

Chapter 5

Syntactic Ergativity in Tongan

Tongan has an ergative case system, in which the subject of intransitive verb (S) bears the same case (ABS) as the object of a transitive verb (O), while the subject of a transitive verb (A) bears a special case (ERG). Ergativity in Tongan is manifested also at the level of syntax. Tongan consistently treats S and O as equivalents in syntactic operations such as relativisation and coordination. In §5.1, it will be shown that S and O undergo ordinary relativisation, while A requires a resumptive pronoun in the position vacated by the movement. In §5.2, we will consider three coordinate constructions. First, *pea* coordination disallows S/O to be coreferential with A both as an antecedent and as a gap, suggesting that *pea* connects arguments in the same structural case position. Second, *'o*-coordination allows only S/O to be an antecedent. We propose that the latter arises because the gap in *'o*-coordination is a null anaphor, which must be bound by the closest potential antecedent, i.e., NP in the lower position of the matrix clause, perhaps reflecting Rizzi's (1990) relativised minimality condition. There is also *mo*-coordination, which shows an accusative rather than ergative pattern. We propose that obligatory theta-role identification applies to the arguments in [Spec, VP] at the base structure, thus requiring the two verbs connected by *mo* to have the same subject. Thus, the accusative pattern reflects not the case but the theta-role (i.e., grammatical function) of the arguments. Altogether our data show that the structural position [Spec, Agro], which we assume is the position where ABS

is assigned, plays a significant role in syntactic operations.

5.1 Relativisation

Syntactically ergative languages commonly have the following restriction on relativisation: only S/O can be relativised, but A cannot.¹ Tongan shows a similar pattern in that relativisation of A is more restricted than that of S/O. Tongan relative clauses are formally the same as tensed clauses except that the relativised argument appears either as an empty category or a (resumptive) pronoun. Relative clauses are introduced by a tense marker and not by an overt operator like English relative pronouns. We assume that the relative clauses in Tongan are similar to the English *that*-relative clauses. Specifically, we assume that an empty operator OP has moved to [Spec, CP] of the relative clause, leaving a *wh*-trace in the base generated position.

Consider (5.1) below.

- (5.1) a. e fefine [OP_i [na'e 'alu t_i ki Tonga]]
 def woman Pst go to Tonga
 “the woman who went to Tonga”
- b. e fefine [OP_i ['oku 'ofa'i 'e Sione t_i]]
 def woman Prs love ERG Sione
 “the woman whom Sione loves”

In (5.1a), the relativised argument is S. In (5.1b), it is O. The relativised argument is realised as a *wh*-trace. In contrast, when A is relativised, it must be realised overtly as a pronoun. See (5.2) below.

(5.2) a. *e siana [OP_i [na'e langa t_i 'a e fale]]
 def man Pst build ABS def house
 "the man who built the house"

b. e siana [OP_i [na'a ne_i langa 'a e fale]]
 def man Pst 3.s. build ABS def house

Furthermore, the occurrence of a resumptive pronoun yields ungrammaticality if the relativised argument is S or O, as illustrated in (5.3) below.²

(5.3) a. *e fefine [OP_i [na'a ne_i 'alu ki Tonga]]
 def woman Pst 3.s. go to Tonga
 "the woman who went to Tonga"

b. *e fefine [OP_i ['oku 'ofa'i ia_i 'e Sione]]
 def woman Prs love 3.s. ERG Sione
 "the woman whom Sione loves"

In short, the use of resumptive pronoun is restricted to A. Put differently, the operation of relativisation respects the ERG-ABS distinction.

It should be noted that indirect objects as well as middle objects also require a resumptive pronoun. See (5.4) below.

(5.4) a. e siana [OP_i ['oku sai'ia 'a Mele 'i ai/*t_i]]
 def man Prs like ABS Mele in there
 Lit. "the man in whom Mele likes"

b. e siana [OP_i [na'e 'oange 'e Mele 'a e tohi ki ai/*t_i]]
 def man Pst give ERG Mele ABS def letter to there
 "the man to whom Mele gave the letter"

¹ In such a language, the clause must be antipassivised first in order for the underlying A to be relativised. Antipassive is a syntactic operation that alters the underlying A to a derived O.

² However, Chung (1978: 40) notes that a resumptive pronoun is allowed if it is not third person singular.

(i) a. ongo siana na'a na hopo

d. man Pst 3.d. jump

"the two men who jumped"

b. kimoutolu kuo mou toki a'u mai.

3.pl. Perf 3.pl. immediately arrive Dir.1.

"those of you who have just arrived"

The pronoun *ai* is used after a preposition³ and usually can be translated as “there”. It can refer to human beings as well as inanimate objects and places. The same pronoun is used, therefore, when the relativised NP is a constituent of an adjunct. See (5.5) below. Note that the relative adverbs are also phonetically null in Tongan.

- (5.5) a. e tepile [OP_i [na'e hili 'e Sione 'a e tohi ai_i/*t_i]]
 def table Pst place ERG Sione ABS def letter there
 “the table where Sione put the letter”
- b. e 'uhinga [OP_i ['oku fiefia 'a Sione ai_i/*t_i]]
 def reason Prs happy ABS Sione there
 “the reason why Sione is happy”

The element *ai* is indispensable in forming questions asking *why*. The most proper form of *why*-questions is (5.6a). In spoken language, *'a e 'uhinga* (“the reason”) can be omitted, but dropping *ai* renders a sentence ungrammatical, as illustrated in (5.6b) and (5.6c), respectively.

- (5.6) a. Ko e haa 'a e 'uhinga [OP_i ['oku ke tangi ai_i]]?
 Pred def what ABS def reason Prs 2.s. cry there
 Lit. “What is the reason (that) you are crying?”
- b. Ko e haa [OP_i ['oku ke tangi ai_i]]?
 Pred def what Prs 2.s. cry there
 Lit. “What is (it) (that) you are crying?”
- c. *Ko e haa 'a e 'uhinga [OP ['oku ke tangi]]
 Pred def what ABS def reason Prs 2.s. cry
 Lit. “What is the reason (that) you are crying?”

Assuming *ai* is a resumptive pronoun for the raised empty operator, the ungrammaticality of (5.6c) is expected; the empty operator is stranded without a bindee.

As illustrated in (5.4), indirect and middle objects behave in the same fashion as NP's

³ Note that the preposition *'i* (“in”) is often omitted when followed by *ai*.

in adjunct clauses. The resumptive element is always *ai* rather than a personal pronoun. Compare the sentences in (5.7) with those in (5.4).

- (5.7) a. *e siana [OP_i ['oku sai'ia ia_i 'a Mele]]
 def man Prs like ABS Mele in there
 Lit. “the man in whom Mele likes”
- b. *e siana [OP_i [na'e 'oange ia_i 'e Mele 'a e tohi]]
 def man Pst give ERG Mele ABS def letter to there
 “the man to whom Mele gave the letter”

In this sense, we should treat middle/indirect objects separately from the core arguments of the verb, S, O, and A. Hence, although middle/indirect objects also require a resumptive pronoun, we assume that they are governed by a separate rule. Consequently, our observation that A is distinguished from S and O is retained. Our data show that a trace of an empty operator must be realised as a resumptive pronoun in [Spec, Agrs], while a trace in [Spec, Agro] may remain phonetically null. As discussed in Chapter 4, we assume that ERG is assigned in the former position and ABS, in the latter. In short, relativisation in Tongan is sensitive to structural case positions.

5.2 Coordination

In an accusative language such as English, O is distinguished from S and A in coordinate constructions: S and A can be coreferential, whereas neither S nor A can be coreferential with O. In other words, the gap cannot be in O function, nor can an O-argument be coreferential with the gap. See (5.8) below.

(5.8) a. John_i came in and e_i saw Mary.

b. *John_i came in and Mary saw e_i.

c. John_i saw Mary_j and e_{i/*j} smiled.

(5.8a) is grammatical, as the gap is A and is coreferential with the subject (S) of the first clause. In contrast, (5.8b) is ungrammatical because the gap, being O, cannot be coreferential with the subject of the first clause. Furthermore, (5.8c) shows that when the gap is S, it can only be coreferential with A of the first clause. Coreference with O is prohibited.⁴ Syntactically ergative languages, on the other hand, show an ergative pattern with respect to coordination. Tongan exhibits syntactic ergativity with regard to coordination as well. In Tongan, there are three coordinate constructions, involving the conjunctions *pea*, *mo*, and 'o, respectively. As Dixon (1979) points out, coordination in Tongan shows a split pattern. Specifically, *mo*-coordination consistently shows an accusative pattern. In the following subsections, we will study each of the three coordination constructions and attempt to explain what causes the split.

5.2.1 Use of conjunctions

The three conjunctions mentioned above are used in different environments, in addition to being semantically different from one another. In terms of semantics, *pea* is interpreted as sequential, *mo* as simultaneous, and 'o as resultative. See (5.9) below.

(5.9) a. Kai pea inu.
eat and drink
“Eat and then drink!”

⁴ Combination of O and O is also illegal in English, as illustrated in (i) below.

(i) *John likes Mary_i and Bill hates e_i.

Hence, the generalisation is that the gap can only be S/A and not O.

- (5.9) b. Kai mo inu.
 eat and drink
 “Eat and also drink!”
- c. Ha’u ‘o kai.
 come and eat
 “Come to eat!”

‘O is resultative in the sense that the two events are regarded as virtually one event, with the second event arising from the first one. Hence, it is often translated as “so that”, “in order to”, or “and as a result”. We will study more examples of ‘o-coordination shortly.

Regarding syntactic conditions, all of the three are used to connect verbs as illustrated in (5.9) above. However, *pea*, *mo*, and ‘o are subject to different restrictions in other environments. For example, only *pea* can be used to connect tensed clauses; neither *mo* nor ‘o can be followed by a tense marker. See (5.10) below.

- (5.10) Na’e kai lahi ‘a Sione *pea*/**mo*/* ‘o na’e inu lahi ‘a Pita.
 Pst eat much ABS Sione and Pst drink much ABS Pita
 “Sione ate a lot and Pita drank a lot.”

However, as long as the tense marker is absent, all of the three can be used to connect clauses. Note also that the subject of the second predicate, if it is coreferential with an argument of the first verb, may be realised either as a gap (5.11a) or as an overt pronoun (5.11b).

- (5.11) a. Na’e kai lahi ‘a Sione_i *pea*/*mo*/'o fiefia *e*_i.
 Pst eat much ABS Sione and happy
 “Sione ate a lot and was happy.”
- b. Na’e kai lahi ‘a Sione_i *pea*/*mo*/'o ne_i fiefia.
 Pst eat much ABS Sione and 3.s. happy
 “Sione ate a lot and he was happy.”

Mo can be used to connect adjectives and adverbs. *Pea* and *‘o* do not have this property.⁵ Similarly, nouns and pronouns are connected only by *mo*. See (5.12) below.

- (5.12) a. ‘Oku talavou mo/*pea/*‘o poto ‘a Mele.
 Prs beautiful and smart ABS Mele
 “Mele is beautiful and smart.”
- b. Na’e ‘alu ‘a Sione mo/*pea/*‘o Mele ki kolo.
 Pst go ABS Sione and Mele to town
 “Sione and Mele went to town.”
- c. Ko koe mo/*pea/*‘o au.
 Pred 2.s. and 1.s.
 “It’s you and me.”

Prepositional phrases can be connected only by *pea*.

- (5.13) Na’e ‘alu ‘a Sione ki Fisi pea/*mo/*‘o ki Nu’usila.
 Pst go ABS Sione to Fiji and to New Zealand
 “Sione went to Fiji and then to New Zealand.”

Finally, only *pea* can be followed by other conjunctions such as *kapau* (“if”) and *neongo* (“although”).⁶ This is predictable, for only *pea* can be used to connect two tensed sentences. The type of construction to be studied below is the one represented in (5.11), in which the second clause apparently lacks tense and the tenseless clause necessarily includes an argument that is coreferential with one of the arguments in the first clause.

5.2.2 *Pea*-coordination

Coordination by *pea* demonstrates an ergative pattern: A is never paired with S/O. Specifically, the combinations, A-S/O and S/O-A are prohibited. However, the A-A combination is allowed. See (5.14) below.

⁵ To be accurate, *pea*, though very rarely, may also be used to connect adjectives and adverbs.

(5.14) a. Na'e tangi 'a Hina_i pea taa'i 'e Mele *e_i*.
 Pst cry ABS Hina and hit ERG Mele
 "Hina cried and Mele hit (her)."

b. *Na'e tangi 'a Hina_i pea taa'i *e_i* 'a Mele.
 Pst cry ABS Hina and hit ABS Mele
 "Hina cried and (she) hit Mele."

The subject (S) of the first clause can be coreferential with the gap in O-function, but not with one in A-function. The ergative principle also applies to those structures in which the gap occurs as S. See (5.15) below.

(5.15) Na'e taa'i 'e Hina_i 'a Mele_j pea tangi *e*_{i/j}*.
 Pst hit ERG Hina ABS Mele and cry
 "Hina hit Mele and (*Hina/Mele) cried."

The gap, being S, is coreferential with *Mele*, O of the first clause, but not with *Hina* (A).⁷ A-O as well as O-A combinations are also forbidden, as illustrated in (5.16) below.

(5.16) a. Na'e 'ave 'e Sione_i 'a Mele_j ki he palasi pea fakamolemole'i 'e he kuini *e*_{i/j}*.
 Pst take Sione ABS Mele to def palace and forgive ERG def queen
 "Sione took Mele to the palace and the Queen forgave (*him/her)."

b. *Na'e tamate'i 'e Sione 'a Lisiate pea tamate'i 'e Tevita *e*.
 Pst kill ERG Sione ABS Lisiate and kill ERG Tevita
 "Sione killed Lisiate and Tevita killed (*Sione/*Lisiate)."

As shown by (5.16a), the gap in O-function can only be coreferential with O of the first clause. The sentence cannot be interpreted as "Sione took Mele to the palace and the Queen forgave him". (5.16b) is considered ungrammatical. This is because it is semantically impossible to obtain coreference between the gap and O of the first clause: as *Lisiate* (O) was already killed by *Sione*, it is impossible for *Tevita* to kill

⁶ Except for the idiomatic use of 'o *kapau*, used as equivalent to *kapau*.

⁷ However, some of the informants allow coreference with A if the second verb is *kata* ("laugh"). This exception seems to be due to a semantic reason: "hit and laugh" makes more sense than "being hit and laugh". Those who accept the A-S combination with *kata* nevertheless take the O-S combination with a semantically neutral verb such as 'alu ("go").

him (again). Coreference with *Sione* (A) is syntactically illegal. As a result, the sentence is ruled out. O-A combination is also prohibited, as illustrated by (5.17) below.

- (5.17) Na'e 'ave 'e Sione_i 'a Mele_j ki he maaketi pea fakatau mai $e_{i/*j}$ 'a e kumala.
 Pst take ERG Sione ABS Mele to def market and buy Dir ABS def sweet potato
 "Sione took Mele to the market and (he/*she) bought the sweet potato."

The examples cited above clearly indicate that *pea*-coordination respects ergativity. ABS-arguments are never paired with ERG-arguments. This ergative pattern can be explained as follows. The gap in the second clause is *pro*. This *pro* is different from the one discussed earlier, which has to be third person singular and must have a discourse antecedent (cf. §3.4). *Pro* in coordinate constructions is not required to be third person singular, as illustrated by (5.18) below.

- (5.18) a. Na'a nau_i pau'u pea taa'i pro_i 'e he faiako.
 Pst 3.pl. naughty and hit ERG def teacher
 "They are naughty and the teacher hit (them)."
 b. Na'e taa'i kinautolu_i 'e he faiako pea pro_i tangi.
 Pst hit 3.pl. ERG def teacher and cry
 "The teacher hit them and (they) cried."

Let us call *pro* of this kind co(ordinate)-*pro*. Co-*pro* is a special instance of *pro* and is permitted in languages that generally do not allow *pro*-drop such as English. That is, we assume that the empty category *e* in (5.8) is also a co-*pro*. A co-*pro* requires an overt antecedent with which its features can be identified. Let us assume that just like overt NP's *pro* has a case feature and phi-features. Let us further assume that co-*pro*, being an exceptional case, is subject to a relatively strict licensing condition: specifically, not only phi-features, but also a case feature must be identified. Thus, an ABS-marked *pro* cannot be coreferential with an ERG-marked argument because it

fails to be licensed. Similarly, in an accusative language, a NOM-marked *pro* looks for a NOM-marked antecedent. Hence, the antecedent cannot be O.^{8,9}

However, it should be noted that under certain circumstances, the A-O combination could be accepted. Some, though not all, of the informants accept the sentence (5.19), allowing the gap (O) to be coreferential with A.¹⁰

(5.19) Na'e fakafoki 'e Sione_i 'a e koloa pea fakamolemole'i 'e he kuini *e*_i.
 Pst return ERG Sione ABS def treasure and forgive ERG def queen
 "Sione returned the treasure and the Queen forgave him."

In (5.19), the O-O interpretation, which is the legitimate combination, results in nonsense. Since O of the first clause is *koloa* ("treasure"), an inanimate object, it is semantically odd for O to be the object of queen's forgiving. Given a [+ human] A and [- animate] O, it is more natural to interpret that the former is what the Queen forgave. This could be regarded as an example of how semantics interfere with the syntactic restriction. On the other hand, it should be noted that this is not always the case. As we have seen above, in (5.16b), the A-O combination is strictly banned, even though the interpretation, "Sione killed Lisiate and Tevita killed Sione", is semantically possible in a context, for example, that Lisiate is Tevita's father and the enraged son took revenge on the murderer. Thus, semantics cannot be regarded as a crucial factor that determines coreference possibility in *pea*-constructions. How the

⁸ As mentioned above, in English O cannot occur as a gap either. This requires another language-specific rule that *pro* is not permitted in an object position.

⁹ This analysis does not necessarily support the claim that ERG is a structural case because as long as the feature [ERG] is identified it does not matter whether it is structural or inherent. However, consider the following example.

(i) *John is proud of Mary_i and Bill is tired (of) *pro*_i.

Genitive (GEN) is an inherent case (Chomsky 1986b). (i) is ruled out even though theoretically feature identification of *pro* is possible. This could mean that the inherently case-marked argument is incapable of licensing co-*pro*. However, it may be that (i) is ruled out because of a specific constraint on GEN. Thus, it is necessary to study other instances of coordinate constructions including an inherently case-marked NP such as Icelandic quirky subjects. However, we will leave this question to future research.

¹⁰ Those who reject (5.19) consider the sentence nonsensical.

semantic conditions affect the acceptability of A-O combination is an interesting issue to be pursued, for a similar effect is observed also with ‘*o*-coordination as we will see shortly. However, we will leave this question open to future research.

5.2.3 ‘*O*-coordination

Coordination by ‘*o* also respects the ERG-ABS distinction. However, the ergative restriction is different from that of *pea*-coordination. S/O-A combination is freely allowed, as illustrated in (5.20) below. In other words, coreference is possible between ABS-marked arguments and ERG-marked arguments.

- (5.20) a. Na’e ha’u ‘a Hina_i ‘o taa’i e_i ‘a Mele.
 Pst come ABS Hina and hit ABS Mele
 “Hina came and hit Mele.”
- b. Na’e ‘ave ‘e Sione_i ‘a Mele_j ki he maaketi ‘o fakatau mai e*_{i/j} ‘a e kumala.
 Pst take ERG Sione ABS Mele to def market and buy dir ABS def sweetpotato
 “Sione took Mele to the market and (*he/she) bought the sweet potato.”

The sentence (5.20a) is grammatical with the gap (A) being coreferential with S. In (5.20b), the gap (A) is coreferential with O rather than A. In fact, the A-A interpretation is not possible for (5.20b).

As far as ‘*o*-coordination is concerned, the restriction is that A cannot be coreferential with the gap: thus, A-S, A-O, and A-A are all illicit combinations.¹¹ See (5.21) below.

¹¹ Chung (1978) argues that the gap must be S/A, thus S-O is also an illegitimate combination. This contradicts with our observation, as my informants consider (i) grammatical.

(i) Na’e ha’u ‘a Hina ‘o fakalangilangi’i ‘e Mele.

Pst come ABS Hina and award ERG Mele

“Hina came and Mele praised (her).”

However, Chung’s examples contain a middle verb in the second clause instead of a canonical transitive verb. Considering that the object of a middle verb differs from the object of a transitive verb in various respects (e.g., it is marked in OBL, not ABS), her examples are not appropriate to illustrate the condition in question. It should be noted, however, one of Chung’s examples raises a problem to our argument.

- (5.21) a. Na'e teke'i 'e Mele 'a Hina 'o $e_{*i/j}$ too.
 Pst push ERG Mele ABS Hina and fall
 "Mele pushed Hina and (*Mele/Hina) fell."
- b. *Na'e fakafoki 'e Sione 'a e koloa 'o fakamolemole'i 'e he kuini e .
 Pst return ERG Sione ABS def treasure and forgive ERG def queen
 "Sione returned the treasure and the Queen forgave him."
- c. *Na'e tamate'i 'e Lisiate 'a Tevita 'o ma'u e 'a e koloa.
 Pst kill ERG Lisiate ABS Tevita and get ABS def treasure
 "Lisiate killed Tevita and got the treasure."

The sentence (5.21a) cannot mean, "Mele pushed Hina and Mele fell (because Hina was too big and strong)". The gap can be coreferential only with O. (5.21b) is ruled out because the A-O combination is prohibited. Besides, the O-O interpretation is semantically impossible. (5.21c), in which A-A is the only semantically natural interpretation, is also considered ungrammatical. The judgement indicates that the A-A combination is syntactically banned. To support this hypothesis, in a context where the O-O interpretation is tenable, the structure in question is accepted. See (5.22) below.

- (5.22) Na'e 'ave 'e Sione_i 'a Mele_j ki he palasi 'o fakamolemole'i 'e he kuini $e_{*i/j}$
 Pst take ERG Sione ABS Mele to def palace and forgive ERG def queen
 "Sione took Mele to the palace and the Queen forgave (*him/her)."

What our data show is that A cannot serve as the antecedent of the gap.¹²

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- (ii) *Na'a ku puna atu 'o ne ma'u.
 Pst 1.s. jump Dir.2 and 3.s. catch
 "I jumped up and he grabbed (me)"

Only one condition distinguishes (ii) from (i): namely, the former contains a pronominal arguments.

¹² As is the case of *pea*-coordination, semantics could affect the syntactic restriction on the antecedent-gap combination. Consider (i) below.

- (i) Na'e fakalavea'i 'e Sione 'a Mele 'o 'ave 'e Tevita e ki he 'api polisi.
 Pst injure ERG Sione ABS Mele and take ERG Tevita to def house police
 "Sione injured Mele and Tevita took him/her to the police station."

Semantically, the A-O interpretation makes more sense than the O-O. For this reason, some informants exceptionally allow the A-O combination. Nevertheless, some others, who are more syntactically inclined, either judge (i) as nonsensical or choose the O-O interpretation despite the semantic oddity.

This anti-A orientation can be explained if we assume that the gap in 'o-clause is a null anaphor, which must be bound by an element outside the clause. In addition, our data suggest that binding of the null anaphor must respect relativised minimality in the sense of Rizzi (1990): it must be bound by the closest potential binder, which is in effect the argument in [Spec, Agr]. This is why A in the higher Agr fails to bind the null anaphor.^{13,14}

5.2.4 *Mo*-coordination

Finally, let us consider *mo*-coordination. Contrary to the other two cases mentioned above, *mo*-coordination does not distinguish ERG from ABS. Rather, it shows an accusative pattern: the gap must be S/A *and* coreferential with S/A. In other words, *mo* cannot conjoin clauses with different subjects. Hence, (5.23a) in which S and O are coreferential is ruled out because the second clause contains an independent subject. In contrast, (5.23b) demonstrates that the S-A combination is allowed.

¹³ The condition of relativised minimality applies before the application of A-bar movement rules. For example, scrambling does not affect the condition. As illustrated by (i) below, coreference is impossible even if the first clause is a VOS construction.

(i) Na'e teke'i 'a Hina_i 'e Mele_j 'o $e_{i/*j}$ too.
 Pst push ABS Hina ERG mele and fall
 "Mele pushed Hina and (*Mele/Hina) fell."

¹⁴ As William O'Grady (p.c.) points out, it is not clear why relativised minimality is not respected in accusative languages. For example, in English the empty element in a resultative clause cannot have the closest NP as its antecedent. See (i) below.

(i) a. The princess_i kissed the frog_j and $e_{i/j*}$ turned into a prince.
 b. The princess_i kissed the frog_j [$e_{i/j*}$ to turn into a prince].

However, note that in (ia), the empty element is a *co-pro*. As we have argued above, *co-pro* must have the same case feature as the antecedent in order to be licensed. Thus, in (ia), the antecedent must be a NOM-marked argument. The closest NP bears ACC, thus cannot be identified with the empty element. In (ib), the empty element is PRO since the clause is infinitival. Since these elements are not a null anaphor equivalent to that in 'o-constructions, relativised minimality is irrelevant.

(5.23) a. *Na'e tangi 'a Hina_i mo taa'i 'e Mele *e*_i.
 Pst cry ABS Hina and hit ERG Mele
 "Hina cried and Mele hit (her)."

b. Na'e tangi 'a Hina_i mo taa'i *e*_i 'a Mele.
 Pst cry ABS Hina and hit ABS Mele
 "Hina cried and (she) hit Mele."

Similarly, sentences in (5.24) illustrate that the gap (whether S or A) must be coreferential with the subject (either S or A) of the first clause. The O-S/A combination is never allowed.

(5.24) a. Na'e taa'i 'e Hina_i 'a Mele_j mo kata *e*_{i/*j}.
 Pst hit ERG Hina ABS Mele and laugh
 "Hina hit Mele and (Hina/*Mele) laughed."

b. Na'e taa'i 'e Sione_i 'a Pila_j mo 'akahi *e*_{i/*j} 'a Taniela.
 Pst hit ERG Sione ABS Pila and kick ABS Taniela
 "Sione hit Pila and (Sione/*Pila) kicked Taniela."

Note, however, that the restriction is not simply that the combinations including O are prohibited. (5.25) is ruled out not because the O-O combination is illegal but because the two clauses have different subjects.

(5.25) *Na'e 'ave 'e Sione 'a Mele ki he palasi mo fakamolemole'i 'e he kuini *e*.
 Pst take ERG Sione ABS Mele to def Palace and forgive ERG def queen
 "Sione took Mele to the palace and the Queen forgave (*him/*her)."

In short, *mo* requires that the conjoined clauses must share the subject. Hence, the combinations, S/A-O and O-S/A are impossible. Consequently, *mo*-coordination shows an accusative pattern. In the following subsection, we will consider why this accusative pattern arises.

5.2.5 Split

In summary, coordination involving *pea* and 'o shows an ergative pattern, while *mo*-coordination shows an accusative pattern. S/O cannot be paired with A in

pea-constructions: A-S/O and S/O-A combinations are prohibited. As for ‘*o*’, only S/O may occur as the antecedent of the gap: A-S/O as well as A-A combinations are ruled out. In contrast, coordination by *mo* demonstrates an accusative pattern. O cannot be part of coordination: neither as the gap nor the antecedent could O occur with *mo*. The accusative pattern exhibited by *mo*-coordination is regarded as a syntactic split.¹⁵

It should be noted that *mo*-coordination shows yet another idiosyncratic property. As mentioned above (§5.2.1), all of the three conjunctions under the current investigation may be followed by a pronoun instead of a gap. If the shared argument is overtly realised as a pronoun, the ergative constraints are not effective. A-O/S and O/S-A combinations are allowed with *pea*, as illustrated in (5.26) below. Similarly, (5.27) shows that coreference between A and the pronoun is permissible with ‘*o*’.

(5.26) a. Na’e tangi ‘a Hina_i pea ne_i taa’i ‘a Mele.
Pst cry ABS Hina and 3.s. hit ABS Mele
“Hina cried and she hit Mele.”

b. Na’e taa’i ‘e Hina_i ‘a Mele_j pea ne_{i/j} tangi.¹⁶
Pst hit ERG Hina ABS Mele and 3.s. cry
“Hina hit Mele and Mele/Hina cried.”

(5.27) a. Na’e tamate’i ‘e Lisiate_i ‘a Sione ‘o ne_i ma’u ‘a e koloa.
Pst kill ERG Lisiate ABS Sione and 3.s. get ABS def treasure
“Lisiate killed Sione and got the treasure.”

b. Na’e fakafoki ‘e Sione_i ‘a e koloa ‘o fakamolemole’i ia_i ‘e he kuini.
Pst return ERG Sione ABS def treasure and forgive 3.s. ERG def queen
“Sione returned the treasure and the Queen forgave him.”

While coreference between O and the gap is prohibited, coreference is legitimate once the shared argument is pronominalised. This effect can be explained as follows. First,

¹⁵ As far as I know, Dixon (1979) is the first to note this phenomenon of syntactic split in Tongan.

¹⁶ With regard to (5.26b), where both A-S and O-S combinations are possible, some speakers prefer the O-S to the A-S interpretation.

with regard to *pea*, the sentence is ungrammatical unless the content of *pro* is identified. As we argued above, *pro* in *pea*-construction is identified by being matched with an argument in the corresponding structural case position in the first clause. On the other hand, an overt pronoun need not be licensed in a similar fashion, as its features are indicated in its form. Thus, it may refer to any argument that has the same feature specification. In reference to *‘o*, we have argued that the coreference possibility is constrained because the gap, being an anaphor, must be bound by the closest potential binder outside the clause. These conditions do not hold of pronouns.

In contrast, the same strategy does not help improve grammaticality of *mo*-coordination: O-S/A as well as S/A-O combinations are banned regardless. See (5.28) below.

- (5.28) a. Na’e taa’i ‘e Sione_i ‘a Pila_j mo ne_{i/*j} ‘akahi ‘a Taniela.
 Pst hit ERG Sione ABS Pila and kick ABS Taniela
 “Sione_i hit Pila_j and he_{i/*j} kicked Taniela.”
- b. *Na’e tangi ‘a Hina_i mo taa’i ia_i ‘e Mele.
 Pst cry ABS Hina and hit 3.s. ERG Mele
 “Hina cried and Mele hit her.”
- c. *Na’e fakafoki ‘e Sione_i ‘a e koloa mo fakamolemole’i ia_i ‘e he kuini.
 Pst return ERG Sione ABS def treasure and forgive 3.s. ERG def queen
 “Sione returned the treasure and the Queen forgave him.”

The fact that pronominalisation does not affect grammaticality of *mo*-constructions confirms our observation that the two clauses connected by *mo* must have coreferential subjects. Whether the argument in the second clause is overt or covert is irrelevant to this same-subject condition. We may formulate this condition in terms of theta-identification in the sense of Higginbotham (1985): *mo* requires that theta-identification obligatorily apply to the arguments in [Spec, VP] of the two clauses

that it conjoins. This ensures that the two arguments share the same theta-role. This in turn predicts that unaccusatives cannot occur in *mo*-constructions.¹⁷ In fact, this prediction is borne out. See (5.29) below.

- (5.29) a. *‘Oku puke ‘a Mele mo tapu *pro* ke mou huu ki hono loki.
 Prs sick ABS Mele and forbidden that 3.pl. enter to poss.3.s. room
 “Mele is sick and you cannot enter her room.”
 Lit. “Mele is sick and it is forbidden that you enter her room.”
- b. *Na’e ‘ikai *pro* ke ha’u ‘a Sione mo ‘ita lahi ‘a Mele.
 Pst not ke come ABS Sione and angry much ABS Mele
 “Sione didn’t come and Mary was angry.”
 Lit. “It wasn’t that Sione come and Mele was angry.”

An interesting analogy may be the contrast between the “resultative” and “conjunctive” compounds in Chinese. In Chinese, resultative as well as conjunctive compounds are formed fairly productively. These compounds do not involve a linking word such as *mo* and *pea* in Tongan. Li (1993) proposes that such a compound is formed by means of theta-identification. For example, see (5.30) below.

(5.30) Chinese resultative (Li 1993: 480)

Táotao zhuī-lèi-le Yōuyou le.
 Taotao chase-tired-ASP Youou LE
 “Taotao chased Youyou and as a result Taotao/Youyou got tired.”

Li (1993) argues that theta-identification in the process of forming such a compound is governed by a rule, which can be summarised as follows: the hierarchy that the theta-roles concerned hold with each other in the head must be maintained in the resulting compound. To be specific, the external argument of the head must remain (part of) the external argument of the compound. The curious fact that sentences like (5.30) are ambiguous can be explained in terms of this condition. The Chinese resultative

¹⁷ Thanks to William O’Grady (p.c.) for bringing this point to my attention.

compounds are assumed to be head-initial. Therefore, in (5.30) above, for example, the external theta-role of *zhuī* must remain (part of) the external theta-role of the compound *zhuī-lèi*. Consequently, assuming the following theta-grids, *zhuī* <1,2> and *lèi* <a>, possible patterns of theta grid of the compound are <1-a, 2> and <1, 2-a>, giving rise to the ambiguity.¹⁸ The interpretation with the theta grid <2-a, 1> (“Youyou chased Taotao and as a result Youyou got tired”) is impossible. This analysis of the Chinese resultatives has some implication regarding the ‘o-construction in Tongan. We will return to this point shortly.

In contrast with the resultatives, theta-identification is compulsory in forming a conjunctive compound in Chinese. Moreover, an external theta-role must be theta-identified with an external theta-role. See (5.31) below.

(5.31) Chinese conjunctive (Li 1993:489)

- a. Táotao hé Yōuyou jīngcháng lái-wǎng.
Taotao and Youyou often come-go
“Taotao and Youyou often visit each other”
- b. * Táotao jīngcháng lái-wǎng Yōuyou.
Taotao often come-go Youyou
Intended meaning: same as (5.31a)
Intended theta-grid: <1, a>

In (5.31a), the compound has a theta-grid <1-a> and this theta-role is assigned to *Táotao hé Yōuyou*. In (5.31b), the intended theta-grid is <1, a>, the external theta-role of *lái* being assigned to *Táotao* and that of *wǎng* to *Yōuyou*. Li (1993) argues that this

¹⁸ In contrast, the Japanese resultative compounds do not allow this type of ambiguity. See (i) below.

(i) John-ga Mary-o oikake-tsukare-ta.

John-NOM Mary-ACC chase-tired-Pst

“John chased Mary and as a result John/*Mary got tired”

This is because the Japanese resultative compounds are head-final. Theta-identification is possible as long as the external theta-role of *tsukare* remains the (part of) external theta-role of the compound. Thus,

theta-grid is illicit because the conjunctive compounds are formed by two heads and therefore the external theta-roles of the two verbs both must remain part of the external theta-role of the compound.¹⁹ The condition on theta-roles plays a crucial role in the same manner in *mo*-construction in Tongan. Theta-identification is obligatory, and the external theta-role must remain the (part of) external theta-role throughout.²⁰

5.2.6 Further speculation on ‘*o*

As mentioned above, two verbs connected by ‘*o* are regarded as representing parts of one continuous event. The relation between the two verbs is sometimes that of cause-and-effect, and sometimes that of means-and-purpose. This property of ‘*o*-construction leads one to wonder whether there is any syntactic resemblance between the Tongan ‘*o*-construction and the Chinese resultative. Specifically, one may speculate that the two verbs conjoined by ‘*o* form a compound by means of theta-identification. However, this hypothesis is not feasible because the two verbs share only one argument. Specifically, if two transitive verbs with different objects, <1, 2> and <a, b>, are combined, the compound will theoretically have three arguments <1-a, 2, b>, with the theta-roles <2> and being assigned not to the compound, but to each component of the compound. Obviously, this raises a problem. Besides, when comparing the legitimate and illegal patterns, no consistent condition can be obtained: the external theta role of the first verb sometimes cannot remain the (part of) external theta-role of the compound, sometimes is allowed to do so. Thus, ‘*o*-construction in

only <1-a, 2>, but not <1, 2-a> is allowed.

¹⁹ More interestingly, two verbs that form a conjunctive compound must share the same number of theta-roles. That is, a transitive verb cannot be connected with an intransitive verb (Li 1993).

²⁰ It is not entirely feasible to assume that verbs conjoined by *mo* form a compound. However, the fact that *mo* implies the simultaneity seems to suggest that two elements conjoined by *mo* are both heads.

Tongan cannot be regarded as analogous to Chinese resultatives.

Nevertheless, there is a particular instance of ‘*o*-construction, which seems to conform to the definition of “compound”. Two intransitive verbs, *lava* (“to be able, capable”) and *hanga* (“to proceed”), show a peculiar behaviour when used in an ‘*o*-construction; the subject of *lava/hanga* appears in ABS if the second verb is intransitive, but it appears in ERG if the second verb is transitive. See (5.32) below.

- (5.32) a. Na’e lava ‘a Sione ‘o ha’u.
 Pst able ABS Sione and come
 “Sione was able to come”
- b. Na’e lava ‘e/*‘a Sione ‘o langa ‘a e fale.
 Pst able ERG/ABS Sione and build ABS def house
 “Sione was able to build the house”

Considering that *lava* is an intransitive verb, it is exceptional that the subject *Sione* is preceded by the ERG case marker in (5.32b). Presumably, this ERG case is assigned by the second verb. Here, it appears that *lava* and *langa* connected by ‘*o* form a kind of compound, *lava-‘o-langa*, with the theta-grid <1-a, b>.²¹ In fact, there is evidence that *lava/hanga ‘o V* is more like an idiomatic expression that is regarded as one chunk. As illustrated in (5.33) below, the subject (shared argument) may appear after the second verb. The sentence forms the VSO order if we consider *lava-‘o-V* as a verbal compound.

²¹ What is worth noting is that when theta-identification applies to A and S, the case of A prevails over that of S and as a result the argument to which this theta-role is assigned will appear in ERG despite the fact that it appears in the S-position.

- (5.33) a. Na'e lava 'o ha'u 'a Sione.
 Pst able and come ABS Sione
 "Sione was able to come"
- b. Na'e lava 'o langa 'a e fale 'e Sione.
 Pst able and build ABS def house ERG Sione
 "Sione was able to build the house"

Furthermore, with *lava/hanga*, the S-O combination is not allowed.

- (5.34) *Na'e lava 'a Sione 'o fakamolemole'i 'e he kuini.
 Pst able ABS Sione and forgive ERG def queen
 "Sione could (managed to) be forgiven by the queen"

This restriction on coreference seems to support Li (1993)'s generalisation. Assuming that *lava* is the head of the compound, the external theta-role must remain the (part of) external theta-role of the compound, whereby <1-a, b>, but not <a, 1-b> is allowed.

The aforementioned facts seem to suggest that at least where *lava* and *hanga* are concerned, 'o forms a compound with two verbs, rather than introducing a simple coordinate structure. In this sense, this particular occurrence of 'o can be regarded as a serial verb construction.²² An illustrative example of serial verb construction is found in Sranan. Sranan has a serial verb construction as well as a simple coordinate structure, which are superficially of identical form. The structure contains only one tense/aspect specification for the whole chain of verbs, and verbs have a single structural subject and share logical arguments. Compare (5.35a), an example of the serial verb construction, with (5.35b), which is a simple coordination structure.

²² It should be noted that serial verb constructions are generally assumed to consist of two or more verbs *without* overt makers of coordination or subordination (Sebba 1987). In this respect, 'o-construction fails to qualify as a serial verb construction.

(5.35) Sranan (Sebba 1987: 110, 89)

- a. Kofi sutu Amba kiri Kwaku.
Kofi shoot Amba kill Kwaku
“Kofi shot Amba and killed Kwaku”
- b. Kofi teki a nefi koti a brede.
Kofi take the knife cut the bread
“Kofi cut the bread with the knife”

The difference between the two syntactically unrelated constructions can be demonstrated by the extraction test. Extraction from a coordinate structure is banned due to the coordinate structure constraint (Ross 1967), while it is permissible in a serial verb construction. The contrast is illustrated by (5.36) and (5.37) below.

(5.36) Sranan coordination (Sebba 1987: 110)

- a. *Suwa_i Kofi sutu Amba kiri t_i?
who Kofi shoot Amba kill
“Who did Kofi shoot Amba and kill?”
- b. *Suwa_i Kofi sutu t_i kiri Kwaku?
who Kofi shoot kill Kwaku
“Who did Kofi shoot and kill Kwaku?”

(5.37) Sranan serial verb construction (Sebba 1987: 101)

- a. San_i Kofi teki a nefi koti t_i?
what Kofi take the knife cut
“What did Kofi cut with the knife?”
- b. San_i Kofi teki t_i koti a brede?
what Kofi take cut the bread
“What did Kofi cut the bread with?”

Application of the extraction test reveals an intriguing fact about the Tongan ‘o-construction. As illustrated in (5.38) below, extraction is permissible if the first verb

is either *lava* or *hanga*, but prohibited otherwise.^{23, 24}

- (5.38) a. Ko e haa_i ‘oku lava ‘e Sione ‘o omi *t*_i?
 Pred def what Prs able ERG Sione and bring
 “What can Sione bring?”
- b. Ko e haa_i na’e hanga ‘e Sione ‘o hua’i *t*_i?
 Pred def what Pst proceed ERG Sione and throw out
 “What did Sione proceed and throw out?”
- c. *Ko hai_i na’e ha’u ‘a Hina ‘o taa’i *t*_i?
 Pred who Pst come ABS Hina and hit
 “Who did Hina come and hit?”
- d. *Ko hai_i na’e ‘ave ‘e Sione ‘a Mele ‘o fakataumai *t*_i?
 Pred what Pst take ERG Sione ABS Mele and buy
 “What did John take Mele and (she) buy?”

Based on this observation, we may conclude that ‘*o*-construction in general is an instance of coordination. However, there is a particular instance in which ‘*o* seems to form a serial verb, namely, the one involving *lava* and *hanga*. It is possible to take the peculiar properties of *lava/hanga* as an indication that reanalysis of ‘*o*-construction as serial verb construction is in process. However, the question remains open to future research.

²³ To be precise, it is extraction from the second clause that is strictly disallowed, while extraction from the first clause is acceptable.

- (i) a. ?Ko hai_i na’e ha’u *t*_i ‘o taa’i ‘a Mele?
 Pred who Pst come and hit ABS Mele
 “Who came and hit Mele?”
- b. ?Ko hai_i na’e ‘ave ‘e Sione *t*_i ‘o fakataumai ‘a e talo?
 Pred who Pst take ERG Sione and buy ABS def taro
 “Who did Sione take and (she) buy taro?”

The same results are obtained with *pea*-construction, which indicates that both ‘*o* and *pea* involve coordination.

²⁴ Chung (1978: 119) argues, however, that extraction from ‘*o*-clause is freely allowed and that therefore, it is not coordination, though our data (5.38c-d) do not conform to her claim. Chung proposes that ‘*o* is a complementiser that introduces an adverbial clause, containing PRO. Her assumption that the gap in ‘*o*-clause is PRO is problematic in that PRO generally occurs as S/A but not O (cf. Chapter 10). As our data show, PRO in ‘*o*-clauses may freely occur as O.

5.3 ERG as a syntactic notion

The preceding discussion demonstrates that ERG plays a significant role in the syntax of Tongan. We have studied three instances in which syntactic ergativity is manifested. First, with regard to relativisation, the position vacated by *wh*-movement requires a resumptive pronoun if the moved argument is A (i.e., ERG-marked), but not if it is A/O (i.e., ABS-marked). Secondly, coordination by *pea* shows an ergative pattern: the gap in the A-function cannot be coreferential with S/O of the first clause, nor can the gap in the S/O-function have A as its antecedent. This is a pattern commonly found among the so-called syntactically ergative languages such as Dyirbal. Thirdly, coordination by 'o shows a slightly different ergative pattern: only S/O can be coreferential with the gap, whether S, A, or O. The first two instances are particularly significant in that they respect the structural case positions. The resumptive pronoun rule applies exclusively to [Spec, Agrs]. *Pea* matches two arguments with the same case feature, either [ABS] or [ERG]. An ERG-marked argument is never matched with an ABS-marked *co-pro*, or vice versa. In other words, these phenomena suggest that ERG as well as ABS are syntactic notions. With regard to 'o-coordination, we propose that the empty element in 'o-clauses is a null anaphor, which must be bound by the closest potential binder, respecting relativised minimality (Rizzi 1990).

We have also observed that there is an exception to this otherwise consistent tendency towards ergativity. Namely, coordination involving *mo* shows an accusative pattern, requiring S, either as a gap or the antecedent, to be coreferential with A rather than O. We argued that this deviation is due to the constraint idiosyncratic of *mo*: *mo* requires

that theta-identification obligatorily applies to the arguments in [Spec, VP]. This condition ensures that the two verbs conjoined by *mo* have a coreferential subject, S or A, and thereby an accusative pattern arises. In other words, an accusative pattern that *mo*-coordination demonstrates is caused by an independent constraint that applies at the base structure.

To conclude, it has been shown that empirical evidence supports our assumption that ERG is assigned in [Spec, Agrs]. Syntactic operations such as relativisation and coordination are governed by the rules that respect the two distinct structural case positions, [Spec, Agrs] and [Spec, Agro]. Thus, we conclude that ergativity is not merely a morphological phenomenon, but is a syntactic notion: ERG is a structural case that is checked in a Spec-head configuration.