

(12) a. Na'e   'ave   'e   Sione   'a   **Mele**.
          PST   take   ERG   Sione   ABS   Mele
          'Sione took Mele.'

     b. Na'e   'ave   '**a**   **Mele**   'e   Sione.
          PST   take   ABS   Mele   ERG   Sione
          'Sione took Mele.'   (Otsuka 2000: 282)

While there is broad agreement that discourse considerations drive VSO~VOS alternations; the nature of VOS order is debated in terms of analyses, but also in terms of the discourse status of the object. For Otsuka's (2005a, 2005b), the object in VOS order is associated with new, focal information. For Custis (2004), the object in VOS order is associated with given information. In addition to providing a detailed presentation of the grammatical and discourse factors that constrain constituent order in Tongan, Polinsky & Potsdam (Chapter 4, this volume) discuss the opposing views on the topic; we direct the reader to their chapter for more on this.[2]

Turning to Niuean, the word order of transitive clauses with two DP arguments is strictly VSO. Note that we consider Niuean's well-studied pseudo noun incorporation (PNI) construction (also found in Tongan) to only superficially resembles the fully transitive VOS construction that is unique to Tongan. The evidence suggests that PNI constructions are underlyingly intransitive: PNI objects are bare NPs that do not bear case. Furthermore, the PNI object is reportedly non-specific and non-referential. The examples in (13) compare: (i) a grammatical VSO example (13a), (ii) an ungrammatical VOS example (13b), and (iii) a grammatical PNI construction that appears to be VOS at first glance but is fundamentally an intransitive clause (13c).

(13) a. Kua   kai   he   tama   **e**   **niu**.
          PERF   eat   ERG   child   ABS   coconut
          'The child ate coconut.'

     b. *Kua   kai   **e**   **niu**   he   tama.
          PERF   eat   ABS   coconut   ERG   child
          'The child ate coconut.'

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[2] It is our position that the two accounts of Tongan VOS order proposed in this volume explain two different sets of data: one in which the object undergoes (leftward) A-movement and one in which the subject is a right-side topic. Indeed we suspect that the preexisting disagreement in the Tongan literature about the discourse status of the object reflects the existence of multiple VOS derivations (see Clemens & Coon 2018 for variation with respect to how VOS order is derived in individual Mayan languages as well as in the family as a whole).

c. Kua   kai   niu   **e**   **tama**.
   PERF   eat   coconut   ABS   child
   'The child ate coconut.'   (authors' notes)

PNI constructions will not be addressed further beyond clarifying that our account of the (un)availability of VSO ~ VOS alternations in Tongic is compatible with a number of different analyses of Niuean PNI, including those found in Baker (1995, 2014); Massam (2001, 2009a); and Clemens (2014, 2019).

5.3.2 Proposal

We propose that A-movement in Tongan VOS is a reflex of ABS case assignment, and, specifically, the fact that the base position and the case position of the absolutive object differ with respect to their location relative to the ergative subject. The base position of the object follows the subject, while the case position precedes it. We propose that the object can be pronounced in either syntactic position and the choice is governed by pragmatic factors (i.e. movement is covert in VSO clauses). Our proposal for variable word order in Tongan is illustrated in (14).[3]

(14)   Tongan VSO ~ VOS

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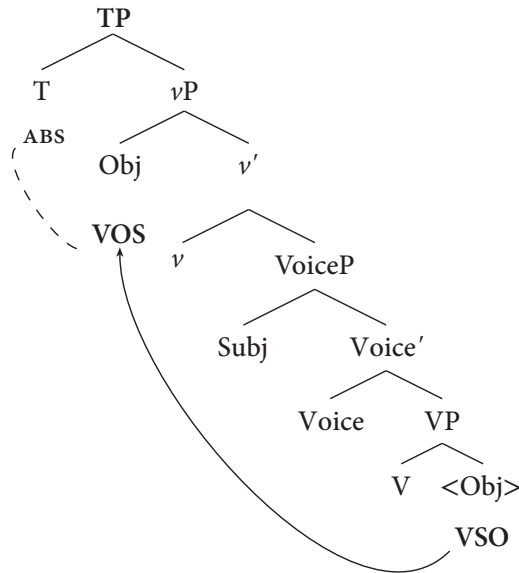
[3] The tree in (14) focuses on the relative order of the subject and the object; it is not a complete account of Tongan word order, because it gives no indication of how the verb arrives in its initial position. Note that our account is compatible with both VP-(remnant)-raising and V⁰-movement accounts of V1 order in Tongic (Massam 2001; Otsuka 2005b; Clemens 2014, 2019).

Comp. by: Bendict Richard   Stage : Revises1   ChapterID: 0005074484   Date:21/5/21
Time:10:01:13   Filepath:d:/womat-filecopy/0005074484.3D
Dictionary : NOAD_USDictionary   102

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Our account takes inspiration from Otsuka (2005b) who argues that Tongan VOS order is derived via A-scrambling of the absolutive object. In the terms of our analysis, the object is pronounced in its case position when it is discourse-prominent (see also Bossi & Diercks 2019 for a related account of VOS order in Kipsigis). Otsuka (2005a, 2005b) argues that because binding relations are altered in VOS order, VOS must be derived, and specifically by A-movement, since reconstruction is impossible. As shown in (15a), the ergative argument binds the absolutive argument in VSO order, but the same bound reading is unavailable in VOS order (15b). Note that linear order alone does not account for the difference between (15a) and (15b)., because the absolutive argument cannot bind the ergative argument in VOS order, as shown in (15c).

(15)   a. Na'e   fili   'e   Sione$_i$ 'a   ia$_{i/j}$ pē.
           PST   choose   ERG   Sione   ABS   3SG   only
           'Sione chose him/himself.'

       b. Na'e   fili   'a   ia$_i$ pē   'e   Sione$_{*i/j}$.fs
           PST   choose   ABS   3SG   only   ERG   Sione
           'Sione chose him/*himself.'

       c. Na'e   fili   'a   **Sione**$_i$ 'e   ia$_{*i/j}$ pē.
           PST   choose   ABS   Sione   ERG   3SG   only
           'He/*himself chose Sione.'   (Otsuka 2005b: 251–2)

Otsuka (2005a, 2005b) also argues that the object must undergo A-movement into its VOS position, because VOS word order does not give rise to weak crossover effects (16), which is the opposite of what we would expect if VOS order were derived via A'-movement.

(16)   Na'e fili   'a   e   taha kotoa$_i$ 'e   he'ene$_i$ tamai.
        PST choose   ABS   DEF   one   every   ERG   his   father
        'His$_i$ father chose everyone$_i$.'   (Otsuka 2005b: 250)

While weak crossover effects do not arise in VOS order, object *wh*-questions do display crossover effects (Otsuka 2005b).

(17)   *Ko   haii   na'e   fili   'e   he'enei   tamai ____$_i$?
        PRED   who   PST   choose   ERG   his   father
        Intended: 'Whoi did hisi father choose?'   (Otsuka 2005b: 251)

The ungrammaticality of (17) is puzzling because, on our analysis, the object always A-moves across the subject prior to any subsequent A'-movement (whether overtly, giving rise to VOS word order, or covertly, giving rise to VSO

word order). Thus, it follows for us that Tongan should not exhibit any crossover effects whatsoever, because the object *never* A' moves across the subject. However, many theories of crossover effects have argued that linear order imposes certain constraints on binding relations. Jaeger (2001), for instance, proposes that weak crossover, in some languages, arises from a default preference for processing elements of a sentence from left to right (see also discussion in Shan & Barker 2006). To this end, we posit that weak crossover effects in Tongan object questions arise due to the linear ordering of the antecedent subject DP *he'ene tamai* 'his father' with respect to the A-bar trace of the moved object DP. In the VOS structure in (16), no A-bar traces are present, since the object DP undergoes A-movement to get to its position above the subject, and weak crossover does not arise. The *wh*-question in (17) does contain an A-bar trace; however, this trace is found in the object's prior A-movement position, situated to the left of the subject. As such the subject does not linearly precede the A-bar trace, and weak crossover arises.

Recall that for Niuean, the only available word order in a transitive clause with two DP arguments is VSO. Also recall that for Niuean, ABS case is assigned low by Voice⁰. Thus, on our account, the ABS object only has the low option, and VSO order is obligatory. The structure in (18) illustrates our account of Niuean word order.

(18) Niuean low ABS; VSO only
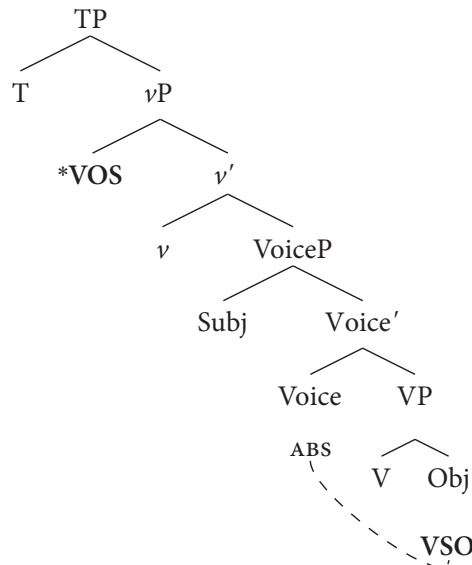
At this point we have demonstrated that the availability of VSO ~ VOS alterna-tions are inversely correlated with the accessibility of the ERG argument for A'-movement. We have connected these two seemingly independent characteristics

in the following way: when T⁰ is the locus of case assignment, the object must move to check case, which simultaneously opens the door for VOS order and closes the door to extraction of the ERG argument. Our analysis depends on the variable location of ABS case in Tongic Polynesian, which we will now further support with evidence from coordination.

5.4 Coordination

In this section, we consider contrasts in coordination patterns between Tongan and Niuean. We show that, while Niuean exhibits a consistently accusative coordination pattern, Tongan has two different patterns, crucially depending on the size of the phrases coordinated: phrases which contain T⁰ exhibit a syntactically ergative pattern, while coordination of smaller phrases gives rise to a syntactically accusative pattern.

Both Tongan and Niuean have two types of coordination: Tongan uses the connectives *mo* and *pea*, while Niuean uses two analogous connectives: *mo* (*e*) and *ti*. Crucially, these two connectives—(i) *mo* for Tongan and *mo* (*e*) for Niuean and (ii) *pea* for Tongan and *ti* for Niuean—coordinate phrases of different sizes.[4]

As shown for Tongan in (19) and for Niuean in (20), *pea* and *ti* may be followed by a tense marker or a clausal conjunction, while in contrast, *mo* and *mo* (*e*) cannot. This suggests that *pea/ti* is required when coordinating phrases that contain a TP. In the examples in (19) and (20), the conjuncts are bracketed and the tense marker or clausal conjunction are bold.

(19)   Tongan *pea-* vs. *mo*-coordination
    a. [Naʻe kai lahi ʻa Sione] pea/*mo [**naʻe** inu lahi ʻa Pita].
       PST each much ABS Sione and PST drink much ABS Pita
       'Sione ate a lot and Pita drank a lot.'   (Otsuka 2000: 121)

    b. Pea/*mo [**kapau** kuo ʻosi ʻa e ngaué]
       and if PERF finished ABS DEF work
       'and if the work has been done...'
                (Churchward 1953, via Otsuka 2010: 323)

(20)   Niuean *ti-* vs. *mo* (*e*)-coordination
    a. [Ne kai e Mele e apala] ti/*mo e [**kua** kai e Sione e pea].
       PERF eat ERG Mele ABS apple and PERF eat ERG Sione ABS pear
       'Mele ate an apple and Sione ate a pear.'

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[4] See Otsuka (2000: chapter 5 and 2010) for comprehensive discussion of Tongan coordination.

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    b. ti/*mo e [**kaeke** ke tutuli e Sione a Mele]
       and if TNS chase ERG Sione ABS Mele
       '…and if Sione chases Mele…' (authors' notes)

In contrast, *mo*/*mo* (*e*) coordinates smaller phrases that do not contain TP. In (21) for Tongan and (22) for Niuean, *mo* (*e*) is shown connecting nominals and adjectives, in the (a) and (b) examples, respectively.

(21)   Tongan *mo-* vs. *pea*-coordination
    a. Naʻe ʻalu [ʻa Sione] mo/*pea [Mele] ki kolo.
       PST go ABS Sione and Mele to town
       'Sione and Mele went to town.'

    b. ʻoku [talavo] mo/*pea [poto] ʻa Mele
       PRS beautiful and smart ABS Mele
       'Mele is beautiful and smart.' (Otsuka 2010: 122)

(22)   Niuean *mo* (*e*) vs. *ti*-coordination
    a. Ko [mautolu] mo e/*ti [ha mautolu a tua ma-matua tupuna].
       PRED 1PL.EXCL and GEN 1PL.EXCL ABS PL PL-parent ancestor
       'It's us and our forefathers.' (Sperlich 1997: 220)

    b. ke gahua [mitaki] mo e/*ti [tonu] tūmau e haana a fekafekau
       SBJV work well and properly always ABS his ABS servant
       '…for his servant to always work well and properly.' (Seiter 1980: 23)

Beginning with the smaller connectives, *mo* and *mo* (*e*) exhibit a consistent syntactically accusative coordination pattern. This means that, when all participants are not overtly expressed, it is the subject, regardless of its case marking, which acts as the coordination pivot (see Dixon 1994). As such, there are two key generalizations: first, the overt subject of the first conjunct (whether an intransitive ABS subject or a transitive ERG subject) and the unexpressed participant in the second conjunct must be the same; and, second, the unexpressed participant in the second conjunct can *only* be the subject of its clause (again, whether intransitive ABS or transitive ERG).

    This pattern is illustrated in (23) for Tongan and in (24) for Niuean. Notice that across all examples, *Mele* can never be interpreted as the subject of the second conjunct (and hence cannot appear with ergative case in (23) and (24)); this is because *Mele* is not the subject of the first conjunct. In these configurations, we propose that case is eventually assigned to the ABS arguments in both conjuncts via multidominance, whereby both conjuncts are equidistant to the relevant case assigning head (Williams 1978). In these examples, the argument in the first conjunct that determines the identity of the elided argument in the second conjunct is given in bold.

(23)   Tongan *mo*-coordination: Accusative pattern

    a. [Naʻe   taaʻi   **ʻe**   **Hina**   ʻa   Mele]   mo   [kata].
        PST   hit   ERG   Hina   ABS   Mele   and   laugh
        'Hina hit Mele and (Hina/*Mele) laughed.'

    b. Naʻe   tangi   **ʻa**   **Hina**]   **mo**   [**taaʻi**   ***ʻe/ʻa**   **Mele**].
        PST   cry   ABS   Hina   and   hit   *ERG/ABS   Mele
        'Hina cried and (Hina/*Mele) hit Mele.'
        Not: '…Mele hit (Hina).'   (Otsuka 2000: 129)

(24)   Niuean *mo (e)*-coordination: Accusative pattern

    a. [Ne   tutuli   **e**   **Sione**   a   Mele]   mo e   [kata]
        PST   chase   ERG   Sione   ABS   Mele   and   laugh
        'Sione chased Mele and (Sione/*Mele) laughed.'

    b. [Ne   kata   **a**   **Sione**]   mo e   [tutuli   *e/a   Mele].
        PST   laugh   ABS   Sione   and   chase   *ERG/ABS   Mele
        'Sione laughed and (Sione) chased Mele.'
        Not: '…and Mele chased (Sione).'   (authors' notes)

Taken together, these data indicate that when smaller phrases are coordinated, the resulting pattern is accusative for both languages.

    Turning now to the larger connective—*pea* for Tongan and *ti* for Niuean—we find a contrast between the two languages. On the one hand, Tongan exhibits a syntactically ergative coordination pattern (compare Dixon 1994 for Dyirbal). This means that, when all participants are not overtly expressed, an unexpressed participant in the second conjunct must correspond to an overt participant in the first conjunct marked with a matching case. As such, an overt ERG argument in the first conjunct can only be coindexed with an unexpressed ERG argument in the second conjunct, and an overt ABS argument (whether intransitive subject or transitive object) in the first conjunct can only be coindexed with an unexpressed ABS argument (whether intransitive subject or transitive object) in the second conjunct.

    The latter is illustrated in (25): in (25), the unexpressed absolutive subject of *tangi* 'hit' can only be interpreted as *Mele*, because, in the first conjunct, *Mele* is the argument bearing ABS case—its grammatical function is irrelevant. In (25), *Mele* must be interpreted as the ergative subject of the second conjunct (and hence cannot appear with absolutive case). This is because the unexpressed argument must be absolutive, in correspondence with the single absolutive argument in the first conjunct.

(25)   Niuean *pea*-coordination (compare to (23a) and (23b), respectively)

    a. [Naʻe   taaʼi   ʻe   Hina   **ʻa**   **Mele**]   pea   [tangi].
        PST   hit   ERG   Hina   ABS   Mele   and   cry
        'Hina hit Mele and (*Hina/Mele) cried.'

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b. [Naʻe   tangi   **ʻa**   **Hina**]   pea   [taaʻi   ʻe/*ʻa   Mele].
    PST   cry   ABS   Hina   and   hit   ERG/*ABS   Mele
    'Hina cried and Mele hit (Hina).'
    Not: '…and (Hina) hit Mele.'   (Otsuka 2000: 123)

Thus, Tongan exhibits a syntactically ergative coordination pattern when phrases containing T^0 are coordinated (with *pea*), but a syntactically accusative pattern when smaller phrases are coordinated (with *mo*).

Niuean, on the other hand, maintains an accusative coordination pattern, even with the larger connective *ti*: notice that the patterns shown in (26) are identical to those with *mo* (*e*) in (24).

(26)   Niuean *ti*-coordination (compare to (24a) and (24b), respectively)
      a.   [Ne   tutuli   **e**   **Sione**   a   Mele]   ti   [kata]
          PST   chase   ERG   Sione   ABS   Mele   and   laugh
          'Sione chased Mele and (Sione/*Mele) laughed.'
      b.   [Ne   kata   **a**   **Sione**]   ti   [tutuli   *e/a   Mele].
          PST   laugh   ABS   Sione   and   chase   *ERG/ABS   Mele
          'Sione laughed and (Sione) chased Mele.'
          Not: '…and Mele chased (Sione).'   (authors' notes)

In sum, an ergative pattern in Tongan arises precisely when phrases at least as large as TP are coordinated with *pea*. Smaller phrases, coordinated with *mo*, show an accusative pattern. By contrast, Niuean has a consistently accusative coordination pattern, with both smaller phrases (with *mo* (*e*)) and when TP/CPs are conjoined (with *ti*). Importantly, we find that he presence of T^0 triggers a syntactically ergative coordination pattern in Tongan, but not in Niuean: this follows naturally from our analysis, in which T^0 is responsible for assigning absolutive case in Tongan, but not in Niuean. An analysis of the operation(s) by which A-movement of the absolutive DP triggers a syntactically ergative coordination pattern awaits further research. One possibility is that the requirement for case matching—which characterizes the ergative coordination pattern—arises as a consequence of the absolutive DP being associated with more than one structural position

5.5 Blocking ERG movement

Thus far, we have argued that absolutive case is assigned low, by v^0, in Niuean, and high, by T^0 in Tongan. Syntactic ergativity subsequently arises in Tongan because the object is required to A-move in order to be in a local configuration with its case assigning head. A remaining question, which we turn to now, is that of why such movement blocks any subsequent A'-movement of the ergative argument.

Previous accounts which, like the current one, derive syntactic ergativity from A-movement of the absolutive argument past the ergative, i.e. 'inaccessible

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ergative' accounts, typically appeal either to (i) superiority or (ii) the *v*P phase boundary to account for the trapping of the ergative subject. Aldridge (2004) proposes that, once the absolutive object has moved above the ergative, an A'probe on C^0 is unable to target the ergative, because a higher target—the absolutive object—intervenes. For Mayan languages, Coon et al. (2014), *v*P projects only a single specifier position. This means that, once the absolutive has undergone A-movement to this position, nothing below it, including the ergative subject, can escape the *v*P phase. As such, only the absolutive argument (or any element merged above the *v*P phase) may A' move. Appealing to superiority or a ban on multiple *v*P specifiers, however, crucially predicts that accusative objects in nominative-accusative languages should be at least as impervious to A-bar movement as ergative subjects in ergative-absolutive languages (see discussion in Assmann et al. 2015): just as a high absolutive argument indeed blocks ergative movement (see (27a), so should a high nominative argument analogously block accusative movement (see (27b), either because (i) it is structurally superior or (ii) because it must occupy the single *v*P phase edge.[5]

(27)   Ergative vs. accusative

  a. Ergative-absolutive
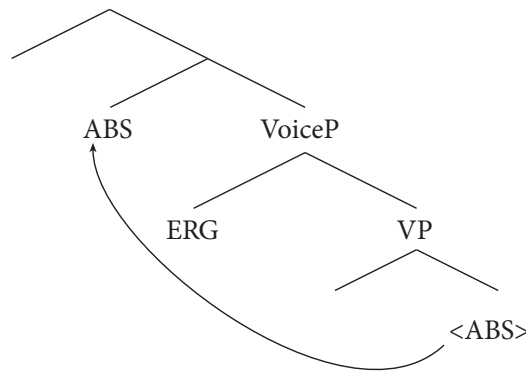
  b. Nominative-accusative
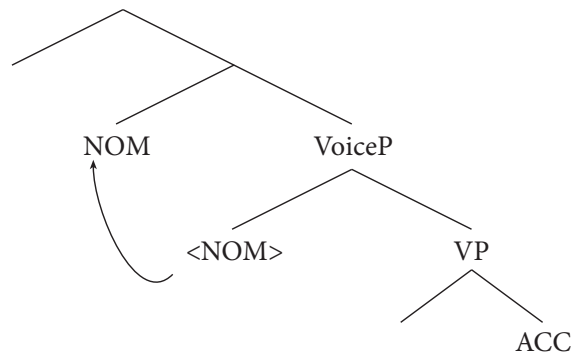
[5] Note that Coon et al. (2014) claim that the external argument is merged below the phase edge in Mayan and above the phase edge in nominative languages, but concede that this is stipulative.

Instead, what we find is that syntactic ergativity is, in fact, more typologically prevalent than syntactic accusativity: whereas approximately 69% of ergative-absolutive languages are syntactically ergative (Polinsky 2016), at best 38% of nominative-accusative languages are syntactically accusative (Tollan 2019).

In view of this asymmetry, we take an alternative approach.[6] Following Tollan (2019), we suggest that the culprit in cases of syntactic ergativity—in Tongic Polynesian and possibly also Mayan—is not superiority or the vP phase boundary, but rather the trajectory of movement. We appeal to the *Constraint on Crossing Dependencies* (CCD) (Kuno & Robinson 1972; Steedman 1985), which captures the observation that movement which results in nested dependencies is preferred to movement which results in crossed dependencies. Notice that, in the English examples in (28), the crossed dependency in (28b) is indeed ungrammatical, whereas a nested dependency is allowed (28a).

(28)   a. The violin$_j$ that I wonder which sonatas$_i$ to play___$_i$ on___$_j$.

    b. *The sonatas$_i$ that I wonder which violin$_j$ to play___$_i$ on___$_j$.

If we apply the CCD to an inaccessible ergative account of syntactic ergativity, then the asymmetries between the attested restrictions on ergative extraction as compared to the unattested restrictions on accusative extraction can be captured. In nominative-accusative languages, the accusative argument A' moves *around* the nominative argument, creating a licit nested dependency (see (29a)). Syntactic ergativity manifests as ban on A'-movement of the ergative argument across the absolutive argument's prior A-movement path, which creates an illicit crossed dependency (see (29b)).
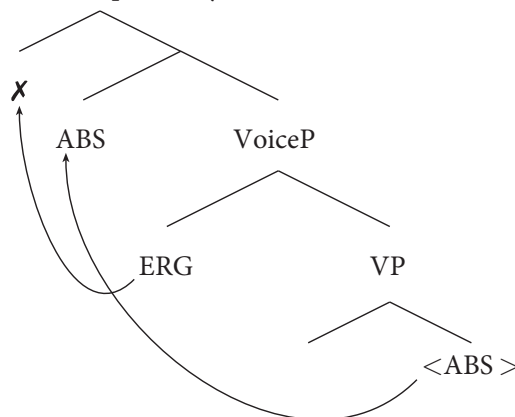
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[6] See Tollan (2019) and Tollan & Clemens (2019) for further details of the advantages of a CCD-based account as compared with a phase-based account, argued from a cross-linguistic perspective.

(29)   Ergative vs. accusative

   a. Movement of ACC: Nested dependency
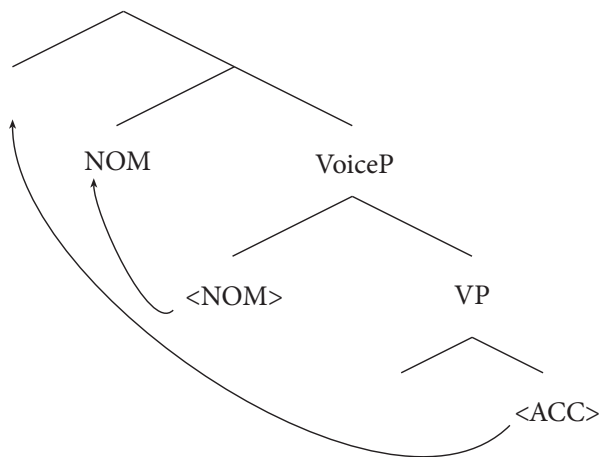
   b. *Movement of ERG: Crossed dependency

Note that this explanation makes the prediction that ditransitive goal arguments, which are standardly assumed to be merged lower than direct objects (see Larsen 1988, et seq.), should be able to undergo A'-movement in syntactically ergative languages, because such movement does not cross the prior movement path of the absolutive argument. Rather, the movement should be nested in the manner of (29).[7]

   For the Tongic Polynesian languages, however, A'-movement of any kind of oblique argument, including a ditransitive goal, requires resumption, in the manner of the relativization of an ERG argument as was shown in (4) for Tongan.

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[7] This prediction is neatly borne out in Mayan languages: notably, Assmann et al. (2015) remark that both absolutive and dative goal arguments can A' move in Kaqchikel (see also Tollan 2019 for discussion of the same fact in related Q'anjob'al).

The examples in (30) show a resumptive element coindexed with the raised indirect object for both Tongan (30a) and Niuean (30b).

(30) Indirect object relatives

    a. e   sianai [$_{RC}$ naʻe ʻoange ʻe   Mele ʻa   e   tohi ki ai$_i$]
       DEF man   PST give   ERG Mele ABS DEF letter to there
      'the man to whom Mele gave the letter'   (Tongan; Otsuka 2000: 117)

    b. e   tau tagatai [$_{RC}$ ne   age e   ia ki ai$_i$ e   motokā]
       ABS PL people   NFUT give ABS 3SG to there ABS car
      'the people he gave the car to'   (Niuean; Seiter 1980: 94)

Although our analysis predicts that the extraction of an oblique element should proceed in the same manner as the extraction of an absolutive argument, we believe that this type of resumption arises from independent factors. Tongic languages do not exhibit the pied-piping of prepositions, neither do they allow preposition stranding. For this reason, we posit that inserting the resumptive element in (30) is a last resort strategy used to avoid preposition stranding.

5.6 Conclusion

In this chapter we connect variation in syntactic ergativity in the Tongic Polynesian family to differences in post-verbal word order. When both post-verbal arguments are of the DP category, Niuean word order is strictly VSO. In addition, the ergative argument in such constructions, like absolutive arguments, can freely undergo A'-movement. Tongan, however, allows both VSO and VOS word orders, but the ergative argument in such constructions cannot be extracted in the same manner as absolutive arguments.

    We propose an inaccessible ergative account for both syntactic ergativity and variable post-verbal word order based on the A-movement of the absolutive argument past the ergative argument for case-licensing purposes. Specifically, in Tongan, absolutive case is assigned high, by T^0, which requires the absolutive argument to A-move, past the ergative subject, into a local licensing position (e.g. the vP phase edge); it can subsequently be pronounced in either its case position or in its base position and the choice is governed by pragmatic factors. In Niuean, however, absolutive case is assigned low, by Voice^0, and no such A-movement is required. The ergative argument can, therefore, move, but the absolutive object can only be pronounced in its low base position (unless of course it undergoes A'-movement itself).

    Differences in coordination patterns between Tongan and Niuean provide additional support for this analysis. When small phrases that do not contain TP

are coordinated, both Tongan and Niuean exhibit an accusative coordination pattern. However, when larger phrases containing T^0 are conjoined, Tongan exhibits a syntactically ergative pattern while Niuean maintains an accusative pattern. If syntactic ergativity is connected to a T^0-assigning ABS, then syntactically ergative patterns should only arise in constructions involving T^0 (e.g. TP but not vP coordination), exactly as observed.

Finally, we evaluate this approach to syntactic ergativity in view of the typological rarity of syntactic accusativity. We propose, following Tollan (2019), that the ban on ergative A'-movement is tied specifically to the prior A-movement of the absolutive subject around the ergative subject, rather than structural superiority or a ban on multiple vP specifiers, as has been proposed by other inaccessible ergative accounts.

This chapter brings to light ways in which languages from within a single subfamily can exhibit micro-variation, and how seemingly unrelated phenomena, such as word order and movement restrictions, may be connected through a single parametric difference. More broadly, this work contributes to our understanding of the cross-linguistic typology of ergativity and syntactic ergativity, lending further support to analyses which rely on A-movement of the absolutive object (e.g. Bittner & Hale 1996a; Aldridge 2004; Coon et al. 2014).

Acknowledgments