ERGATIVITY IN TONGAN

by

Yuko Otsuka
Linacre College

A thesis submitted in partial fulfilment of the requirements for the degree of

Doctor of Philosophy

Committee for Comparative Philology and General Linguistics
University of Oxford

Trinity Term 2000

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THESIS

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Abstract

In an ergative case system, the subject of an intransitive verb (S) and the object of a transitive verb (O) receive the same case, absolutive (ABS), while the subject of a transitive verb (A) receives a special case, ergative (ERG). Given the Principles and Parameters approach (Chomsky and Lasnik 1993), ergative case marking should be derived from a UG parameter. The objective of this thesis is to postulate such a parameter that can account for various case-related phenomena.

In Tongan, an ergative pattern exists also at the syntactic level: S and O are treated as equivalent in some syntactic operations such as relativisation and coordination. I propose that this arises because ERG is a structural case associated with a structural position [Spec, Agrs]. Following Chomsky (1993), I assume that a structural case is assigned by feature checking in a Spec-head configuration. I also assume that only one Agr can be active in intransitive constructions: Agrs in accusative languages and Agro in ergative languages (Bobaljik 1993). However, the current approach differs from the standard account in that case features [ERG/NOM] and [ABS/ACC] are considered to be intrinsic to Agr(s), and not T and V. In effect, each case is associated with a unique structural position: ERG with [Spec, Agrs], ABS with [Spec, Agro] and Null with [Spec, TP]. The Tongan data show that syntactic ergativity arises because the relevant syntactic rules are sensitive to these structural positions.

There are also some phenomena in which S and A are treated as equivalent. I argue that such an accusative pattern arises in ergative languages when a syntactic rule is sensitive to theta-role. The accusative case system demonstrates relative stability because the contrast between the internal argument (O) and the external arguments (S/A) happens to show the same pattern. This hypothesis is also supported by the Tongan data.

Acknowledgement

First and foremost, my profound gratitude shall go to my supervisor, James Higginbotham, for his invaluable advice and encouragement. He taught me how to think critically and helped put my incoherent ideas into a thesis. I am also deeply grateful to Gillian Ramchand for being an excellent teacher.

I owe special thanks to many other people. First, to Katrina Hayward and William O'Grady for reading the early draft and making many helpful suggestions. I am indebted to Charles Randriamasimanana, who answered my questions regarding Malagasy with incredible efficiency and patience. Special thanks also go to Anoop Mahajan, Albert Schütz, Michael Forman and Lawrence Reid for sharing their expertise. Hisashi Morita is thanked for his comments.

Acknowledgement goes out to the following individuals, who enthusiastically helped me with Tongan: 'Aisea Hingano, Ingrit Hoeft, Popua Mafi, Mailei, Manu Puloka, Siosifa Hopo Teumohenga, Ilifileti Tovo, Tupou Vi'inga, Fatima, Winston Halapua, 'Ana and especially Lakai Koloamatangi, Lile Fifita, and Saluni Mafi for many discussions. In particular, I am grateful to 'Alisi Mataele Fineasi for being a wonderful friend. Special thanks are also due to Naoko Matahira Afeaki, Mana Latu, and Don and Norie Blanks, for facilitating my field research. I would like to thank Vehitau, Melenaite, Viliami, Tali and Lepa Hafoka for providing a loving home for me in Vava'u.

My research was partly funded by the Matsushita International Foundation (grant 99-351). I am also grateful to the Linacre House Trust and the University of Oxford for helping me continue my research through the time of hardships.

Finally, my deepest personal thanks to my parents, Yoko and Takeshi Otsuka, and sisters, Setsuko and Hisako, for their constant love and support. I am very thankful to my friends: especially, Kritsadarat Wattanasuwan and Oduor Oloo for their inspirational friendship and emotional support.

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Abbreviations

ABS	absolutive
ACC	accusative
Agt	agent
APASS	antipassive
ASP	aspectual
avi	adjectival intransitive verb
d.	dual
DAT	dative
def	definite
DIR	direct (case)
Dir	directional
excl.	exclusive
ERG	ergative
f.	feminine
Fut	future
GEN	genitive
incl.	inclusive
IND	indicative
Lit.	literal meaning
m.	masculine
n.	neutral
Neg	negative
NFut	non-future
NOM	nominative
NPst	non-past
OBL	oblique
OP	operator
pass	passive
Perf	perfect
pl.	plural
poss.	possessive
Pot	potential
Pred	predicate
Pret	preterite
Prs	present
prt	particle
Pst	past
Rel	relative
s.	singular
subj.	subjunctive
SUBJ	subject
Tns	tense
trans	transitive
vt	transitive verb
vi	intransitive verb
1.	first person
2.	second person
3.	third person

Chapter 1
Introduction

1.1 Preliminaries

The subject of this thesis is the Tongan language. Tongan is a Polynesian language spoken by approximately 100,000 people living in the Tongan archipelago in the South Pacific. One of the most characteristic features of the Tongan language is its ergative case marking: the subject of an intransitive verb appears in the same case (i.e., absolutive) as the one assigned to the object of a transitive verb. This type of ergative case marking is found across the Tongic and Samoic-Outlier languages in the Polynesian group. The rest of the Polynesian shows an accusative case marking. The coexistence of the two types of case marking in the Polynesian languages is often ascribed to a diachronic change: specifically, reanalysis of the Proto-Polynesian passive construction as ergative that took place some time ago in the Tongic and Samoic-Outlier subgroups (Hohepa 1969, Chung 1977, 1978 among others).

Ergative case marking, however, is not a phenomenon idiosyncratic to these Polynesian languages. It is found across a wide range of languages including the Australian, Eskimo, Mayan, Indo-Aryan, and Caucasian. In short, ergative case marking is not a language-specific phenomenon. On the contrary, it should be considered a part of Universal Grammar (UG). A historical approach such as the passive-to-ergative reanalysis in Polynesian seems to explain how a particular instance

of ergative case marking arises in a specific language. However, if we were to generalise this reanalysis, a question arises as to why only a limited number of languages have undergone this reanalysis. Theoretically, any language could go through similar reanalysis. However, languages with ergative case marking are outnumbered by those with accusative case marking such as English. Since it is arguably a rare process, one needs to explain why such reanalysis had to take place in a certain language. What motivates this reanalysis?

In the spirit of the Principles and Parameters approach (Chomsky and Lasnik 1993), it would be better if we could account for the difference between ergative languages and accusative languages in terms of a parametric choice. Since both case systems exist across a wide range of languages, it is natural to assume that a language could have either ergative or accusative case marking. The choice is utterly arbitrary just like a language may select VSO as opposed to SVO as a linear word order. The question is whether it is possible to postulate a single parameter (or possibly combined with some other parameters) that derives the ergative case marking on the one hand and the accusative case marking on the other. Several attempts have been made to postulate such a parameter (Bobaljik 1993, Bittner and Hale 1996a,b, Murasugi 1992 among others). An important observation is that a language may choose which argument to mark in a transitive construction. If a language L1 chooses to mark the direct object, L1 will have an accusative case marking. In contrast, if a language L2 chooses to mark the transitive subject, then, L2 will have an ergative case marking. Thus, the parameter that determines case-marking types is likely to concern the choice of marked case (or alternatively, the unmarked case) in a given language. Informally, it

could be formulated either as "assign the marked case to a) the direct object or b) the transitive subject" or as "the intransitive subject must receive the same case as a) the transitive subject or b) the direct object".

Ergative case marking is interrelated to various syntactic phenomena as well. In Tongan, ergativity is manifested not only in morphology but also in syntax. ERG-marked arguments are treated differently from ABS-marked arguments in some syntactic operations such as coordination and relativisation. On the other hand, it should be noted that the ergative pattern is not consistently observed. For example, pronominal arguments apparently show an accusative pattern: subject pronouns and object pronouns have different forms. Distribution of PRO also shows an accusative pattern: PRO can occur as a subject but not as a direct object. Such inconsistency also needs to be explained.

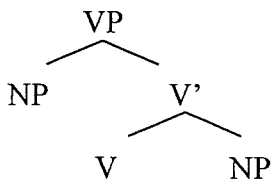
1.2 Theoretical background

The current study of the Tongan syntax is based on the Principles and Parameters approach (Chomsky and Lasnik 1993). It is assumed that UG consists of a set of universal principles and the associated parameters. Some of the essential principles include the Extended Projection Principle (EPP), the Case Filter, and the Theta Criterion. The EPP requires that a sentence have a subject; the Case Filter and the Theta Criterion require that an argument must bear a (abstract) case and a theta-role (Chomsky 1981). Any derivation that fails to meet these requirements yields an

ungrammatical sequence.

With regard to the phrase structure, we assume the X-bar theory (Chomsky 1981). Following Pollock (1989) and Chomsky (1991, 1993), we assume that Inflection phrase consists of T(ense) and Agr(eement) phrases. We also take the VP-internal subject hypothesis (Koopman and Sportiche 1991 and others). Specifically, we assume that the subject is generated in [Spec, VP]. In a transitive construction, the direct object is generated as a sister of V. In short, we assume the phrase structure (1.1) below.

(1.1)



Another essential notion is that of the Predication theory (Williams 1980, 1981). We assume that a transitive verb bears two theta-roles, an external theta-role and an internal theta-role. The latter is assigned to a NP in [V, NP]. Hence, this argument is called internal argument. The external theta-role is assigned to a NP in [Spec, VP] by V' through the predication rule. The head V and the internal argument form a predicate and take a NP to enter a subject-predicate relation (also see Marantz 1981). Thus, the argument generated in [Spec, VP] is referred to as an external argument. Note that when we use the terms external theta-role and internal theta-role, we do not refer to a specific semantic role such as Agent, Patient and Goal. External/internal theta-role is a more general term referring to a theta-role assigned to a particular structural position. An intransitive verb has only one theta-role, which can be either an external theta-role or an internal theta-role.

In addition to the above, we assume the feature-checking theory proposed by Chomsky (1991, 1993). In the feature-checking theory, it is assumed that a syntactic object may move only if it is necessary in order to check its feature. Syntactic objects are assumed to have a set of features. For example, a NP bears a case feature and phi-features. The latter includes person, number and gender. In principle, features are checked in Agr phrases. It is also assumed that these features must be checked off for a derivation to converge. The process of feature checking is constrained by the economy principle: redundant movement is not permitted. The economy principle is formulated in the following constraints: a) Shortest Move, b) Procrastinate, and c) Greed. Due to the Shortest Move condition, a syntactic object α cannot move from one position to another, skipping a position that is closer to α and is available for feature checking. Procrastinate forbids movement in the overt syntax if the relevant movement can take place at a later stage, i.e., LF. Greed requires that a syntactic object α is allowed to move only if the relevant movement is necessary for the checking of its own feature. In other words, α cannot move to a certain position so that another element β in that position would be able to check off its case feature. These economy principles derive from a fundamental assumption that computation should be kept minimal. In this sense, the current study takes a minimalist approach. However, it should be noted that Chomsky (1995) proposes a drastic modification of the minimalist program sketched above. As we will see shortly (cf. Chapter 4), the modification proposed by Chomsky (1995) brings about some unwelcome consequences with regard to ergative case marking. Therefore, the current study does not support the modified minimalist program. Thus, when we refer to the standard

theory, it means a theory in which all of the above principles and constraints are assumed.

1.3 Objectives

Assuming that ergative case marking is part of UG, there are two questions to be addressed.

A. Why does UG have two types of case marking and how are they derived?

B. Why is the accusative pattern relatively more stable than the ergative pattern?

The latter question concerns the phenomena of split and the distribution of PRO. With regard to these phenomena, arguments are cross-linguistically distinguished on an accusative basis: subjects on the one hand and direct objects on the other. The current study ultimately aims to answer these questions. Consequently, objectives of the current study are as follows:

A. To provide a parametric account of ergative case marking;

B. To show that our alternative analysis accounts for various syntactic phenomena in which ergativity is manifested, in particular those found in Tongan;

C. To account for the relative stability of accusative pattern.

With regard to C, we will attempt to show why such an accusative pattern arises in an ergative language while languages with accusative case marking never exhibit an ergative pattern either in morphology or at the level of syntax.

1.4 Data

The Tongan data studied in this thesis were collected during my own field research undertaken on two separate occasions, one from November 1998 to January 1999 and the other in April 2000. The data were collected through individual interviews conducted in Tongan. An intermediary language (e.g., English) was not used in order to avoid interference from a second language in their judgement. There are seventeen informants, seven males and ten females, ranging between eighteen and late sixties in age. Nine out of seventeen live in the capital Nuku'alofa. The rest are residents of Vava'u island.

1.5 Organisation of the thesis

The following six issues in the Tongan syntax will be discussed in this thesis: syntactic ergativity, morphological split, raising, passive, antipassive, and control. In Chapters 2-4, we will present some more background notions on which our discussions are based. In Chapter 2, we will consider various phenomena in which ergativity is manifested both in terms of morphology and syntax. It will be shown that there is always an instance or another that demonstrates an accusative pattern, which is conventionally referred to as *split*. Basic characteristics of the Tongan syntax will be outlined in Chapter 3. Some topics of particular importance are *pro*-drop, pronouns, and *ke*-clauses. Tongan permits *pro* only in case it is third person singular in its feature

specification.[1] As for the overt pronouns, there are two sets of pronouns: one is used exclusively for subjects and the other, mainly for (direct) objects. This apparent accusative pattern could be regarded as an instance of split. *Ke*-clauses are used as complements of certain verbs. On the one hand, they exhibit properties of infinitives: a) they do not contain an overt tense marker and b) PRO may occur in the subject position. On the other hand, *ke*-clauses demonstrate a property characteristic of finite clauses: arguments are able to receive case inside *ke*-clauses. These contradictory properties of *ke*-clauses raise problems particularly with regard to the distribution of PRO in Tongan. We will propose that *ke*-clauses are on a par with what Raposo (1987) calls inflected infinitives in European Portuguese (see Chapter 7 for details). We will put forth a hypothesis in Chapter 4 with these problems in mind. We will introduce fundamental assumptions of the standard case theory and argue why it fails to account for ergative case marking. Various approaches hitherto proposed in the literature are also reviewed. These include the unaccusative approach (Levin 1983, Laka 1993), the inherent case approach (Woolford 1996, Johns 1992), the dependent case approach (Mahajan 1997, to appear), the KP approach (Bittner and Hale 1996a,b) and the active Agr approach (Bobaljik 1993). Our analysis supports the active Agr approach, assuming that only one Agr can be active in intransitive constructions and the choice of the active Agr is parameterised. It should be noted also that ergative case is considered a structural case. Crucially, our approach differs from the standard analysis in that case features, e.g., [NOM/ERG] and [ACC/ABS] are considered to be intrinsic to Agr(s), and not T and V. It is also assumed that Null case feature is intrinsic to [–tense] T and that the feature [Null] is checked in [Spec, TP]. These assumptions are

[1] There is also a null expletive *pro*. See Chapter 3 for discussion.

crucial when we consider distribution of PRO in ergative languages. We will also discuss why our analysis is preferred to the revised minimalist program proposed by Chomsky (1995).

Chapters 5-10 will cover each of the aforementioned topics. First, in Chapter 5, we will show that syntactic rules such as relativisation and coordination in Tongan consistently distinguish ERG-marked arguments from ABS-marked arguments. This observation leads us to conclude that ERG is associated with a structural position [Spec, Agrs], for such syntactic rules are in general sensitive to structural positions. Put differently, our hypothesis that ERG is a structural case is supported by empirical evidence. Thus, the following discussions are crucially based on this assumption.

Chapter 6 contains a study on the morphological split found in Tongan: namely, an apparent accusative pattern demonstrated by pronouns. We will argue that this accusative pattern arises due to two factors: a) Tongan has a set of clitic pronouns and a set of independent pronouns and b) clitics are arguments generated in [Spec, VP] and must receive an external theta-role. The latter condition ensures that only subjects can be realised as clitics. In short, our argument is that a split arises when a syntactic rule is sensitive to theta-roles rather than case. Therefore, the apparent accusative pattern does not mean that case marking on these pronouns is accusative.

Chapter 7 deals with a peculiar construction analogous to what has been called raising in Niuean (Chung 1978, Seiter 1980). This construction is problematic in the following respects: a) it involves movement from a case position to another case

position (hence, violating the Chain Condition (Chomsky 1981)); b) raising of object is permitted; c) on the other hand, raising of the transitive subject is forbidden; and d) raising does not apply to pronominal arguments. We argue that the raising analysis fails to account for these peculiar properties and propose that the construction in question involves operator-movement, and not raising. The operator-movement analysis accounts for the aforementioned peculiar facts in accordance with the other principles of the Tongan syntax. First, relativisation is restricted to ABS-marked arguments. Second, clitics must bear an external theta-role. The former explains why the transitive subject cannot appear in the relevant construction. The latter explains why pronouns cannot appear in the matrix subject position; the matrix subject position is not a theta-position.

Chapters 8 and 9 consider two syntactic operations, passive and antipassive. Generally, it is assumed that passive exists in accusative languages and antipassive, in ergative languages. The major function of these two operations is to alter the underlying transitive construction into a superficial intransitive construction.[2] We will propose that according to the current approach, syntactic passive and ergative case marking are expected to be mutually exclusive. Our Tongan data show that this hypothesis is borne out. What is referred to as passive in ergative languages is not a syntactic passive. Rather, those verbs with a passive meaning are derived by affixation in the lexicon, which involves theta-role absorption. As for the antipassive, we argue that an antipassive construction exists purely out of syntactic necessity: specifically, in

[2] As we will argue, a passive construction is not technically intransitive in that it involves two arguments if we consider the passive morpheme an argument. Thus, an essential criterion is that the internal argument is the sole overt argument and appears in NOM.

order to overcome the restrictions imposed by syntactic ergativity. Put differently, antipassive need not be an indispensable part of the syntax of a language L if L has some other device to escape from such a constraint. Given that Tongan allows relativisation of ERG-marked arguments by virtue of the resumptive pronoun strategy, we do not expect that antipassive exist in Tongan. There is, however, a construction whose form resembles that of an antipassive construction: the middle construction has an ABS-marked subject and a direct object in oblique case. We will consider whether the middle can be taken as antipassive. It will be shown that the middle construction in Tongan does not meet the criteria of antipassive. Crucially, the middle arises not for syntactic reasons but because of semantic reasons.

Finally, in Chapter 10, we will consider the issue of control. It is observed that occurrence of PRO is universally restricted to the subject position of infinitival clauses. One question to be addressed is why the distribution of PRO cross-linguistically shows an accusative pattern. In the standard theory, it is explained in terms of Null case (Chomsky and Lasnik 1993). PRO must bear Null case and [Null] is a feature intrinsic to the minimal I which lacks T and Agrs and is checked in [Spec, IP] of this minimal I. More specifically, Bobaljik (1993) argues that Agrs is defective in the [–T] environment and cannot license NOM/ERG case and subject agreement. In this view, non-finite clauses lack T but contain Agrs. In other words, [Null] is checked in [Spec, Agrs] of T-less clauses. This analysis, however, faces a problem as to how PRO can be licensed in intransitive constructions in an ergative language. If we take the active Agr hypothesis, PRO would fail to check its case feature in intransitive constructions, for Agrs is not available. The fact that PRO can appear not only in

transitive constructions, but also in intransitive constructions supports our hypothesis that [Null] is checked in [Spec, TP].

To summarise, some of the significant findings regarding Tongan are as follows: a) *ke*-clauses contain [–tense] T and Agrs, unlike English *to*-infinitives which contain [–tense] T but lack Agrs; b) clitics are arguments and need be assigned an external theta-role; and c) *pro*-drop is limited to a third person singular pronoun.[3] Overall, it will be shown that the revised active Agr analysis accounts for case assignment in ergative languages as well as accusative languages.

[3] This restriction applies only to [+human] arguments. [–human] arguments are consistently realised as *pro* regardless of number. This is because the personal pronouns cannot be used to refer to [–human] arguments. Let us assume that this *pro* is [–human, third person] in its feature specification. However, note that we will not include this [–human] *pro* in our discussion, which mainly concerns personal pronouns.

Chapter 2
Overview of Ergativity

Ergativity is a term that refers to a certain pattern that some languages show in treating arguments of a verb. Generally, arguments are classified into three types: the subject of a transitive verb, the object of a transitive verb and the subject of an intransitive verb. Adopting Dixon's (1979) terminology, we will refer to them as A, O, and S, respectively. If a language treats A and S in the same way, distinguishing O, the pattern is called *accusative*. In contrast, in an ergative pattern, S and O are treated as equivalent, while A is treated differently. The notion of ergativity is often used with regard to case marking. In an ergative case system, S and O appear in the same case, *absolutive* and A appears in a special case, *ergative*. An ergative pattern of case marking is referred to as *morphological ergativity*.

Ergativity is not merely a morphological phenomenon. Some languages treat S and O as equivalents in some syntactic operations such as coordination and relativisation. An ergative pattern found at the level of syntax is referred to as *syntactic ergativity*. It should be noted that morphological ergativity does not entail syntactic ergativity. A language may have an ergative case marking without showing syntactic ergativity. However, a language that shows syntactic ergativity necessarily has an ergative case system. Syntactic ergativity is incompatible with accusative case marking. In other words, there seems to be some correlation between morphological ergativity and

syntactic ergativity. This leads to a hypothesis that ergative case marking is associated with syntactic configuration.

Another important characteristic of ergativity is its inconsistency. As Dixon (1979, 1994) points out, none of the so-called ergative languages are fully ergative. Specifically, there are always some phenomena in which S and A are grouped together as opposed to O. Such an accusative pattern found in an otherwise ergative environment is called *split*. Split exists at both morphological and syntactic levels. Such interference by accusativity to ergativity seems to demonstrate relative stability of the former.

This chapter offers an overview of ergativity. The objectives of this chapter is to illustrate the diversity of the phenomena in which ergativity is manifested and to address some questions that are relevant to the current study. §2.1 introduces some examples of morphological ergativity. Two questions will be addressed: Why does ergative case marking have to exist and how does it arise? It will be also shown why ergative case marking is problematic to the standard theory of generative grammar.[1] In §2.2, we will discuss various instances of morphological split. Morphological split is related to (one of) the following four factors: pronouns, agreement, tense/aspect, and subordinate clauses. In §2.3, we will see how ergativity is manifested at the level of syntax. Finally in §2.4, we will consider some syntactic operations that consistently

[1] "The standard theory" here refers to the one proposed by Chomsky (1991, 1993), an earlier version of the minimalist program, with basic assumptions summarised in Chomsky and Lasnik (1993). Note that the theory of minimalist program is further developed by Chomsky (1995). However, we do not include the development proposed by Chomsky (1995) when we refer to the standard theory for various reasons to be discussed shortly (cf. Chapter 4).

show an accusative pattern cross-linguistically. These include imperatives and control of PRO. Overall, it will be shown that there has not been a satisfactory account that covers all of the extensive phenomena involving ergativity.

2.1 Morphological ergativity

A language is said to be morphologically ergative if S and O appear in the same case while a special case is assigned to A. The marked case which A receives in such a system is called *ergative* (ERG), while the case assigned to O and S is traditionally called *absolutive* (ABS).[2] This type of case marking is different from the more familiar accusative system, in which S and A both receive *nominative* case (NOM) and O receives *accusative* (ACC). The contrast between the two systems is schematised in (2.1) below.

(2.1)

Ergative		Accusative
ERG	A	NOM
ABS	S	NOM
ABS	O	ACC

In English, for example, this formal distinction is reflected in the form of pronouns. As illustrated by (2.2), the third person singular pronoun has the same form *he* when it occurs as S and A, while as O, it must take a distinctive form, *him*.

(2.2) a. He went to school.
b. He/*him likes Mary.
c. Mary doesn't like him/*he.

[2] It should be noted that some prefer to use the term nominative for absolutive, arguing that both nominative and absolutive are unmarked in a given system (cf. Bittner and Hale 1996a,b; Woolford 1996 among others).

In contrast, distribution of the case markers, *'a* and *'e* in Tongan shows an ergative pattern: *'a* occurs with S or O, while *'e* occurs exclusively with A. See (2.3) below.

(2.3) a. Na'e 'alu 'a/*'e Sione ki he ako.
Pst go ABS/*ERG John to def school
"John went to school."

b. Na'e fana'i 'e Sione 'a Mele.
Pst shoot ERG John ABS Mary
"John shot Mary."

Both ergative and accusative case marking exists in the Polynesian languages; those belonging to the Tongic and Samoic-Outlier subgroups show ergative case marking. Languages that demonstrate morphological ergativity also include Australian languages (e.g., Dyirbal, Yidin^{y}, Warlpiri, Kalkatungu), Indo-Aryan languages (e.g., Marwari, Sindhi, Hindi, Kashmiri), Mayan languages (e.g., Mam, Jacaltec), Eskimo languages (e.g., Inuit, Inuktitut), Caucasian (e.g., Avar, Georgian), Yagua, Basque, and Chukchee. In other words, ergative case marking spreads across a wide range of languages, and thus should be considered part of UG rather than a language-specific phenomenon. Consequently, the existence of ergative case marking raises two significant problems to the standard theory. Why does UG have two types of case marking and how do the two differ from each other in terms of case assignment mechanism? More accurately, can the difference be reduced to a single parameter? Some attempts have been made so far in the literature (Bobaljik 1993, Murasugi 1992, Woolford 1996, Bittner and Hale 1996a, b, Mahajan 1997, to appear). However, there has not been a consensus as to how to incorporate ergative case marking into the theory of UG. We will consider this problem in Chapter 4.

2.2 Morphological Split

Morphological ergativity is inevitably accompanied by some inconsistency, with an accusative pattern arising on one occasion or another. Generally, morphological split concerns one of the following four factors: a) pronouns, b) agreement, c) subordinate clauses, and d) aspect/tense. Anderson (1977) notes that the following generalisations hold whenever an ergative pattern and an accusative pattern co-occur within a single language: a) a language may employ an ergative pattern of case marking for full nouns and an accusative pattern for pronouns, but not vice versa; b) a language may show an ergative pattern of case marking and an accusative pattern of agreement, but not an accusative pattern of case marking and an ergative pattern of agreement; c) a language may demonstrate an ergative pattern in main clauses and an accusative pattern in subordinate clause, but not vice versa[3]; and d) a language may show an ergative pattern in the perfective and accusative in the imperfective, but not vice versa. Various analyses have been proposed in the literature, though most of them focus on a specific instance in a particular language. In this section, we will consider some examples of morphological split and introduce some of the analyses hitherto proposed in the literature.

2.2.1 Accusative pattern on pronouns

Some languages show an accusative pattern of case marking with pronouns while keeping an ergative pattern with full NP's. Take Tongan for example. Despite the

[3] As we will see shortly, however, this generalisation concerning the main-subordinate difference is untenable, as we have some counterexamples, e.g., Tsimshian (Dixon 1979).

ergative case marking on full NP's, Tongan pronouns show an accusative pattern. In (2.4), singular personal pronouns are contrasted with case markers used with full nouns. Note that in Tongan the personal pronouns are never accompanied by a case marker. Instead, they alter their own forms.[4]

(2.4) Tongan Case pattern

	1st person pron.	2nd person pron.	3rd person pron.	Nouns
A	ou	ke	ne	ʻe
S	ou	ke	ne	ʻa
O	au	koe	ia	ʻa
	└————	Accusative	————┘	Ergative

Another example is Kalkatungu, an Australian language. Kalkatungu has a set of bound pronouns, which operate in an accusative system. The contrast between an ergative pattern of free pronouns and an accusative pattern of bound pronouns is illustrated in (2.5) below. A bound pronoun may cross-reference a NP or stand in lieu of one.

(2.5) Kalkatungu Pronouns (Blake 1982:79)

	1st person		2nd person	
	free	bound	free	bound
S	ŋai	-Ø	nʸini	-n
A	ŋatu	-Ø	nʸinti	-n
O	ŋai	-ŋi	nʸini	-kin

More complicated is the Dyirbal case. In Dyirbal, ERG assigned to A is marked by a suffix *-ŋgu* while S and O in ABS appear with a zero morpheme. See (2.6) below.

[4] We will discuss the accusative pattern on pronominal arguments in Tongan in Chapter 6.

(2.6) Dyirbal (Dixon 1994:160)

a. ŋuma-Ø banaga-n^{y}u.
father-ABS return-Nfut
"Father returned."

b. ŋuma-Ø yabu-ŋgu bura-n.
father-ABS mother-ERG see-Nfut
"Mother saw father."

Curiously, although full NP's and third person pronouns inflect on an ergative pattern, first and second person pronouns show an accusative pattern. Note that in (2.7) the pronominal arguments *ŋana* and *n^{y}ura* are marked by the suffix *-na* only when they occur as O. When they occur as A or S, they are unmarked. The inflection pattern of the Dyirbal nominals is illustrated in (2.8).

(2.7) Dyirbal (Dixon 1979: 64)

a. ŋana banaga-n^{y}u.
"We returned."

b. N^{y}ura banaga-n^{y}u.
"You returned."

c. N^{y}ura ŋana-na bura-n.
"You saw us."

d. ŋana n^{y}ura-na bura-n.
"We saw you."

(2.8) Dyirbal Case Inflection

	1st person pron.	2nd person pron.	3rd person pron.	Nouns
A	-Ø	-Ø	-ŋgu	-ŋgu
S	-Ø	-Ø	-Ø	-Ø
O	-na	-na	-Ø	-Ø
	└── Accusative ──┘		└── Ergative ──┘	

Similar pattern is also found in Nez Perce, a Sahaptian language of the northwestern U.S. In Nez Perce, only the third person pronouns are marked ergatively (Rude 1988)[5].

There are two approaches to this type of split. One assumes that the split arises due to the different degree of agentivity of NP's (Dixon 1979, 1994). The other argues that topicality is the crucial factor (Blake 1982). Dixon (1979, 1994) argues that a split of this kind can be explained in terms of the animacy hierarchy proposed by Silverstein (1976). The animacy hierarchy consists of a continuum in which NP's are arranged according to their potential animacy. See (2.9) below. Silverstein (1976) claims that if a NP is located at the leftmost end of the hierarchy, it is most likely to be animate, and that the degree of animacy decreases as it gets closer to the rightmost point of the line.

(2.9) Animacy Hierarchy

1st person pron.	2nd person pron.	3rd person pron. & demonstratives	Proper nouns	Common nouns	
			Human	Animate	Inanimate

←——————————————————————————→

Most animate — Least animate

Dixon (1979) develops the idea of animacy hierarchy into that of agency hierarchy, arguing that the more animate a NP is, the more likely it is to be A than O. According to this view, the first person pronouns are most likely to be A, while inanimate common nouns tend to be O. Based on this assumption, Dixon proposes that it is most natural as well as economical to morphologically mark a constituent when it appears in an unexpected role: e.g., a first person pronoun as O or an inanimate common noun

[5] It should be noted that strictly speaking, Nez Perce case system is not ergative. It is ergative in the sense that S and A are treated differently, with the former unmarked and the latter marked by a suffix *-nm*. However, O is marked by a distinctive suffix *-ne*, which is a deviation from ergativity (Rude 1988).

as A. In other words, there is no need to mark a NP to indicate that it is A if the NP is located in the leftmost part of the hierarchy. Similarly, if a NP is found towards the right-hand side of the hierarchy, it is unnecessary to mark it as O. In principle, this analysis predicts an ergative pattern of case marking from the right-hand end up to some point in the middle of the hierarchy, and an accusative pattern from that point on. However, the exact point that marks the distinction between the two patterns varies from one language to another. In Dyirbal, it seems that the borderline is drawn between second person pronouns and third person pronouns. In the case of Tongan, the boundary is marked at the point between third person pronouns and proper nouns.

Blake (1982) proposes that topicality is the factor that triggers the split. In this approach, ABS is considered to represent a grammatical topic, based on the fact that absolutive arguments exhibit some characteristics generally attributed to topic: they tend to have a zero case form and often cross-referenced by bound pronouns. Blake argues that first and second person pronouns tend to operate on an accusative system because they are inherently highly topic-worthy and therefore, they consistently appear in ABS. That is, even when they occur as A, they attract ABS rather than ERG due to their high topicality, giving rise to an accusative pattern.

The above-mentioned analyses are untenable for some obvious reasons. First, validity of the animacy hierarchy in (2.9) is questionable. Granted that personal pronouns are more likely to be animate than inanimate common nouns, it is not clear, for example, what makes the demonstratives (e.g., *it*) more animate than [+human] proper nouns. Similarly, Dixon's (1979) claim that the animacy hierarchy also represents the

potential agency cannot be justified. For example, what is the rationale behind the claim that a pronoun, *he* is more likely to be an agent than a proper noun, *John*? Another problem is the cross-linguistic inconsistency concerning where the borderline is drawn between the accusative pattern and the ergative pattern. Furthermore, it should be noted that there are some cases that cannot be sufficiently explained in terms of the hierarchy. For example, in Australian languages, personal names are often ranked higher than demonstratives (Dixon 1994).[6]

As for the second approach, an essential assumption is that ABS is related to topic in languages that have an ergative pattern of case marking. This speculation extends to a claim that in some languages topicality is so important that it prevails over the general principle of case marking, allowing A to appear in ABS rather than ERG. However, there is a crucial flaw in this logic. According to Blake (1982), first and second pronouns are highly topical and therefore, they tend to appear in ABS. If this is true, then they are expected to appear in ABS when they occur as O as well. As the Dyirbal sentences in (2.7) clearly indicate, the first and second person pronouns, despite their high topicality, appear in ACC (or at least, non-absolutive case) when they occur as O. This raises inconsistency of topicality account. Either ABS has nothing to do with topic, or first and second person pronouns are neutral in terms of topicality. Given that neither of the two approaches can provide a satisfactory account, an alternative account needs to be sought. We will consider this problem in Chapter 6.

[6] This seems to make more sense than the way in which NP's are arranged in the proposed hierarchy. Nevertheless, Dixon (1994) treats these counterexamples as "odd exceptions," which inevitably exist with any principles.

2.2.2 Agreement

The second type of split concerns agreement. Some of those languages that have an ergative case marking show agreement on the verb which operates on an accusative basis. For example, Warlpiri, an Australian language, shows an accusative pattern of agreement despite its ergative case marking (Bittner and Hale 1996b). In Warlpiri, person and number of pronominal arguments are reflected on the auxiliary. Specifically, the auxiliary is followed by a subject agreement morpheme and an object agreement morpheme. See (2.10) below. Note that the second person singular pronominal subjects *nyuntulu* (ERG) and *nyntu* (ABS) trigger the same agreement form *–npa* although they bear different cases. On the other hand, the first person singular pronoun *ngaju* (ABS) triggers two different agreement forms: *-ju* if it is O, and *-ma* if it is S, as illustrated by (2.10a) and (2.10c), respectively.

(2.10) Warlpiri (Bittner and Hale 1996a:23)

a. Nyuntulu-rlu ka-**npa-ju** ngaju nya-nyi.
you-ERG Prs-2.s.-1.s. me(ABS) see-NPst
"You see me."

b. Nyuntu ka-**npa** parnka-mi.
you (ABS) Prs-2.s. run-NPst
"You are running."

c. Ngaju ka-**ma** parnka-mi.
me (ABS) Prs-1.s. run-NPst
"I am running."

Burushaski[7] is another example. In Burushaski, all finite verbs must have a suffix that agrees with the subject. In (2.11) below, both the ergative subject (A) and the absolutive subject (S) trigger the same subject agreement, *-i*.

[7] Burushaski is said to be a language isolate spoken in the Karakoram Range on the border between Kashmir and Tibet (Dixon 1979:95). The data provided in this specific research by Morin and Tiffou (1988) are collected in Yasin, Pakistan.

(2.11) Burushaski (Morin and Tiffou 1988:494)

a. Ne hír-e phaló bók **-i.**
the m. man-ERG seed pl. ABS sow Pret-3.s.m.SUBJ
"The man planted the seeds."

b. Ne hir yált **-i.**
the m. man-ABS yawn Pret-3.s.m.SUBJ
"The man yawned."

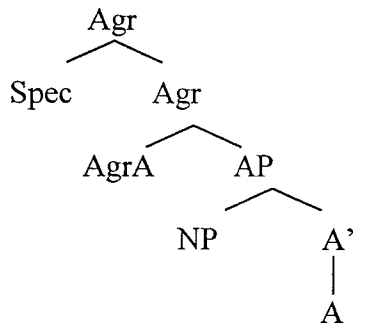
This agreement pattern clearly distinguishes A and S from O.[8]

This type of split, ergative case marking on the one hand and accusative agreement on the other, prima facie poses a challenge to the standard theory, in which it is assumed that both case and agreement involve a functional category Agr (Chomsky 1991, 1993). In this view, in order for S and O to appear in a same case, they need to check their case feature in a same Agr, say Agro. This predicts that S and O also check their agreement features (i.e., phi-features) in the same Agro. On the other hand, A moves to another Agr, Agrs, where it checks its case feature as well as phi-features. Assuming that features checked in Agrs and those checked in Agro are realised as different agreement morphemes, we would expect that S and O trigger one form and A, another, thereby giving rise to an ergative pattern. Put differently, in this configuration, case and agreement are expected to show a similar pattern, whether accusative or ergative.

[8] As far as the object agreement is concerned, some verbs agree with the affected participant (in the case of affective verbs) or with the highest complement NP in the following hierarchy: a) dative complement, b) object, c) subject (Morin and Tiffou 1988: 495). It is not clear if this can be considered object agreement. However, what is crucial here is that the language shows the subject agreement, which is an obvious deviation from ergativity.

However, it has been also shown that case and agreement do not entail each other. For example, Chomsky (1993) notes that agreement can appear without case and vice versa. The former is exemplified by NP-AP agreement in configuration (2.12) below. The latter is demonstrated by the transitive expletive construction in Icelandic (Bobaljik and Jonas 1993).

(2.12)

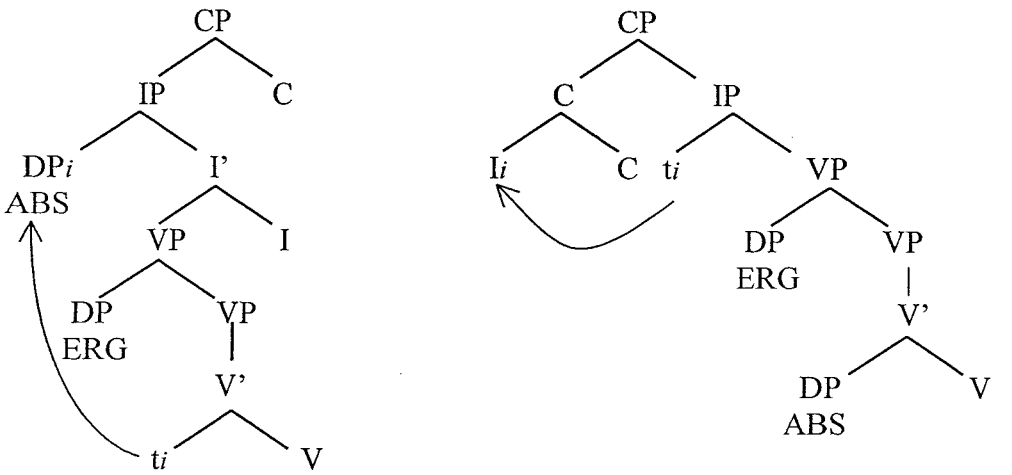


These examples show that agreement does not necessarily reflect case. Thus, in principle, the standard theory does not exclude the combination of ergative case marking and accusative agreement.

Bittner and Hale (1996b) also assume that agreement and case are different phenomena, and give the following account of the split concerning agreement. They compare two morphologically ergative languages, Inuit and Warlpiri to illustrate how the two agreement patterns arise. Inuit shows an ergative pattern, while Warlpiri shows an accusative pattern. It is argued that agreement is a relation between an argument (chain) and a local functional head, which "canonically antecedent-governs a designated position in that chain" (Bittner and Hale 1996b: 542).[9] Also crucial to their argument is an assumption that so-called ergative languages are divided into two subclasses: raising ergative and transparent ergative. In a raising ergative language, an

absolutive NP moves to [Spec, IP], yielding the structure (2.13a).[10] While in a transparent ergative language, it remains in the VP internal object position, where it is base-generated, as illustrated by (2.13b). Consequently, the absolutive NP is located in a higher position than the ergative NP in the raising ergative language. In contrast, the ergative NP appears in the higher position in the transparent ergative variation.

(2.13) Raising Transparent



Inuit is a raising ergative language, while Warlpiri is a transparent ergative language. As illustrated by (2.13a), in Inuit the ABS-argument moves to [Spec, IP] to be licensed, while the ERG-argument is licensed in situ. As a result, the former is canonically antecedent-governed by C. Consequently, C agrees with the ABS-argument, whether S or O. On the other hand, the ERG-argument is canonically antecedent-governed by I, which agrees with it. In contrast, in Warlpiri, both ABS- and ERG-arguments are licensed in situ. Thus, I consistently canonically antecedent-governs the VP-adjoined subject. Consequently, I agrees with the subject, whether S

[9] α canonically antecedent-governs β, iff α governs and binds β (Chomsky 1981).

[10] This movement is enforced by the K Filter, which requires absolutive NP's to be governed by C. In a transparent ergative language, VP is rendered transparent to government from C (due to the I-to-C or V-to-I-to-C movement) and therefore the absolutive NP can be governed by C in situ.

or A. In short, Bittner and Hale argue that whether a language shows ergative agreement or accusative agreement is determined by the position in which the ABS-argument appears in S-structure. The account proposed by Bittner and Hale (1996b), theory-internally consistent as it is, requires a number of prerequisites idiosyncratic to this particular theory. In this respect, it cannot be easily incorporated into the standard theory. The question is whether it is possible to account for this type of split without introducing such prerequisites. We will attempt to propose an alternative account in Chapter 6.

2.2.3 Perfective vs. imperfective

The type of split conditioned by tense/aspect is particularly characteristic of Indic and Iranian languages, e.g., Hindi (Anderson 1977) and Kashmiri (Wali and Koul 1994). In these languages, the use of ergative case marking is restricted to perfective (or past-based) tenses and accusative marking is used for imperfective (or non-past) tenses. For example, in Hindi, A is marked by *-ne* in the perfective, while in the imperfective *-ne* never accompanies A. See (2.14) below.

(2.14) Hindi (Anderson 1977: 330, 331)

a. larka kutte-ko dekhta hai.
boy dog-ACC sees aux
"The boy sees the dog."

b. larke-ne kutte-ko dekha hai.
boy-ERG dog-ACC has-seen aux
"The boy has seen the dog."

Kashmiri sentences in (2.15) shows a similar pattern: the ERG-marker *-an* appears on A only in the perfective. In the imperfective, A is accompanied by the ABS-marker *I*.[11]

(2.15) Kashmiri (Wali and Koul 1994: 970)

a. mohn-an por akhba:r
Mohan-ERG read nespaper
"Mohan read the newspaper."

b. mohnI chu čaay čavaan.
Mohan-ABS be tea drinking
"Mohan is drinking tea."

Note, however, that in the Hindi examples, a particle *-ko*, glossed as ACC-marker, appears not only in the imperfective but also in the perfective. Furthermore, *-ko* may be absent in the perfective, as illustrated by (2.16b) below.

(2.16) Hindi (Anderson 1977: 330, 331)

a. larka kutta dekhta hai.
boy dog sees aux
"The boy sees a dog"

b. larke-ne kutta dekha hai.
boy-ERG dog has-seen aux
"The boy has seen a dog"

Traditionally, *-ko* is taken to be an accusative marker. (2.14a) of the structure [A O-*ko* V] is at a first glance an accusative construction because O is morphologically marked with A unmarked. However, as illustrated by (2.16a), *-ko* is not always present in the imperfective. More accurately, *-ko* accompanies O only if it is animate and definite. This generalisation also holds of the occurrence of *-ko* in the perfective. In other words, the function of *-ko* is to mark O for the features [+animate, +definite], and not

[11] Thus, *-I* appears on O in a perfect transitive construction (Wali and Koul 1994).

to mark O for ACC case.[12] Marwari, a dialect of west Rajasthani, provides additional evidence against this dubious status of ACC-marker in these languages. Marwari is also said to have an ACC-marker *-ne* that appears on O. Usage of *-ne* is also conditioned by the semantic features of O. Namely, it can occur only when O is [+animate or +definite]. Hence, all personal pronouns and human proper nouns get this object-marking. In contrast, common noun direct objects take *-ne* only if they are [+definite] and [+animate]. See (2.17) below.

(2.17) Marwari (Magier 1983: 246)

a. mhai uthe dhobi dekhiyo.
I-DIR there washerman saw-m.s.
"I saw a washerman"

b. mhai uthe i dhobi-ne dekhiyo.
I-DIR there this washerman-ACC saw-m.s.
"I saw this washerman"

These data strongly suggest that the elements that have been called ACC-markers actually have nothing to do with case. Consequently, we may assume that O is in the same case (whatever case it may be) in both tenses.[13] Considering the sentences in (2.14) and (2.16), O is unmarked for case regardless of tenses.

Thus, case marking in Hindi shows a pattern depicted in (2.18). The contrast is between ergative and neutral (no marking) rather than between ergative and accusative.

[12] It should be noted, however, as Gillian Ramchand (p.c.) points out, *-ko* cannot be seen simply as a definiteness marker because it only has consequences for definiteness when it appears on direct object arguments. It could be that there is a language-specific constraint that requires the direct objects to be marked for definiteness in these languages.

[13] Alternatively, one may assume that although O appears in one case in the perfective and another in the imperfective, morphology does not reflect the difference.

(2.18) Hindi case marking

	S	A	O
Perfective	-Ø	-ne	-Ø
Imperfective	-Ø	-Ø	-Ø

As for Kashmiri, the ABS-marker *-I* appears on S and O in the perfective, and on S and A in the imperfective. O in the imperfective is unmarked if A is in a higher person than O or marked as OBL otherwise. Thus, we find an ergative pattern in the perfective and an accusative pattern in the imperfective, as illustrated below.

(2.19) Kashmiri case marking

	S	A	O
Perfective	-I	-an	-I
Imperfective	-I	-I	-Ø/OBL

A commonly accepted account of this type of split is that it is due to the reanalysis of the past participles as active verbs. For example, Anderson (1977) gives a sketch of the evolution of Hindi as follows. It is known that Sanskrit had an extensive series of inflected verb forms with inherited Indo-European ending. These inflected forms fell out of use in Middle-Indic, in which a variety of periphrastic constructions took over the function of the original inflected verbal forms. It is said that for the perfective, the periphrastic form based on the verbal adjective or participle *-ta* was used. *-ta* form of an intransitive verb has simply the perfective sense. In contrast, *-ta* form of a transitive verb has a passive interpretation and could be accompanied by a complement in the instrumental case representing the agent. At this stage, S and O appear in the same case, which at a later stage is recognised as direct (DIR) or subject case. A appears in the Instrumental case (i.e., as an agent in the *-ta* construction, as mentioned above), which subsequently merges with other uses of a general oblique case. In Hindi, this

derived passive has been reanalysed as an active, i.e., ergative. Consequently, an ergative pattern of case marking is found only in the perfective in languages like Hindi, because it is inherently related to the perfective.[14]

Mahajan (1997) proposes an alternative account, which drastically diverges from the traditional view. Mahajan regards *ko* as definite marker and *ne* as adposition for an ergative argument. Noting that ergative case marking and the *have*-auxiliary (e.g., English *have* in the past perfect) are in complementary distribution, Mahajan argues that the *have*-auxiliary is derived by incorporation of the ERG-adposition into the *be*-auxiliary.[15] In Hindi, this incorporation fails to take place and therefore, it has the ERG-adposition *ne* and the *be*-auxiliary. In this approach, the perfective is universally ergative in an underlying structure. The surface accusative pattern arises due to the incorporation of an ERG-adposition into the *be*-auxiliary.

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[14] However, Magier (1983) points out that Marwari is a counterexample for this passive-to-ergative reanalysis. In Marwari, all subjects are unmarked (i.e., assigned directional case) regardless of transitivity of the verb or tense of the clause. The only exception is third person pronominal subjects, which are marked in OBL in the perfective transitive. Moreover, the use of OBL with third person pronominal subjects is a free variation when it is allowed to occur. Compare (i) and (ii) below. Magier (1983) suggests that this is actually evidence for a change toward (or back to) accusativity which is currently taking place in Marwari.

(i) a. mhai kale athe puggo.
I(DIR) yesterday here reached-m.s.Pst
"I arrived here yesterday."
b. mhai kam kariyo.
I (DIR) work-Ø did-m.s.Pst
"I did work."

(ii) a. vo/*un kale athe puggo.
he(DIR)/he(OBL) yesterday here reached-m.s.Pst
"He arrived here yesterday."
b. vo/un kam kariyo.
he(DIR)/he (OBL) work did-m.s.Pst
"He did work."

[15] This hypothesis is based on Kayne (1993)'s proposal that *have* is underlyingly *be* + an empty preposition.

2.2.4 Subordinate vs. main clauses

The fourth type of split concerns the clause types in terms of main vs. subordinate. According to Anderson (1977), a language may have an ergative pattern in main clauses and an accusative pattern in subordinate clauses. Mam, an Eastern Mayan language, seems to conform to this generalisation. Mam has two sets of agreement affixes that specify number and person of the arguments. In principle, these agreement affixes operate on an ergative basis: one set is used for A, and the other for S/O. Pronominal arguments in first and second person (except for the first person inclusive plural pronoun) are also cross-referenced by an enclitic *-(y)a*.

(2.20) Mam agreement affixes (England 1988: 526)

	ERG Prefix	ABS Prefix	Enclitic
1s	n-/w-	chin-	-(y)a
2s	t-	Ø-/tz-/tz'-/k-	-(y)a
3s	t-	Ø-/tz-/tz'-/k-	
1pl.excl.	q-	qo-	-(y)a
1pl.incl.	q-	qo-	
2pl	ky-	chi-	-(y)a
3pl	ky-	chi-	

Intriguingly, this ergative pattern is violated in some exceptional clause types, including a) *when-* clauses, b) purpose and result clauses, c) clauses introduced by focused adverbials, specific adverbs or focused generic quantifiers, and d) relative clauses with stative verbs. In such clauses, A, O and S are all cross-referenced on the verb by an ergative affix. See (2.21) below. In (2.21a), the verb *poon* ("arrive") agrees in person and number with S *ky-txuu7* ("their mother"), but crucially what appears on the verb is an ergative affix instead of an absolutive one. Similarly, in (2.21b), both of the two agreement affixes (one for A and the other for O) on the verb belong to the ergative set.

(2.21) Mam (England 1988: 527)

a. N - chi ooq' **t** -poon ky-txuu7.
Prog-3.pl.ABS cry [3.s.ERG -arrive 3.pl.-mother]
"They were crying when their mother arrived."

b. Ok qo tzaalaj-al [ok **t** **-q** -il u7j t -e
Fut 1.pl.ABS be-happy-Pot when 3.s.ERG-1.pl.ERG-see book 3.s.-RN/poss.
yool t- e I7tzal].
word 3.s.-RN/poss. Ixtahuacan
"We'll be happy when we see the Ixtahuacan dictionary."

It should be noted that the pattern the Mam subordinate clauses show is not accusative; subordinate clauses show neither an ergative nor an accusative pattern. Arguments are all cross-referenced by ergative agreement affixes: in effect they are unmarked. However, what matters here is that the ergative pattern cannot be found in subordinate clauses.

On the other hand, Dixon (1979) cites a counterexample for Anderson's generalisation. Tsimshian (due to Boas 1911) consistently shows an ergative pattern of cross-referencing in subjunctive clauses while showing a neutral pattern in main clauses unless A is third person and O is first or second person.[16] Thus, we have evidence for split based on the main-subordinate difference. Nevertheless, we do not know whether a certain pattern is characteristic of either subordinate or main clauses.

Dixon (1979) proposes that the key factor that gives rise to this type of split is also agency. In his approach, the split conditioned by tense/aspect arises when a language

[16] Dixon (1979) refers to two other examples: Australian Ngarluma (due to Hale 1967) and Lardil (due to McConvell 1977 following Klokeid 1976).

marks S for agency in the imperfective.[17] Dixon argues that subordinate clauses such as purposive clauses are semantically similar to the imperfective, and therefore the same principle applies. Hence, S is marked in the same way as A, giving rise to an accusative pattern. In contrast, subordinate clauses such as relative clauses are similar to the perfective, and thus are expected to show an ergative pattern. Dixon argues that Tsimshian subjunctive clauses show the pattern predicted by this hypothesis. However, the same argument is disproved by the Mam data cited above. In Mam not only purposive clauses but also relative clauses show an accusative pattern.

An alternative approach would be to assume that main clauses and subordinate clauses have different structures in these languages, just like English *to*-infinitives lack tense and agreement.[18] Another point to note is that the non-ergative pattern is not accusative but neutral (either all marked as ERG or all marked as ABS). This raises a problem to this alternative account because in a transitive construction both A and O must check its features in the single Agr. We will leave this problem open to future research.

2.3 Syntactic ergativity

As mentioned above, a language can either be ergative or accusative at the level of syntax as well as morphology.[19] Syntactic ergativity of a language is typically

[17] Dixon argues that it is because an event described by the imperfective is likely to be thought of in terms of the potential agent rather than the potential patient. We do not discuss the validity of this hypothesis here. For details see Dixon (1979).

[18] More accurately, Agro is present as ACC can be assigned within *to*-infinitives. See Chapters 4 and 10 for more discussion.

[19] However, it should be mentioned that no language that is morphologically accusative has been reported to demonstrate syntactic ergativity. (Dixon 1979, 1994; Comrie 1989).

demonstrated by coordination and relativisation. To illustrate the contrast, let us first consider a syntactically accusative language, English. In an English coordinate construction involving the conjunction *and*, the coreferential argument may be (and usually is) omitted in the second clause. For example, consider (2.22) below. The second occurrence of *John* is considered redundant and usually dispensed with.

(2.22) John came in and (John) saw Mary.

The coreferential argument can be dropped in the second clause only if it is either S or A, but crucially not if it is O. Consider the sentences in (2.23) below. (2.23a) is ungrammatical because the coreferential argument *John* is O in the second clause. Similarly, (2.23b) can be interpreted only as "John saw Mary and John left the room", and not "John saw Mary and Mary left the room". Put differently, coreference is possible between S and A, but not between S and O. (2.23c) illustrates that coreference between O and A is also prohibited.

(2.23) a. *John came and Mary saw (John).

b. John saw Mary and (John/*Mary) left the room.

c. John saw Bill and (John/*Bill) raised his eyebrow.

(2.24) below shows all the possible combinations. * indicates that coreference is impossible. Note that coreference is strictly prohibited in any combination involving O.[20]

[20] Note that the combination O-O is also forbidden. As far as syntactic accusativity is concerned, a generalisation is that the gap (the omitted argument of the second verb) must be S or A. O can never be omitted, as illustrated in (i) below.
(i)*John saw Bill and Mary kissed (Bill).

(2.24) Syntactically accusative language

First / Second	S	A	O
S	√	√	*
A	√	√	*
O	*	*	*

In contrast, syntactically ergative languages treat S and O as equivalent in such operations. Specifically, A cannot participate in a coordinate construction either as a gap or an antecedent. A well-known example is Dyirbal. Consider (2.25) below. In (2.25a), the omitted argument, S of the second verb "return," can be coreferential with O of the first verb, but not with A. Similarly, in (2.25b), coreference between O of the second verb and A of the first verb is impossible.

(2.25) Dyirbal (Dixon 1994: 162)

a. ŋuma-Ø yabu-ŋgu bura-n banaga-nyu.
father-ABS mother-ERG see-Nfut returen-Nfut
"Mother saw father and (*mother/father) returned."

b. ŋuma-Ø yabu-ŋgu bura-n jaja-ŋgu ŋamba-n.
father-ABS mother-ERG see-Nfut child-ERG hear-Nfut
"Mother saw father and the child heard (father/*mother)."

Dyirbal demonstrates an ergative pattern with regard to relativisation as well: only S and O may be relativised. Relativisation of A yields an ungrammatical sequence. See (2.26) below. (2.26c) shows that if the gap happens to be A, the verb must be antipassivised so that the argument appears as a surface S instead of A.[21]

[21] Antipassive converts a transitive construction into an intransitive construction by putting the subject in ABS and assigning an oblique case to the object. In other words, it is a convention to put the underlying A argument in a surface S. It contrasts with passive in accusative languages, which changes the underlying O argument into a surface S.

(2.26) Dyirbal (Dixon 1979: 127-8)

a. ŋuma+ŋgu yabu+Ø [duŋgara+ŋu+Ø] bura-n.
father-ERG mother-ABS cry-Rel+ABS see-Pst
"Father$_i$ saw mother$_j$, who$_{*i/j}$ was crying."

b. ŋuma+ŋgu [duŋgara+ŋu+ru] yabu+Ø bura-n.[22]
father-ERG [cry-REL-ERG] mother-ABS see-Pst
"Father$_i$, who$_i$ was crying, saw mother."

c. ŋuma+Ø [bural+ŋa+ŋu+Ø yabu+gu] duŋgara+n^{y}u.
father-ABS [see-APASS-Rel mother-DAT cry-Pst
"Father, who saw mother, was crying."

Tongan also shows syntactic ergativity as illustrated by (2.27) below. A coordinate construction involving *pea* ("and") does not allow A to occur either as a gap or as an antecedent.[23]

(2.27) a. Na'e taa'i 'e Mele$_i$ 'a Hina$_j$ pea tangi $e_{i*/j}$.
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."

It is natural to wonder why an ergative pattern arises at the level of syntax in these languages. In many languages, syntactic rules refer to grammatical relations (e.g., subject and direct object) rather than case. Nevertheless, in languages like Dyirbal and Tongan, such rules refer to case, distinguishing A from S and O. Dixon (1979, 1994) attempts to explain syntactic ergativity in terms of syntactic "pivot". Pivot is a pair of argument types that are considered syntactically equivalent. A language chooses either the S/A or S/O pivot. If the former is selected, the language is

[22] Note that although the gap in the relative clause is S, the verb is marked by an ergative marker. According to Dixon (1979), the verb in a relative clause bears a suffix *–ʔu* and agrees in case with the antecedent.

syntactically accusative. If the latter is selected, the language exhibits syntactic ergativity. In this view, syntactic ergativity derives from a more primitive concept of pivot and it is not related in any way with the morphological ergativity. Hence, a language with an ergative case system may choose the S/A pivot at the syntactic level. However, this analysis is ad-hoc in two respects. First, it only describes what happens but not why it happens. Second, it is not entirely true that there is no connection between syntactic ergativity and morphological ergativity. For example, a language that is morphologically accusative always selects the S/A pivot. If it is a random choice, then, the combination of accusative case marking and the syntactic S/O pivot should be allowed. The restriction on the combination seems to indicate that syntactic ergativity is not a phenomenon independent of morphological ergativity. A language that is morphologically ergative can be either accusative or ergative in terms of syntax, while a language with an accusative case system can only be accusative at the syntactic level. Thus, case definitely plays a significant role in determining whether a language regards S as equivalent to O or A in terms of syntactic operations. This in turn suggests that it has to do with the positions in which these arguments occur, assuming that syntactic rules are sensitive to structural positions.

Bittner and Hale (1996a,b) propose that difference between syntactically ergative languages and those that are not is that the former is raising ergative. Bittner and Hale argue that it is the hierarchical relations of NPs at SS that determines which pivot is used for certain types of syntactic operations. If A is located higher than O, A will be considered more prominent than O. On the other hand, if O is in a higher position than

[23] We will discuss syntactic ergativity in Tongan in Chapter 5.

A by virtue of raising, O will override A, whereby an ergative pattern arises. Note, however, that although this approach accounts for syntactic ergativity in terms of structural position, it requires a number of assumptions unique to this particular theory. Our question is whether is it possible to account for the same phenomenon using the framework of the standard theory.

2.4 Syntactic split

There are also some instances in which a language shows a split at the level of syntax. For example, in Yidin^{y}, there are two types of coordination: a) joining two clauses that share a pronominal argument and b) linking clauses that share a non-pronominal NP. The former shows an accusative pattern while the latter shows an ergative pattern (Dixon 1994). Dixon argues that this syntactic split reflects the split at the morphological level. Yidin^{y} has an accusative case marking for pronouns and an ergative case marking for full NP's (Dixon 1994).

This hypothesis that a morphological split is reflected at the syntactic level is infeasible with regard to other languages. For example, Dyirbal also shows a similar kind of morphological split, but does not show a split at the syntactic level. Moreover, Dixon's account cannot explain some other instances of syntactic split. Take, for example, a type of syntactic split found in Chukchee. In Chukchee, an ergative pattern is found only with a specific instance of relativisation, specifically, relativisation using a negative participle. With regard to other syntactic processes, Chukchee consistently

shows an accusative pattern (Comrie 1979). Tongan shows yet another type of syntactic split: coordination involving *pea* shows an ergative pattern, whereas coordination involving *mo* shows an accusative pattern (see Chapter 5). It appears that each instance of syntactic split requires a case-by-case explanation. We will consider the Tongan case in Chapter 5. However, we have to leave other cases open to future research.

2.5 Subject-oriented syntactic rules

Finally, it should be noted that some syntactic rules are universally subject-oriented. These include imperatives and control of PRO. An accusative pattern found with such syntactic rules should not be regarded as an instance of split. For example, imperatives have a second person pronoun as S or A, but never as O, as illustrated by (2.28). We cannot have (2.28c) with the intended meaning "put yourself in a situation such that John hits you" not only in syntactically accusative languages but also in syntactically ergative languages.

(2.28) a. (You = S) go to school now!
b. (You = A) do your work!
c. John hit *(you = O)!

An accusative pattern displayed by the imperative can be accounted for in terms of semantics. Dixon (1994) argues that in an imperative construction, the covert argument refers to the addressee (hence the second person pronoun). At the same time, the addressee must be the performer/actor of the instruction. This condition necessarily implies that the covert second person argument has an agent theta-role or

at least that it is volitional. O is never volitional and therefore cannot have the addressee as its referent. To support this hypothesis, S of a non-volitional verb is disallowed in an imperative construction. See (2.29) below.

(2.29) a. *Want to go to school!
b. *Hear the music!

In short, an accusative pattern found with the imperative is conditioned by semantics. Consequently, it does not affect the syntactic ergativity of a given language.

Also, consider control of PRO. Control verbs generally take a subordinate clause that contains an empty argument, which is coreferential with a matrix argument. In addition, control verbs universally require this empty argument to be S or A, but never O. See (2.30) below.

(2.30) a. John wants [PRO (S) to win].
b. John wants [PRO (A) to persuade Mary].
c. *Mary wants [John to persuade PRO (O)].

Even if a language is syntactically ergative otherwise, the empty element in the control constructions can only be S or A. Consider the Dyirbal examples in (3.31) below. PRO is allowed to appear as A. *Nuyma-l* ("do properly") is a control verb that takes an ERG-subject.

(2.31) Dyirbal (Dixon 1994: 134)

a. yara-ngu mija wamba-n.
man (A) -ERG house (O) ABS build NFut
"The man built a house."

b. yara-ngu [PRO mija wamba-n] nuyma-n.
man -ERG house-ABS build-NFut do properly-Nfut
"The man built the house properly."

A similar restriction exists in Tongan as well. Consider (2.32) below. *Loto* ("want") is a control verb that takes an ABS-subject.

(2.32) Tongan

a. Na'e loto 'a Sione [ke PRO ha'u].
Pst want ABS Sione ke come
"Sione wanted to come."

b. Na'e loto 'a Sione [ke PRO 'ave 'a Mele].
Pst want ABS Sione ke take ABS Mele
"Sione wanted to take Mele."

c.*Na'e loto 'a Sione [ke 'ave 'e Mele PRO].
Pst want ABS Sione ke take ERG Mele
"Sione wants Mele to take (Sione)."

An accusative pattern found in control constructions, unlike the imperative, cannot be explained in terms of semantics: [± volitional] or [± agent] is not a determinant factor in this case. Dixon (1994) thus attempts to account for an accusative pattern found in the control constructions in terms of the notion "subject", which he defines as a universal category that consists of S and A. He argues that the notion subject overrides ergativity in control constructions. However, this is merely another way of describing the single fact. It does not explain why the notion of subject prevails over ergativity in control constructions and not in any others.

On the other hand, Bittner and Hale (1996a,b) propose an account that is based on the syntactic configuration. As mentioned above, Bittner and Hale postulate that O raises to [Spec, IP] in a syntactically ergative language. Note that the landing site for O, [Spec, IP] is crucially an A-bar position. Bittner and Hale argue that those syntactic operations which universally shows an accusative pattern are A-bar dependent. That

is, they involve A-bar movement. In contrast, in control constructions, what is relevant is the highest A-position. Sitting in an A-bar position, O is invisible in this case and therefore, A in the VP-adjoined position (i.e., A-position) prevails over O. Granted that this account is consistent with their theory of ergativity, one drawback of their approach is that it requires many preliminary conditions.

Another alternative is to assume that this accusative pattern arises due to a case reason. However, in this case, the case in question is Null, which is assumed to be assigned exclusively to PRO (Chomsky and Lasnik 1993). If we are able to show Null is assigned to a particular position in a phrase structure, which is accessible for both A and S, this exceptional accusative pattern would be reducible to a condition on the structural case assignment. We will pursue this possibility in Chapter 10.

2.6 Summary

In summary, we made the following three observations regarding ergativity. First, ergative case marking is found across a wide range of languages. This leads us to conclude that ergativity, as least morphological ergativity, is part of UG rather than a language-specific phenomenon. Hence, two questions arise. Namely, why does UG (have to) have two types of case marking? And, how does morphological ergativity arise? Second, there is correlation between morphological ergativity and syntactic ergativity. A language does not show syntactic ergativity unless it has an ergative case marking. This unilateral relation between morphological ergativity and syntactic

ergativity suggests that an ergative pattern found at the level of syntax is induced by the ergative case marking. Or at least, they are both caused by the same factor, which probably is associated with some structural position. Thirdly, between these two systems in UG, the accusative system exhibits relative stability compared with the ergative system. Specifically, whenever an ergative pattern exists, morphologically or syntactically, an accusative pattern also appears.

Given these facts, we considered various phenomena in which ergativity is manifested. With regard to morphology, we observed that the following four factors may give rise to an accusative pattern in a language that otherwise consistently sticks to an ergative pattern. These factors are a) pronouns, b) agreement, c) imperfective tense/aspect, and d) main-subordinate difference. On the other hand, it was also shown that there is not a single account that successfully explains in accordance with the standard theory why a morphological split arises. However, we proposed that it is possible to relate a mophological split caused by the above-mentioned factors to a phrase-structural reason. In other words, there is a possibility that phenomena of morphological split can be incorporated into the standard theory.

As for syntactic ergativity, we suggested that syntactic splits found across languages are caused for a language-specific reason. More significant to our study is the fact that some syntactic operations, control of PRO in particular, universally show an accusative pattern, grouping S with A rather than with O. This accusative pattern could also be due to a phrase structural reason. Specifically, the standard theory assumes that PRO is associated with Null case. If, for example, Null case can be

assigned in the position in which only S and A can appear but O cannot, it explains why the distribution of PRO shows an accusative pattern.

To conclude, we argue that morphological ergativity, morphological split, and syntactic ergativity may all be explained in terms of phrase structure. That is, the standard theory should be able to provide a satisfactory account of ergativity. In the following two chapters, we will study in more detail how ergativity is manifested in Tongan (Chapter 3) and set forth a hypothesis regarding how ergative case marking could be accounted for in the standard theory (Chapter 4).

Chapter 3
Issues in Tongan Syntax

In studying various phenomena of ergativity, we mentioned that Tongan shows both morphological and syntactic ergativity. In terms of case marking, Tongan shows an ergative pattern of case marking on full NP's, while showing an accusative pattern on pronouns. As for syntax, certain syntactic rules such as *pea*-coordination and relativisation apply exclusively to S and O. With regard to coordination, a split pattern is found: unlike *pea*-coordination, *mo*-coordination applies to S and A. In this chapter, we will introduce basics of the Tongan syntax, emphasising how ergativity is interrelated with other syntactic phenomena.

Tongan is a Polynesian language spoken by approximately 100,000 people living in the Tongan archipelago in the South Pacific. It is a VSO language with ergative case marking. The most substantial work on the Tongan grammar is that of Churchward (1953). While impressively extensive, Churchward's (1953) work is purely descriptive. Other works concerning Tongan include Morton (1962), Lynch (1972), Tchekhoff (1973a,b, 1978, 1979, 1981), and Chung (1978).[1] One of the most frequently discussed issues regarding Tongan is its case system in relation to a question concerning the reconstruction of the Proto-Polynesian: specifically, whether

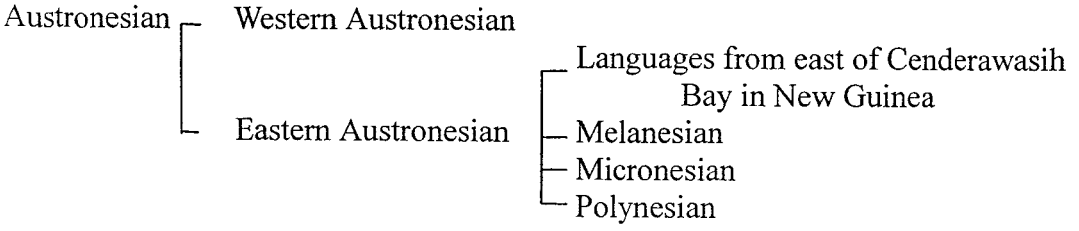
[1] As a textbook for non-native speakers, Shumway (1971) should also be mentioned. However, it has not much to offer as far as linguistic theory is concerned.

the Proto-Polynesian had an ergative system or an accusative system. The striking similarity between the ergative construction of the ergative languages and the passive construction of the accusative languages in the Polynesian subgroup induced a debate concerning the diachronic change within the Polynesian languages. Some argued that the Proto-Polynesian had an ergative system and that the Proto-Polynesian ergative construction was later reanalysed as passive in those languages that now have an accusative system (Clark 1973, 1976, Gibson and Starosta 1990). Some others hypothesised that the Proto-Polynesian had an accusative system and that the Proto-Polynesian passives later underwent re-analysis as ergative in those languages such as Tongan, which now show an ergative pattern (Chung 1977, 1978, Hohepa 1969, Hale 1970 among others). Overall, Tongan is not a well-known language in the literature of transformational grammar and therefore, there remains much more to investigate.

3.1 Classification and morphological characteristics

Tongan is classified as one of the Polynesian languages, which form the Eastern Austronesian language subgroup, also known as Oceanic languages (Phillips 1994). See Figure 3.1 below.

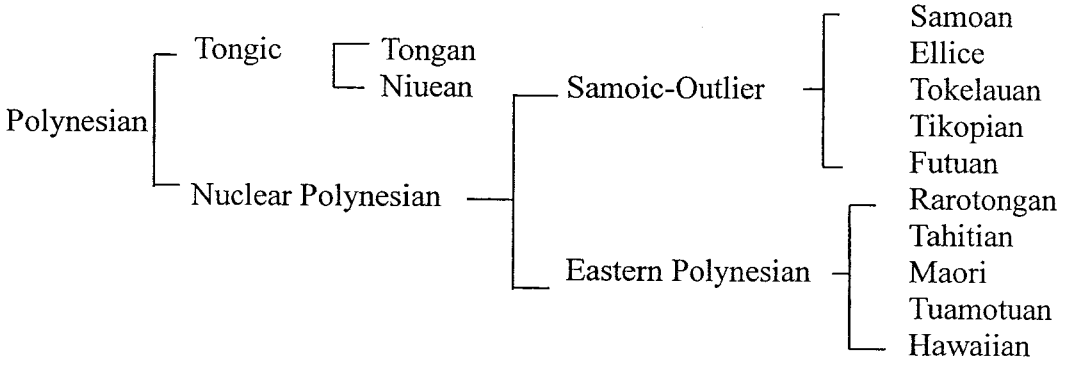
Figure 3.1 Classification of Austronesian languages



According to Pawley's (1966) classification, Polynesian languages are divided into

two classes, Tongic and Nuclear-Polynesian. The Tongic subgroup includes only two languages, i.e., Tongan and Niuean. The Nuclear-Polynesian consists of two subgroups: Samoic-Outlier including Samoan, Futuan, etc., and Eastern Polynesian, including Maori, Hawaiian, etc. See Figure 3.2 below.

Figure 3.2 Classification of Polynesian languages



Like in other Polynesian languages, productive morphology is very limited in Tongan. In terms of derivational morphology, some of the most typical affixes are *faka-*, which indicates causation, *fe-...-'aki*, which marks reciprocity, and *-'i*, which indicates transitivity.[2] See (3.1) below.[3]

(3.1) *hela* (adj) "tired" ⟶ *fakahela* (v.i.) "to make someone tired"

'ita (adj) "angry" ⟶ *fe'ita'aki* (v.i.) "to get angry with each other"

tokoni (v.i.) "to help" ⟶ *tokoni'i* (v.t.) "to help someone"

[2] This suffix *-'i* is called transitive suffix by Churchward (1953) and has been accepted as such in the literature (Tchekhoff 1978, 1979, Shumway 1971). However, Lynch (1972) argues that *–'i* functions as a passive suffix. We will return to this issue in Chapter 8.

[3] The Tongan orthography adopted in this thesis is the one used by the native Tongan speakers, except for the long vowels. In this thesis, long vowels are represented by the duplication of the vowel, e.g., *aa*. The apostrophe stands for a glottal stop. Glottal stop is a full-fledged phoneme in Tongan, as illustrated by the following minimal pair: *anga* ("habit") and *'anga* ("shark"). Note also that definiteness of a NP is indicated by the stress on the final syllable of the final element of the noun phrase. This is called "definitive accent" and is an essential part of the Tongan orthography: e.g., *'a e tamasi'í* (the boy), *'a e tamasi'i potó* (the smart boy). Admitting that the definitive accent is an indispensable part of Tongan grammar, in our Tongan examples we will omit the accent mark. Unless otherwise indicated, wherever a definite article appears the definitive accent is implied and thus it is translated as *the*.

Inflectional morphology is virtually nonexistent. Tense and aspect are indicated by independent lexical items, which immediately precede the verb.[4] Tongan has three tense markers and one aspect marker as shown in (3.2) below.

(3.2) Tense/aspect markers in Tongan

Present tense marker	*'oku*
Future tense marker	*'e/te*[5]
Past tense marker	*na'e/na'a*
Perfect aspect marker	*kuo*

Tongan does not show any agreement in number, person or gender except for a few intransitive verbs that agree with the subject in number, e.g., *'alu/oo* ("go") and *ha'u/oo-mai* ("come").

As for noun phrases, a noun is preceded by an article, either definite (*e/he*)[6] or indefinite (*ha*). Although Tongan has both definite and indefinite articles, the definite articles do not necessarily indicate that the argument is definite. In Tongan, definite article is the unmarked option and can be interpreted as either definite or indefinite. Definiteness is indicated by the definitive accent, which is placed on the final syllable of the NP. Thus, in (3.3a) the object can be understood as either definite or indefinite

[4] We assume that these tense markers are independent lexical items rather than inflection on the verb, based on the following phonological evidence. Tongan has a penultimate accent in an unmarked environment: e.g., *tamasí'i, faka'ofo'ófa*, and so on. When two (or more) elements are combined to form a constituent, the penultimate accent shifts to the penultimate syllable of the newly formed compound. Hence, *'óku* becomes *'okú* when followed by a monosyllabic clitic pronoun such as *ke*: *'okú-ke* . This accent shift, however, does not extend over to the verb: *'okú-ke 'álu* but * *'oku-ke-álu* ("You go"), and *'óku 'álu* but * *'oku-'álu*. This suggests that tense markers are not part of a verbal compound, but independent lexical items. (However, see footnote 5 below).

[5] The future and past tense markers have two forms that alternate depending on what follows them. When followed by a verb, *'e* and *na'e* are used. When followed by a pronoun, *te* and *na'a* are used. Lawrence Reid (p.c.) points out that *'e* and *na'e* are used only with third person subjects (i.e., non-pronominal arguments), and suggests that these morphemes are actually subject-agreement. However, this observation is not entirely correct, as the usage of *te* and *na'a* may also occur with a third person subject as long as it is pronominal.

[6] The difference between the two definite articles is merely phonological: *he* is used when immediately following the ergative case marker *'e*, or the prepositions *'i, ki*, or *mei* and *e*, otherwise.

without the definitive accent. On the other hand, the indefinite article is used to mean "some, any" rather than existential "a". In addition, its usage is generally limited to interrogative and negative constructions. Thus, (3.3b) is considered odd.

(3.3) a. Na'e sio 'a Sione ki he ta'ahine.
Pst see ABS Sione to def girl
"Sione saw a/the girl."

b. *Na'e sio 'a Sione ki ha ta'ahine.
Pst see ABS Sione to indef girl
"Sione saw a girl."

The usage of the indefinite article is exemplified by (3.4) below.

(3.4) a. 'Oku 'i ai ha maa?
Prs in there indef bread
"Is there some bread?"

b. Na'e 'ikai ke sio 'a Sione ki ha taha.
Pst neg that see ABS Sione to indef one
"Sione didn't see anyone."

Finally, Tongan shows an ergative pattern of case marking. Case is marked by prepositional particles: absolutive case (ABS) is marked by *'a* and ergative case (ERG) by *'e*, as illustrated by (3.5) below.

(3.5) a. Na'e 'alu 'a Sione.
Pst go ABS John
"John went."

b. Na'e kai 'e Sione 'a e mango.
Pst eat ERG John ABS def mango
"John ate the mango."

It should be noted that pronominal arguments do not abide by the rules mentioned above. First, pronominal subjects never co-occur with a case marker. Besides, they show an accusative pattern. Pronouns divide into two subclasses and one is used specifically for subjects. We will return to this point shortly.

3.2 Construction types

Tongan is a VSO language. We assume that the order VSO arises because verbs undergo obligatory V-to-I-to-C movement. This VSO order is fairly rigid as long as all the arguments involved are full NP's.[7] As it will be shown shortly, however, the order VSO is not retained with pronominal arguments.

3.2.1 Verbal Constructions

Verbal constructions in Tongan divide into three types: intransitive, transitive, and middle, represented by (3.6a), (3.6b), and (3.6c), respectively.

(3.6) a. Na'e 'alu 'a Sione ki Tonga.
Pst go ABS Sione to Tonga
"Sione went to Tonga."

b. Na'e kai 'e Sione 'a e ika.
Pst eat ERG Sione ABS def fish
"Sione ate the fish."

c. Na'e tokoni 'a Sione ki he faiako.
Pst help ABS Sione to def teacher
"Sione helped the teacher."
Lit. "Sione helped to the teacher."

Middle constructions are so called because of their ambiguous nature: they are syntactically intransitive, but semantically transitive involving two arguments. For example, in (3.6c) the ABS case marker precedes the subject, indicating that the sentence is intransitive. The logical object, on the other hand, appears in oblique case.

[7] It should be noted that the VOS alternative is also found in Tongan. VOS constructions typically have a passive interpretation (Churchward 1953, Tchekhoff 1973b, 1981 among others). We will consider the derivation of VOS construction and examine whether it is possible to analyse VOS constructions as passive, in Chapter 8. In this chapter, however, we leave the VOS order aside, assuming that VOS is a peripheral construction, possibly due to scrambling.

Middle verbs like *tokoni* cannot occur in a transitive construction, as illustrated by (3.7) below.

(3.7) *Na'e tokoni 'e Sione 'a e faiako.
Pst help ERG def boy ABS def teacher
"Sione helped the teacher."

In order to appear in a transitive construction, the verb must be transitivised by adding a suffix *–'i*. Compare (3.8) below with ungrammatical (3.7).

(3.8) Na'e tokoni'i 'e Sione 'a e faiako.
Pst help-trans ERG Sione ABS def teacher
"Sione helped the teacher."

Note that the contrast between the middle and the *-'i* transitive resembles the relation between the ergative transitive and the so-called antipassive in the following respects: a) the transitive A corresponds to the antipassive (or middle) S, and b) the transitive O corresponds to the antipassive (or middle) object appearing in oblique case. This resemblance seems to suggest that the middle could be analysed as antipassive. We will consider this question in Chapter 9.

3.2.2 Non-verbal constructions

Tongan does not have a copula verb. Adjectival and nominal predicates appear in a position immediately following a tense marker. The subject is marked by the ABS case marker. In other words, sentences with an adjectival or nominal predicate are of an identical form as the intransitive verbal construction. See (3.9) below.

(3.9) a. 'E 'ita 'a Sione.
Fut angry ABS Sione
"Sione will be angry."

b. 'Oku faiako 'a e fefine.
Prs teacher ABS def woman
"The woman is a teacher."

There are two points that call for some explanation regarding constructions with an adjectival/nominal predicate. First, note that the predicate precedes the subject in linear order in these sentences. In fact, the adjectival/nominal predicate cannot follow the subject, as illustrated by (3.10) below. This suggests that adjectival/nominal predicates raise to C just like verbs.

(3.10) a. *'E 'a Sione 'ita.
Fut ABS Sione angry
"Sione will be angry."

b. *'Oku 'a e fefine faiako.
Prs ABS def woman teacher
"The woman is a teacher."

Second, note that in (3.9b) no case marker precedes the noun *faiako*. This suggests that the noun *faiako* in this case is not an argument but a predicate. Otherwise, the sentence would be ruled out by the Case Filter, which requires an argument have case. Given these two facts, we may assume that there is an abstract verb *v* in these sentences. A noun/adjective is incorporated into *v*, in the sense of Baker (1988), to form a predicate, acquiring the characteristics similar to those of a verb.[8]

Note also that prepositional phrases may act as predicates in a similar fashion. As illustrated by (3.11) below, a PP predicate must appear in the position immediately following the tense marker and preceding the subject.

[8] ABS case marking on the subject can also be accounted for if we assume that a predicate nominal/adjective counts as a verb because it is assumed that ABS is assigned by virtue of case-feature checking by the verb. For details, see discussion in Chapter 4.

(3.11) a. 'Oku 'i he funga teepile 'a e tohi.
Prs in def surface table ABS def book
"The book is on the table."

b. *'Oku 'a e tohi 'i he funga teepile.
Prs ABS def book in def surface table

Applying the above hypothesis, we may assume that the PP *'i he funga teepile* as a whole has been incorporated into the abstract verb v and then has undergone raising to C.

3.2.3 *Ko*-construction

There is another construction specifically used for nominal predicates. This construction is introduced by a predicate marker, *ko*. As shown in (3.12) below, *ko*-constructions lack a tense marker[9] and are typically interpreted as present tense.

(3.12) a. Ko e faiako 'a Sione.
Pred def teacher ABS Sione
"Sione is a teacher."

b. Ko e fonua faka'ofa'ofa 'a Tonga.
Pred def country beautiful ABS Tonga
"Tonga is a beautiful country."

It should be noted that not all of the *ko*-sentences can be replaced by a nominal predicate construction described in §3.2.2. For example, compare (3.13) below with (3.12b).

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[9] The following evidence suggests that *ko*-constructions lack not only tense morphology but also the T node itself. As we will see shortly, pronominal subjects are usually realised as a clitic. However, as illustrated by (i) below, a pronominal subject cannot appear in its clitic form in *ko*-constructions.
(i) a. Ko Mele au.
Pred Mele 1.s.
"I am Mele."
b.*U ko Mele.
CL.1.s. Pred Mele
As will be argued in Chapter 6, we assume that clitic pronouns attach to T. Thus, the fact that clitic pronouns are excluded in *ko*-constructions suggests that T does not exist *ko*-constructions.

(3.13) *'Oku fonua faka'ofa'ofa 'a Tonga.
Prs country beautiful ABS Tonga
"Tonga is a beautiful country."

Note also that the NP following *ko* is not accompanied by a case marker, but it is accompanied by a definite article *e*. In contrast, in the nominal predicate constructions, a predicate nominal stands alone. In other words, a nominal following *ko* is different from a nominal in the nominal predicate construction in that the former is a DP. Here we face a problem: if the nominal is not a predicate, then what is the predicate in *ko*-constructions?

The usage of *ko* is not limited to *ko*-constructions. Consider the following example.

(3.14) Na'a ku fetaulaki mo e ta'ahine ko Mele.
Pst 1.s. meet with def girl Pred Mele
"I met the girl (called) Mele"

In (3.14), *ko* is used to introduce a NP in apposition with the preceding NP.[10] Given examples like (3.14), *ko* is best described as an appositional preposition. Assuming that *ko* is a preposition, then we may apply the hypothesis we used above regarding the PP predicate construction. That is, a PP headed by *ko* is incorporated into the abstract *v*.

It should be noted also that the interrogative and the cleft are also introduced by *ko*, as illustrated by (3.15) below.

(3.15) a. Ko hai_i [OP_i [na'e 'alu t_i ki Tonga]?
Pred who past go to Tonga
"Who went to Tonga?"
Lit. "Who is it that went to Tonga?"

[10] As Gillian Ramchand (p.c.) suggests, we may assume that in this construction *ko* forms a kind of small clause of the following structure: [$_{sc}$ e ta'ahine [$_{pred}$ ko Mele]].

(3.15) b. Ko Sione$_i$ [OP$_i$ [na'e 'ita lahi 'aupito t_i].
Pred Sione past angry much very
"Sione was very angry."
Lit. "It is Sione that was very angry."

3.3 Pronouns

As mentioned above, the regular VSO order is not retained if a construction contains pronominal arguments. This is because pronouns are required to appear in a particular position: either immediately preceding the verb or immediately following the verb. Pronouns in Tongan are classified into two subclasses according to the position in which they appear. See (3.16) below. Pronouns of Set A appear immediately preceding the verb, while those of Set B appear following the verb.

(3.16) Tongan Pronouns

	Set A	Set B
1st Excl[11]. s.	te	kita
1st Excl. d.[12]	ma	kimaua
1st Excl. pl.	mau	kimautolu
1st Incl. s.	ou/ku/u[13]	au
1st Incl. d.	ta	kitaua
1st Incl. pl	tau	kitautolu
2nd s.	ke	koe
2nd d.	mo	kimoua
2nd pl.	mou	kimoutolu
3rd s.	ne	ia
3rd d.	na	kinaua
3rd pl.	nau	kinautolu

[11] Tongan distinguishes the first person exclusive from inclusive. Exclusive first person pronouns exclude the speaker. Referent of the first person exclusive singular pronoun, *te* is an arbitrary/general "one" rather than referring specifically to the speaker. When referring to the speaker, it is used in the language of politeness or humility (Churchward 1953).

[12] Note also that Tongan distinguishes dual (two persons) from plural (more than two).

[13] The difference between the three first person singular pronouns is morpho-phonological. *Ou* is used after *'oku* (present tense marker), *u* after *te* (future tense marker) and *ke* (infinitival complimentiser), and *ku* after *na'a* (past tense marker).

Note that the Set A pronouns cannot appear following the verb, nor can the Set B pronouns precede the verb. See (3.17) below.

(3.17) a. Te u ʻalu ki Tonga.
Fut 1.s. go to Tonga
"I will go to Tonga."

b. *Te ʻalu u ki Tonga
Fut go 1.s. to Tonga

c. ʻE ʻave au ʻe Sione.
Fut take 1.s. ERG Sione
"Sione will take me."

d. *Te au ʻave ʻe Sione.
Fut 1.s. take ERG Sione
"Sione will take me."

Another substantial difference is that Set A pronouns always occur as a subject, while those belonging to Set B occur as a direct object. Thus, sentences in (3.18) are ungrammatical.

(3.18) a. *Te ʻalu au ki Tonga.
Fut go 1.s. to Tonga
"I will go to Tonga"

b. *Te u ʻave ʻe Sione.
Fut 1.s. take ERG Sione
"Sione will take me"

(3.18a) is ruled out because the sentence lacks a subject. Being a Set B pronoun, *au* cannot count as a subject. On the other hand, (3.18b) is barred because it has two subjects, a Set A pronoun *u* and the ERG-marked argument *Sione*.

Furthermore, a careful observation reveals two more significant facts. First, the Set A pronouns never co-occur with a case marker, while the Set B pronouns are sometimes accompanied by a case marker. See (3.19) below.

(3.19) a. *Te ʻalu ʻa ke ki Tonga.
Fut go ABS 2.s. to Tonga
"You will go to Tonga"

b. *ʻE ʻave ʻe ke ʻa Sione.
Fut take ERG 2.s. ABS Sione
"You will take Sione"

c. ʻE ʻave ʻe Sione ʻa koe.
Fut take ERG Sione ABS 2.s.
"Sione will take you"

As illustrated by (3.19a) and (3.19b), a Set A pronoun *ke* cannot co-occur either the ABS case marker or the ERG case marker. In contrast, (3.19c) is grammatical with a set B pronoun *koe* preceded by the ABS case marker. Second, while the Set A pronouns are never allowed to occur as a direct object, the Set B pronouns may occur as a subject if they accompany a case marker. Consider the following examples.

(3.20) a. Na'e tangi lahi ʻa kinautolu.
Pst cry much ABS 3.pl.
"They cried a lot"

b. *Na'e ʻave ʻe Sione ʻa nau.
Pst take ERG Sione ABS 3.pl.
"Sione took them"

In summary, Set A pronouns are used specifically for subjects and are required to occur in the position immediately preceding the verb.[14] They can never co-occur with a case marker. Set B is used in other environments. Set B pronouns are generally used as direct objects, but can also be used as subjects. When occurring as a direct object, a pronoun of this class may stand without a case marker, but the presence of a case marker is obligatory when it occurs as a subject. In other words, Set B pronouns are not different from full NP's except that they may stand sans case marker under a

certain condition.[15] In contrast, distribution of Set A pronouns is highly restricted. This observation leads to a hypothesis that the difference between the two sets of pronouns is that one is clitic and the other is independent.[16, 17] A clitic needs a host to which it attaches. Consequently, it must appear adjacent to the host: either immediately preceding the host or immediately following the host. This description of clitic fits the above mentioned behaviour of Set A pronouns. Thus, in the following discussion, we will refer to Set A pronouns as clitics and Set B pronouns as (independent) pronouns. What is notable is that the occurrence of clitics is strictly limited to subjects, i.e., S and A. This restriction shows an accusative pattern, which is rather unexpected given that case marking on full NP's as well as independent pronouns is ergative. We will discuss why and how this accusative pattern arises in Chapter 6.

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[14] More accurately, it is the position between the tense marker and the verb.

[15] However, it should be noted that the omission of the ABS case marker also applies to full NP's. In particular, the omission of a case marker is obligatory with indefinite arguments. Thus, to be accurate, the difference is that the omission of a case marker necessarily affects the word order with pronouns while it does not with full NP's.

[16] Interestingly, this observation fits the following description of Proto-Polynesian personal pronouns. According to Besnier (1992), Proto-Polynesian personal pronouns have a clitic form and an independent form. The former is used when the pronoun is a transitive subject, and placed between the tense/aspect marker and the verb. The latter is used in all other contexts.

[17] Churchward (1953) is inclined to analyse both Set A ("preposed") and Set B ("postposed") as clitics, and argues that there is another set of pronouns that behave as independent pronouns, which he calls "emphatic". Emphatic pronouns are of identical forms to Set B pronouns, but they are required to occur with a case marker. However, our analysis is preferable to Churchward's proposal for the following reasons. First, it is not economical for a language to be equipped with two sets of pronouns consisting of identical constituents. It is preferable to account for the distinction between Set B pronouns and emphatic pronouns in terms of some syntactic rules. Second, most of the Set B pronouns are morphologically too complex to be a clitic. (I am grateful to Gillian Ramchand for bringing this point to my attention). We will return to this issue in Chapter 6.

3.4 *Pro*-drop

3.4.1 Subjectless sentences

In Tongan, a pronominal argument can be omitted if its referent is identifiable by virtue of context. Thus, we frequently encounter subjectless sentences such as those in (3.21) below.

(3.21) a. Na'e 'ave 'a Sione ki he ako.
Pst take ABS Sione to def school
"(someone) took Sione to school."

b. Na'e tamate'i 'a e siana.
Pst kill ABS def man
"(someone) killed the man."

Both *'ave* ("to take") and *tamate'i* ("to kill") are transitive verbs. Therefore, the argument marked by the ABS case marker, *'a* is the object, not the subject.[18] In other words, these are transitive sentences lacking A. (3.21a) and (3.21b) may be uttered, for example, in a context given below.

(3.22) a. i. 'Oku 'i fee 'a Mele?
Prs in where ABS Mele
"Where is Mele?"

ii. Na'e 'ave 'a Sione ki he ako.
Pst take ABS Sione to def school
"(She) took Sione to school."

[18] Tchekhoff (1979) observes that the ABS marked argument in constructions derived by the subject deletion is interpreted differently depending on the verb types; a) verb like *'ave* ("take") requires it to be interpreted as Patient; b) verbs like *tamate* ("kill") requires it to be interpreted as Agent and c) with verbs like *kai* ("eat"), it can be interpreted as either, depending on the context. However, in everyday use, verbs of type (b) are usually transitivised by *–'i* affixation and as a result, the ABS-marked argument is interpreted as Patient.

(3.22) b. i. Ko e haa e me'a na'e fai 'e Pita?
Pred def what def thing Pst do ERG Pita
"What did Pita do?"

ii. Na'e tamate'i 'a Sione.
Pst kill ABS Sione
"(He) killed Sione."

We assume that the phonologically absent subject in sentences like (3.21a, b) is syntactically present, because otherwise such sentences would be ruled out due to the Extended Projection Principle, which requires that a sentence have a subject (Chomsky 1981). A phonetically null subject occurs also in intransitive constructions as well as in middle constructions, as illustrated by (3.23) below.

(3.23) a. Kuo 'osi 'alu.
Perf already go
"(She) has already gone."

b. 'Oku sai'ia 'ia Mele.
Prs like in Mele
"(He) likes Mele"

3.4.2 *Pro* and licensing conditions

Note that similar subjectless sentences exist in languages such as Italian and Spanish. Italian and Spanish are so-called *pro*-drop languages, permitting a phonetically null pronoun called *pro* in the subject position. Thus, both (3.24a) with an overt subject and (3.24b) without one are equally grammatical in Spanish.[19]

(3.24) a. Yo hablo espanol.
1.s. speak-1.s. Spanish
"I speak Spanish"

b. *pro* hablo espanol.
speak-1.s. Spanish

[19] However, it should be noted that sentences with a null subject are strongly preferred. (3.23a), for example, is considered odd in an unmarked context.

Pro in (3.24b) is a phonetically null pronoun and is assumed to bear the features identical to those of the first person singular pronoun, *yo*. In a *pro*-drop language, this covert element does count as a legitimate subject and therefore, the apparent absence of the subject does not lead to ungrammaticality. Adopting this analysis, let us assume that subjectless sentences in Tongan also contain *pro*. To support this hypothesis, the empty subject in these sentences may be replaced by a clitic pronoun without affecting the meaning.

Assuming that the empty subject in Tongan sentences such as (3.21a,b) is *pro*, we need to explain how *pro* is licensed in these constructions. In Spanish, for example, *pro* is licensed because features of *pro* are identifiable by virtue of inflection on the verb. In contrast, *pro* cannot be licensed in English because verbal inflection is not rich enough. In Tongan, verbal inflection is even more limited. Consequently, it is impossible to identify the referent of a subject by the form of the verb. Rather, it seems that it is a pragmatic factor that licenses *pro* in Tongan: *pro* may occur as a subject provided an appropriate context in which its referent is identifiable. Therefore, a subjectless sentence is considered grammatical only as part of speech, but not as an independent utterance. Thus, (3.25b) is considered odd without some preceding utterance such as (3.25a).

(3.25) a. Na'e 'alu 'a Sione ki fee?
Pst go ABS Sione to where
"Where did Sione go?"

b. Na'e 'alu *pro* ki Tonga.
Pst go to Tonga
"(He) went to Tonga."

Put differently, *pro* in (3.25b) cannot refer to a random third person singular entity.

Considering the virtual lack of inflection, the existence of *pro* in Tongan seems to contradict the prevalent conviction that *pro* is licensed by virtue of rich inflection. However, as Jaeggli and Safir (1989) point out, the argument that there is a strong relation between *pro* and rich inflection is rather flimsy. For example, *pro* is not permitted in German despite its rich inflection. Thus, Jaeggli and Safir posit the following Null Subject Parameter to account for various instances of *pro*-drop.

(3.26) The Null Subject Parameter (Jaeggli and Safir 1989:29)

> Null subjects are permitted in all and only languages with morphologically uniform inflectional paradigms.

An inflectional paradigm is morphologically uniform if and only if verbs either show no agreement at all or appear only in derived inflectional forms. English is not morphologically uniform, because verbs appear in the inflected form with a third person singular subject but in the root form otherwise. In *pro*-drop languages such as Italian, verbs consistently appear in their inflected forms. On the other hand, some languages are morphologically uniform in that verbs never agree in person and number. Japanese, for example, freely omits the subject when the context allows both the speaker and hearer to identify its referent.[20] See (3.27) below.

(3.27) a. *pro* kinou ki-masita-ka?
yesterday come-Pst-question
"Did (you) come yesterday?"

b. Hai, *pro* ki-masita.
Yes, come-Pst.
"Yes, (I) did"

Tongan is also morphologically uniform except for a few verbs such as *'alu* and *ha'u*

[20] Cf. Huang 1984, 1989 for Chinese data.

that show the number agreement. However, it should be noted that these verbs sometimes appear in the uninflected form with plural subjects without affecting the grammaticality. Considering that agreement is virtually none in Tongan save these exceptions and that even in these cases agreement is not obligatory, Tongan could be regarded as morphologically uniform, and thus *pro* should be permissible.

It should be noted, however, that the usage of *pro* in Tongan is significantly limited compared with Japanese. As illustrated by (3.28) below, first/second pronominal arguments may never be *pro*. (3.28b) is considered ungrammatical as an answer to the question (3.28a) although the context clearly indicates who the subject refers to.

(3.28) a. Na'a ke ha'u 'aneafi?
Pst 2.s. come yesterday
"Did you come yesterday?"

b. *'Io, na'e *pro* ha'u.
Yes Pst come
Intended meaning: "Yes, (I) did."

c. 'Io, na'a ku ha'u.
Yes Pst 1.s. come
"Yes, I did."

In short, in Tongan *pro*-drop applies exclusively to the third person singular pronoun.

Finally, on a different note, it is said that the subjectless transitive construction in Tongan typically has a passive interpretation (Churchward 1953, Tchekhoff 1973a,b among others). Thus, one may hypothesise that such a subjectless construction is derived by passivisation. However, considering that intransitive constructions may also be subjectless, this passive hypothesis seems infeasible. It is more plausible that

the subjectless transitive arises because of *pro*-drop rather than passivisation.[21]

3.5 Expletive

The EPP requires that a sentence have a subject. Generally, the term subject refers to an argument to which the verb assigns an external theta-role in the sense of Williams (1980, 1981): S of an intransitive verb and A of a transitive verb. Some intransitive verbs, however, do not assign an external theta-role. These include verbs of weather and unaccusative verbs . The former simply does not assign any theta-role. The latter only assigns an internal theta-role (Perlmutter 1978, Burzio 1986). When there is no argument that fits the above definition of subject, a language takes one of the following strategies in order to satisfy the EPP: a) to insert an expletive element in the subject position or b) to move an argument, if there is one available, to the subject position. Take English for example. Weather constructions contain an expletive *it* in the subject position, as illustrated by (3.29a). Similarly, in (3.29b), an unaccusative verb *seem* takes an expletive subject. In (3.29c), the subject of the embedded clause has been moved to the matrix subject position.[22]

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[21] As a related topic, there is VOS construction, which is also said to have a passive interpretation. See (i) below. Here the subject (A) follows the object in linear order, apparently violating the regular VSO order. Lynch (1972) suggests that VOS constructions are derived by passivisation: the ABS marked argument is the surface subject and *'e* is an agent marker. This and other issues concerning the passive in Tongan will be discussed in Chapter 8.

(i) Na'e tamate'i 'a siana 'e Pita.
Pst kill ABS def man Agt Pita
"The man was killed by Pita."

[22] To be accurate, this movement requires another condition: namely, the Case Filter cannot be met if the argument in question remains in the embedded clause.

(3.29) a. It rained yesterday.
b. It seems that John likes Mary.
c. John$_i$ seems to t_i like Mary.

In this section, we will consider how Tongan deals with such cases.

3.5.1 Weather verbs

Weather verbs in Tongan include *'uha* ("to rain"), *sinou* ("to snow"), *la'a* ("to be sunny"), and *havili* ("to be windy"). As illustrated by (3.30), weather constructions do not contain an overt subject, not even an overt expletive.

(3.30) a. Na'e 'uha lahi 'anepoo.
Pst rain much last night
"It rained a lot last night"

b. 'Oku pupuha 'i he 'aho ni.
Prs humid in def day this
"It is humid today."

These sentences apparently have the structure (3.31) below.

(3.31) Tense V-weather

The structure (3.31), however, should be ruled out by the EPP since it lacks a NP that counts as a subject. Thus, we assume that there is a null subject *pro* in sentences (3.30a,b).

The preceding discussion has shown that Tongan is a *pro*-drop language with some idiosyncratic restrictions. First, *pro* is permitted only when its referent is identifiable by virtue of context. Second, *pro* is typically third person singular in its feature specification. Returning to the weather constructions, we assume the following structure.

(3.32) Tense V-weather *pro*

Pro in (3.32), however, cannot be replaced with the third person singular pronoun, *ne*. See (3.33) below.

(3.33) a. Na'e *pro* 'uha lahi.
Pst rain much
"It rained a lot."

b. *Na'a ne 'uha lahi.
Pst 3.s. rain much
"It rained a lot."

The fact that (3.33b) is ruled out suggests that *pro* in (3.33a) is different from the one discussed earlier.

Let us maintain the hypothesis that *pro* in Tongan bears the features [3.s.]. Considering that an expletive is generally a third person singular pronoun, e.g., *it* in English and *il* in French, it is plausible that expletive elements are universally [3.s.]. The difference would then be the feature [±human]. In English, for example, an expletive *it* is distinguished from the [3.s.] personal pronoun *he*. As for French *il*, we may assume that there are two *il*'s: one is [+human] and the other is [–human]. Similarly, we may assume that Tongan has two *pro*'s: both have the features [3.s.], but crucially, one is personal and the other is impersonal. In fact, a similar situation is found in Spanish. See (3.34) below.

(3.34) *pro*/*el/*eso esta lloviendo.
3.s be-3.s. rain-progressive
"It is raining."

As illustrated by (3.34), replacing *pro* with an overt pronoun results in ungrammaticality. Neither the personal [3.s.] pronoun nor the impersonal [3.s.] demonstrative is allowed in the subject position. In other words, the expletive *pro* is an element, distinct from both the personal pronoun *el* and the demonstrative *eso*.

Thus, we conclude that weather constructions in Tongan contain a phonetically null expletive *pro* with the features [3.s., –human] in the subject position.

3.5.2 Unaccusative verbs

Tongan has several one-place predicates that subcategorise for a sentential subject. These include *pau* ("to be determined"), *totonu* ("to be advisable") and a negative verb *'ikai*. See (3.35) below.[23]

(3.35) a. Kuo pau [ke 'alu 'a Sione].
Perf determined that go ABS Sione
"Sione must go."
Lit. "(It) has been determined that Sione go."

b. Na'e 'ikai [ke 'alu 'a Sione].
Pst not that go ABS Sione
"Sione did not go."
Lit. "(It) was not that Sione go."

c. 'Oku totonu [ke 'alu 'a Sione].
Prs advisable that go ABS Sione
"Sione had better go."
Lit. "(It) is advisable that Sione go."

As illustrated by (3.36) below, these verbs cannot take a thematic subject.

(3.36) a. *Kuo pau 'a Sione.
Perf determined ABS Sione
Intended meaning: Sione is determined.

b. *Na'e 'ikai 'a Sione.
Pst not ABS Sione
Intended meaning: Sione didn't/wasn't.

c. *'Oku totonu 'a Sione.
Prs advisable ABS Sione
Intended meaning: Sione should.

[23] Whether *ke*-clauses are finite or infinitive is one of the most controversial issues in Tongan syntax. As we will see shortly, *ke*-clauses are like finite clauses in that they are case assigning. At the same time, they are similar to infinitive clauses in that PRO may occur. Note that *ke* is glossed as *that* in (3.35) simply for the sake of convenience. It does not imply that *ke*-clauses are finite.

In this respect, these one-place predicates are similar to *seem*, a special instance of the unaccusative. Let us assume that the expletive *pro* is present in the subject position of the sentences in (3.35) above. Thus,

(3.37) a. Kuo pau *pro* [ke 'alu 'a Sione].
Perf determined that go ABS Sione
"Sione must go."

b. Na'e 'ikai *pro* [ke 'alu 'a Sione].
Pst not that go ABS Sione
"Sione did not go."

c. 'Oku totonu *pro* [ke 'alu 'a Sione].
Prs advisable that go ABS Sione
"Sione had better go."

However, unlike *seem*, the movement strategy is not available in Tongan. An embedded argument cannot move to the matrix subject position, as illustrated by (3.38) below.

(3.38) a. *Kuo pau 'a Sione$_i$ [ke 'alu t_i].
Perf decided ABS Sione ke go
"Sione has been decided to go."

b. *Na'e 'ikai 'a Sione$_i$ [ke 'alu t_i].
Prs not ABS Sione ke go
"Sione did not go."

An exception is *totonu*, which allows the following structure.

(3.39) 'Oku totonu 'a Sione$_i$ [ke 'alu t_i].
Prs advisable ABS Sione ke go
"Sione had better go."
Lit. "Sione is advisable that go."

Sentences like (3.39) raise a problem because derivation of (3.39) apparently involves movement from a case position.[24] Such movement should be barred due to the Chain

[24] Sentences like (3.39) is problematic in another sense. As illustrated by (i) below, the raised argument appears in ABS whether it is S or A. In other words, case is assigned in the target position and the verb *totonu* is responsible for this case assignment.

Condition (Chomsky 1981). Therefore, it would be preferable to assume that a) the movement strategy is not available in Tongan and that b) sentences like (3.39) are derived not by raising but by some other syntactic rules. We will consider this issue in Chapter 7.

3.6 Subordinate clauses

There are two types of subordinate clauses in Tongan: those introduced by a tense marker and those introduced by an element *ke*. The former is without a doubt finite, similar to *that*-clauses in English. On the other hand, whether *ke*-clauses are finite or infinitive is not an easy question to answer. They are like infinitives in that they do not contain a regular tense marker. Yet, they are similar to finite clauses with regard to case assignment. Generally, it is assumed that Infl of infinitives checks only the Null case feature, which is associated with an empty element PRO, and no other case features (Chomsky and Lasnik 1993). Thus, in English *to*-infinitives cannot have a NOM-marked subject. However, in *ke*-clauses ERG-marked arguments as well as ABS-marked arguments freely occur. This suggests that case features, both ERG and ABS, can be checked inside *ke*-clauses. More problematically, *ke*-clauses may contain an empty subject that could be analysed as PRO. In short, *ke*-clauses must be able to check off all of the three case features, ABS, ERG and Null, which is an impossible

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(i) ʻOku totonu ʻa Sione [ke ʻave *ti* ʻa Mele].
Prs advisable ABS Sione that take ABS Mele
"Sione had better take Mele."
This fact is contradictory to our assumption that *totonu* is unaccusative: unaccusative verbs do not have case feature (Burzio 1986). Unaccusatives in ergative languages will be discussed in Chapter 4.

situation according to the assumptions of the standard theory.

3.6.1 Finite clauses

Finite subordinate clauses are not different in any way from independent clauses. They are introduced by a tense marker. Word order is VSO and case marking is ergative. Verbs like *pehee* ("to think"), *'ilo* ("to know"), and *tui* ("believe") take a finite clause as a complement. See (3.40) below.

(3.40) a. 'Oku 'ilo 'e Sione [na'e 'alu Mele ki ai]
Prs know ERG Sione Pst go ABS Mele to there
"Sione knows that Mele went there."

b. 'Oku ou pehee [na'e kai 'e Sione 'a e ika]
Prs. 1.s. think Pst eat ERG Sione ABS def fish
"I think that Sione ate the fish."

Note that no other element precedes the tense marker within the subordinate clause. In other words, there is no complementiser equivalent to English *that*. This can be explained by our assumption that the V-to-C movement is obligatory in Tongan. If this rule also applies to subordinate clauses, C will be occupied by the V+T cluster and as a result. Consequently, the position C is not available for a complementiser.

3.6.2 *Ke*-clauses

The standard theory distinguishes two types of clauses in terms of tense. Finite clauses contain a tense element that is specified for a certain tense such as present and past. Infinitival clauses lack specified tense but instead have a kind of tense anaphora: they are dependent on the main clause for their temporal interpretation. Generally, the tense of the infinitive is interpreted either as simultaneous or as future in relation to the matrix tense (Stowell 1982). Another important observation is that only finite clauses

have an overt subject. Infinitival clauses may contain only an empty subject i.e., PRO.[25] Complementary distribution of PRO and overt NP's is considered to arise due to some case-related reasons. Specifically, Chomsky and Lasnik (1993) propose that Infl of infinitives is specified for Null case and thus can check only Null case, which is associated with PRO. Given these assumptions, we consider that a) tenseless clauses are infinitival and b) infinitival clauses allow only PRO in the subject position.

According to the definition sketched above, *ke*-clauses could be both finite and infinitival. There are three points to note: a) *ke*-clauses lack a regular tense marker; b) *ke*-clauses may contain an empty subject that is neither *pro* nor a trace; and c) *ke*-clauses may contain both ERG-marked and ABS-marked arguments. Assuming that the empty subject is PRO, the first two facts suggest that *ke*-clauses are infinitival. However, the fact that both ABS and ERG can be assigned inside *ke*-clauses cannot be explained if we assume that *ke*-clauses are infinitival. In short, we are facing a perplexing situation.[26]

As illustrated by (3.41b) below, *ke* cannot co-occur with a regular tense marker.

[25] Strictly speaking, another empty category, trace may also appear in the subject position of an infinitival clause. This option is available in the so-called Exceptional Case Marking (ECM) constructions. In ECM constructions, the overt subject of the infinitive raises to the matrix object position in order to satisfy the Case Filter, thereby leaving a trace in the infinitival clause (Chomsky 1993).

[26] Thus, Churchward (1953) concludes that Tongan has only one type of subordinate clauses while English distinguishes infinitival clauses from finite ones. He calls *ke* "prospective" conjunction, noting that *ke*-clauses refer to a future event in relation to the event described by the main clause.

(3.41) a. Na'e ha'u 'a Sione [ke fetaulaki mo Mele].
Pst come ABS Sione ke meet with Mele
"Sione came to see Mele."

b. *Na'e ha'u 'a Sione [ke te fetaulaki mo Mele].
Pst come ABS Sione ke Fut meet with Mele
Intended meaning: "Sione came so that he should see Mele."

Ke-clauses may appear not only as adverbial clauses, but also as adjectival clauses, subjects, and complements of a verb. See (3.42) below.

(3.42) a. 'Oku 'i fee 'a e fale [ke tau holoki]?
Prs in where ABS def house ke 1.incl.pl. demolish
"Where is the house (for us) to demolish?"
(Churchward 1953: 53)

b. 'Oku lelei ke tau fai leva 'a e ngaaue.
Prs good ke 1.incl.pl. do immediately ABS def work
"It is good that we do the work immediately."
(Churchward 1953: 52)

c. Na'e manatu'i 'e Sione [ke tamate'i 'a e maama].
Pst remember ERG Sione ke kill ABS def light
"Sione remembered to turn off the light."

Note that *ke*-clauses in (3.42c) lack an overt subject, while in (3.42a) and (3.42b) the subject is overtly present.

We assume that the empty subject in *ke*-clauses is PRO for the following reasons. Take a verb *loto* ("want"). Consider (3.43) below. The italicised *e* stands for an empty category.

(3.43) a. 'Oku loto 'a Sione$_i$ [ke 'alu e_i].
Prs want ABS Sione ke go
"Sione wants to go."

b. 'Oku loto 'a Sione$_i$ [ke kai e_i 'a e ika].
Prs want ABS Sione ke eat ABS def fish
"Sione wants to eat the fish."

The empty element in these examples cannot be a trace of *Sione* because the pre-

raising construction (3.44) is ungrammatical. *Pro* in (3.44) is an empty expletive. As mentioned in §3.5.2, one-place predicates such as *totonu* ("to be advisable") allow this type of construction.

(3.44) *'Oku loto *pro* [ke 'alu 'a Sione].
Prs want ke go ABS Sione
"Sione wants to go."
Lit. "It wants that Sione go."

Could the empty element be a personal *pro*? This hypothesis is also untenable for the following reasons. First, if it were *pro*, then it would be replaceable with an overt pronoun. However, replacing the empty element with an overt pronoun yields ungrammaticality, as illustrated by (3.45) below.[27]

(3.45) *'Oku loto 'a Sione$_i$ [ke ne$_i$ 'alu].
Prs want ABS Sione ke 3.s. go
"Sione wants to go."

Second, sentences like (3.46) are grammatical.

(3.46) 'Oku mau$_i$ loto [ke kai e_i 'a e ika].
Prs 1.excl.pl. want ke eat ABS def fish
"We want to eat the fish."

As discussed earlier, *pro* in Tongan must be third person singular. Thus, if the empty element in (3.46) is *pro*, it would not be coreferential with *mau*, a first person plural pronominal argument. The fact that coreference is permissible suggests that this empty element is not *pro*. Since it is neither *pro* nor a trace, we may assume that the empty subject of *ke*-clauses is PRO.

We have observed that *ke*-clauses are tenseless and contain PRO subjects. However,

[27] More accurately, what is prohibited is coreference between the pronoun and the matrix subject. The sequence itself is grammatical as long as coreference is not intended. Note also that coreference is obligatory with the empty subject. We will return to this issue in Chapter 10.

here is the puzzling fact: *ke*-clauses also allow an overt subject. See (3.47) below.

(3.47) a. 'Oku loto 'a Sione [ke 'alu 'a Mele]
Prs want ABS Sione ke go ABS Mele
"Sione wants Mele to go"

b. Oku loto 'a Sione [ke lea 'e Mele 'a e mo'oni]
Prs want ABS Sione ke tell ERG Mele ABS def truth
"Sione wants Mele to tell the truth"

Sentences in (3.47) demonstrate that both ABS and ERG can be assigned inside *ke*-clauses. This puzzling fact raises three questions. Are *ke*-clauses finite? If they are finite, how can PRO be licensed in *ke*-clauses? If they are infinitival, then, how can both ABS and ERG be assigned in *ke*-clauses? We will consider these questions in Chapter 10.

On a different note, *ke*-clause complements of negative verbs *'ikai* ("not") and *te'eki* ("not yet") differ from other instances of *ke*-clauses. Negative verbs in Tongan are unaccusative: they take a sentential complement and an empty expletive *pro* in the subject position. See (3.48) below.

(3.48) a. Na'e 'ikai *pro* [ke 'alu 'a Sione].
Pst not ke go ABS Sione
"Sione did not go."
Lit. "It was not that Sione go."

(3.48) b. Na'e 'ikai *pro* [ke kai 'e Sione 'a e ika].
Pst not ke eat ERG Sione ABS def fish
"Sione did not eat the fish."
Lit. "It was not that Sione eat fish."

As illustrated by (3.49) below, *ke*-clause complements of the negative constructions cannot contain an empty subject.

(3.49) *Na'e 'ikai 'a Sione$_i$ [ke 'alu e_i]
Prs not ABS Sione ke go
"Sione did not go"

In other words, PRO cannot appear in *ke*-clauses if the matrix verb is a negative verb. In addition, *ke* in the negative constructions shows some peculiar property. First, *ke* can be omitted in these constructions, as illustrated by (3.50) below.

(3.50) Na'e 'ikai ['ave 'e Sione 'a Mele].
Pst not take ERG Sione ABS Mele
"Sione did not take Mele."

Second, *ke* alternates with *te* when the embedded subject is a pronominal argument. See (3.51) below.

(3.51) a. Na'e 'ikai [te ne 'alu].
Pst not te cl.3.s. go
"He didn't go."

b. Na'e 'ikai [te mau kai 'a e ika].
Pst not te 1.excl.pl eat ABS def fish
"We did not eat the fish."

These properties are restricted to *ke*-clause complements of negative verbs. These facts seem to suggest that *ke* that occurs with *'ikai* and *te'eki* is somehow different from *ke* of other *ke*-clauses. A possible account may be as follows: Tongan is going through a process of reanalysing *'ikai/te'eki* as a functional head rather than a verb. When the speaker considers *'ikai/te'eki* as a verb, *ke/te* appears. This element *ke/te* can be dropped if the speaker treats *'ikai/te'eki* as a functional head of, say, NegP. However, this is merely a speculation. We will leave this issue open to future research.

3.7 Summary

To summarise, the above overview of the Tongan syntax has presented the following

three issues of significance: a) case marking, b) clitic pronouns, and c) *ke*-clauses. First, Tongan shows ergative case marking. As discussed in Chapter 2, ergative case marking is a problem for the standard theory. In order to account for ergative case marking, some modification is necessary. In Chapter 4, we will review various proposals and set forth an alternative analysis. This raises two other relevant issues: passive and antipassive. As mentioned above, the subjectless transitive and VOS constructions are said to have a passive interpretation. However, a passive construction is generally derived from an accusative construction. In addition, how passive is defined in an ergative language is not clear. In Chapter 8, we will propose a definition of passive that is applicable to both accusative and ergative languages and examine whether the subjectless transitive and VOS constructions in Tongan qualify as passive. As for the antipassive, the structure of the Tongan middle strikingly resembles that of the antipassive: the underlying A appears as a surface S and the underlying O as an oblique argument. We will look into this possibility in Chapter 9.

The second issue also concerns ergativity: specifically, the behaviour of clitic pronouns. Tongan has two sets of pronouns, clitic and independent. The distribution of clitic pronouns shows an accusative pattern: they may occur as S or A, but never as O. This accusative pattern is unexpected because in Tongan arguments are distinguished on an ergative basis otherwise. In Chapter 6, we will discuss why this accusative pattern arises. Note also that Tongan shows syntactic ergativity and that split exists at the syntactic level as well. Syntactic ergativity in Tongan will be discussed in Chapter 5.

Third, there is a problem of *ke*-clauses. *Ke*-clauses exhibit the following property: a) they lack a tense marker; b) they may have a PRO subject; and c) they may have a case-marked subject. The first two are characteristics of infinitival clauses, whereas infinitival clauses generally do not show the third property. We need to determine whether *ke*-clauses are finite or infinitival. If they are finite, then the following question arises. Why can PRO occur in *ke*-clauses? The standard theory predicts that PRO cannot appear in finite clauses because it cannot check off its Null case feature. On the other hand, if *ke*-clauses are infinitival, we will face another difficulty. We need to explain how case, both ABS and ERG, can be assigned in *ke*-clauses. We will discuss this issue in Chapter 10. There is yet another puzzle concerning *ke*-clauses. Some of the unaccusative verbs such as *totonu* ("to be advisable") seem to allow raising of an argument out of the *ke*-clause complement. Derivation of such a structure is problematic because it necessarily involves movement from a case-marked position. Movement from a case-marked position should be barred due to the Chain Condition (Chomsky 1981). This problem will be discussed in Chapter 7.

Chapter 4
Case Theory in Generative Grammar

The previous two chapters have presented a number of issues to be discussed concerning ergativity in general and its manifestation in the Tongan syntax. In this chapter, we will study various approaches to ergativity hitherto proposed in the literature and put forth an alternative analysis. In §4.1, we will review the standard case theory proposed by Chomsky (1991, 1993). The essence of the standard theory is that case is assigned by means of feature checking in a Spec-head configuration. In §4.2, some exceptional cases and how they are treated in the standard theory will be discussed. Noting that the feature checking mechanism of the standard theory fails to account for ergative case marking, we will review various approaches to ergative case marking in §4.3. These include the unaccusative analysis, the inherent case analysis (Woolford 1996), the dependent case analysis (Mahajan 1996, to appear), the KP approach (Bittner and Hale 1996a,b) and the active Agr approach (Bobaljik 1993). It will be shown that the active Agr approach is most promising in that it postulates a single parameter to account for the difference between accusative case marking and ergative case marking. Thus, our analysis of ergative case marking is based on the active Agr approach. In §4.4, we will propose an alternative analysis. Following Chomsky (1991, 1993), we assume that case assignment is in fact case feature checking. We also assume, with Bobaljik (1993), that the ergative-accusative

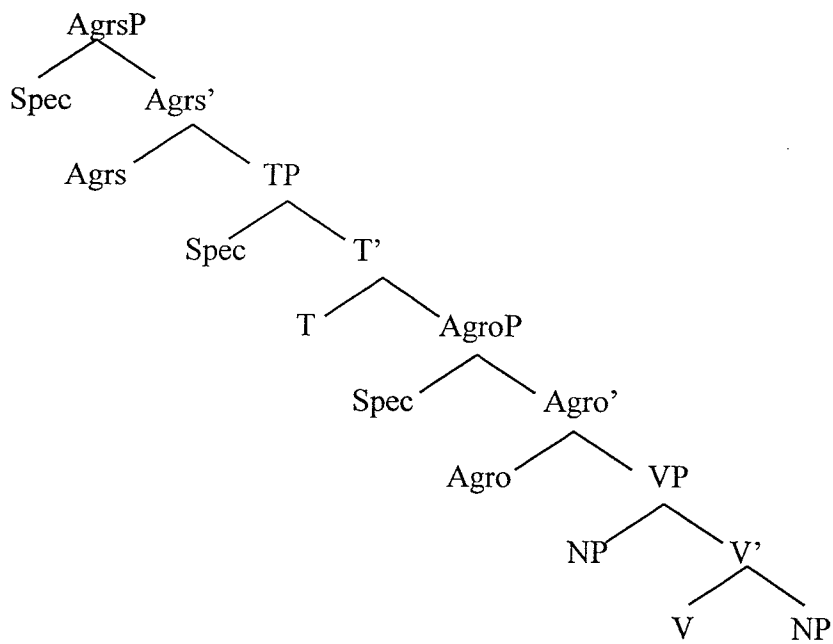
dichotomy arises due to the active Agr parameter. However, our analysis differs from the standard account in the following respects: a) case features are considered to be intrinsic to Agr, and not T and V; b) Null case feature is checked in [Spec, T], and not in [Spec, Agrs]. It will be shown that these modifications solve the problems with which other approaches are confronted. We will also consider how ergative case marking can be accounted for in the minimalist approach proposed by Chomsky (1995) and argue why our analysis is preferred.

4.1 Standard theory of case

In generative grammar, case is considered to be a phenomenon of language that is not reducible to some smaller, more fundamental notions. Case is often visible in the form of case morphology, e.g., inflection and particles. However, an essential assumption is that abstract case exists without overt morphology. Thus, when we mention case, we are referring to abstract case and not case morphology. Another important assumption is that an overt NP must have abstract case. This principle is known as Case Filter (Chomsky 1981). Abstract case is either structural or inherent. Structural case has some connection with structural positions and inherent case is associated with theta-roles (Chomsky 1981).

Structural case is considered to be the manifestation of Spec-head relation, specifically, that of Agr node(s) (Chomsky 1993).[1] In this approach, case assignment is accounted for in terms of feature checking. In the standard theory, it is assumed that each constituent bears a set of features and that these features must be checked (and thereby deleted) in the course of derivation in order to yield a grammatical sequence. Following Pollock (1989) and Chomsky (1993), we assume the base structure (4.1) below. IP consists of three functional categories, T(ense) and two Agr(eement)'s. We will also assume that the subject is base-generated in [Spec, VP].

(4.1)

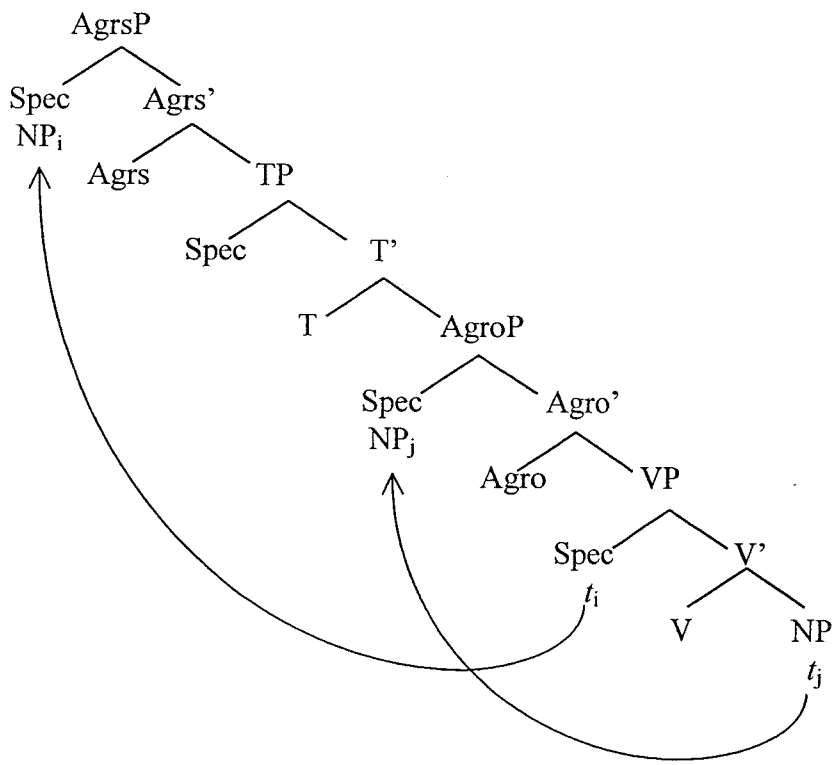


Chomsky (1993) assumes that T and V have intrinsic case feature, [NOM] and [ACC], respectively. On the other hand, a NP bears an associate case feature. Case is assigned to a NP if its case feature is checked off. Case feature is checked off in a Spec-head

[1] Note that Chomsky (1995) proposes that relevant nodes are T and V, not Agr. We will return to this point shortly.

configuration. If the head is T, a NP in Spec will receive NOM. If the head is V, ACC will be assigned. On the other hand, if a NP fails to have its case feature checked, the Case Filter will be violated. As a result, the derivation will crash. Thus, NP's in (4.1) above need to move to some Spec position in order to have their case feature checked. Note that Agr itself does not have a case feature. A case feature becomes available in Agr when T (or V) adjoins to it. Subsequently, the NP originated in [V, NP] moves up to [Spec, Agro] and the NP originated in [Spec, VP] moves up to [Spec, Agrs], as illustrated by (4.2) below. In this configuration, both NP's successfully check their case feature.

(4.2)



Finally, another fundamental assumption should be noted: T of an infinitival clause does not have the case feature [NOM].[2] This condition predicts that infinitival clauses cannot have an overt subject, as illustrated by (4.3a) below.

(4.3) a. *It is important [John to attend the meeting].
b. It is important [PRO to attend the meeting].
c. It is important [for John to attend the meeting].

The infinitive may have a null subject PRO as shown by (4.3.b). Alternatively, an overt NP is licensed by *for*, as illustrated by (4.3c). In (4.3c), the NP may check its case feature in [Spec, CP] by the complementiser *for*.

4.2 Some exceptional cases

In this section, we will consider some special cases that do not fit the regular case feature checking model depicted above. These include unaccusatives, Exceptional Case Marking (ECM), small clause, and PRO.

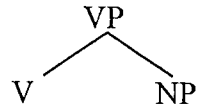
4.2.1 Unaccusative

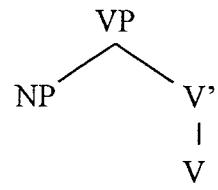
Perlmutter (1978) points out that there is a special subgroup of intransitive verbs called *unaccusative*. Just like other intransitive verbs (henceforth called *unergative*), unaccusative verbs take only one argument. However, the sole argument of an

[2] We assume that what the infinitives lack is [+ tense] feature and not T itself. Specifically, we assume that T of an infinitive is a kind of tense anaphora.

unaccusative verb is generated in [V, NP]. In contrast, the sole argument of an unergative verb is generated in [Spec, VP]. See (4.4) below.

(4.4) a. Unaccusative b. Unergative[3]





Following Williams (1980, 1981), we refer to NP in [Spec, VP] as external argument and the one in [V, NP] as internal argument.

Evidence for the phrase structure (4.4a) is found in Italian. In Italian, *ne*-cliticisation is possible only for an internal argument (Belletti and Rizzi 1981). See (4.5) below. (4.5b) is ungrammatical because *tre (settimane)* is an external argument. In contrast, (4.5d) is grammatical because *tre (settimane)* is an internal argument.

(4.5) Italian (Belletti and Rizzi 1981: 119)

a. Tre settimane passano rapidamente.
three weeks elapse rapidly

b. *Tre ne-passano rapidamente.
three of-them elapse rapidly

[3] Alternatively, following Hale and Keyser (1993), we may assume that unergative verbs are covertly transitive: specifically, we may assume that there is an abstract NP in [V, NP]. Note that the bare phrase structure (Chomsky 1995) fails to distinguish unaccusative from unergative if we are to assume that they both take only one argument. In the bare phrase structure approach, a phrase structure is defined as follows: a) if constituents α, β of K have been formed in the course of computation, one of the two must project (say, α) and b) at LF, maximal K is interpreted as a phrase of the type α (Chomsky 1995:245). According to this definition, an intransitive verb and NP constitute a phrase, namely, VP (verbal projection). However, crucially, this definition cannot specify whether the NP is a complement (i.e., the internal argument) or a specifier (i.e., the external argument). Thus, Chomsky (1995) adopts the proposal of Hale and Keyser and assumes that the unergative is transitive.

(4.5) c. Gianni trascorrerà tre settimane a Milano.
Gianni will-spend three weeks in Milano

d. Gianni ne-trascorrerà tre a Milano.
Gianni of-them will-spend three in Milano

One would imagine that *ne*-cliticisation is prohibited in intransitive sentences. However, this is not a correct prediction. Some intransitive verbs that take *essere* as the axiliary allow *ne*-cliticisation with the inverted subject although those that take *avere* do not. Consider (4.6) below.

(4.6) Italian (Belletti and Rizzi 1981: 133)

a. Sono passate tre settimane.
are elapsed three weeks
"Three weeks elapsed"

b. Ne sono passate tre.
of-them are elapsed three

c. Hanno parlato tre ragazze
have spoken three girls
"Three girls spoke"

d. *Ne hanno parlato tre.
of-them have spoken three

Based on this observation, Burzio (1986) argues that those intransitive verbs taking *essere* form a special subclass, namely, the unaccusative, whose subject is base-generated as an internal argument.[4,5]

[4] To be accurate, Burzio (1986) refers to this subclass as "ergative". However, we adopt the name "unaccusative" in order to distinguish this particular class of intransitive verbs from other instances of ergative case marking.

[5] Belletti and Rizzi (1981) propose that difference between the *essere*-type verbs and the *avere*-type verbs is the position to which the subject moves by the operation of subject inversion. The inverted subject of an *essere*-type verb substitutes the position [V, NP], while that of an *avere*-type verb adjoins to VP like an adverbial phrase. The trace of *ne* is governed by the antecedent in the former structure, whereas it cannot in the latter.

In the framework outlined above, a NP generated in [V, NP] moves to Agro and checks its case feature. As a result, an internal argument receives ACC. This theory predicts that the sole argument of an unaccusative verb receives ACC. However, the internal argument of an unaccusative verb has NOM. Facing this problem, Burzio (1986) proposes that a verb that fails to assign an external theta-role is incapable of assigning case. Put differently, a verb that does not assign an external theta-role does not have a case feature. Consequently, a NP in [V, NP] in the structure (4.4) above cannot check its case feature in [Spec, Agro]. Therefore, it moves further up to [Spec, Agrs], where it can its case feature checked by T and receive NOM.

4.2.2 Raising

Raising verbs in English such as *seem* are also unaccusative in that they do not assign an external theta-role nor have the case feature [ACC]. Since raising verbs do not assign an external theta-role, they may have an expletive subject as illustrated by (4.7) below.

(4.7) It seems [that John is happy].

Note that raising verbs do not take a NP complement: they subcategorise for a CP complement. Thus,

(4.8) *It seems John.

The complement of a raising verb can also be infinitival. As mentioned above, the subject of the infinitive cannot check its case feature. Thus, (4.9a) is ruled out. Besides, *for*-insertion is not a possible option in this case, as illustrated by (4.9b).[6]

(4.9) a. *It seems [John to be happy]

b. *It seems [for John to be happy]

Consequently, the subject NP raises to the matrix [Spec, Agrs] to check its case feature. As a result, we have (4.10) below.

(4.10) John$_i$ seems [t_i to be happy].

This type of raising is permissible only if it is necessary for case feature checking. Therefore, raising out of *that*-clause is forbidden as illustrated by (4.11) below.

(4.11) * John$_i$ seems [that t_i is happy]

In other words, a NP cannot move once it has checked its case feature.

4.2.3 Exceptional Case Marking (ECM)

The internal argument of an unaccusative verb cannot check its case feature in [Spec, Agro] and therefore moves up to [Spec, Agrs] in order to satisfy the Case Filter. As a result, the internal argument receives NOM instead of ACC. In contrast, in what is called ECM construction, the external argument of a verb receives ACC. See (4.12) below.

(4.12) a. *I consider [he to be intelligent].
b. *I consider [for him to be intelligent].
c. I consider [him to be intelligent].

[6] This in turn suggests that the infinitive complement of a raising verb lacks C. Stowell (1982) also argues that the complement of a raising verb is IP rather than CP.

(4.12a) is ruled out because the subject of an infinitive fails to check its case feature. (4.12b) shows that *for*-insertion is not possible in this case.[7] (4.12c) is an ECM construction: the subject of an infinitive bears ACC. The question is how does this NP check its case feature? Chomsky (1993) argues that the subject NP of the infinitival clause moves to the closest Agr available, namely, [Spec, Agro] of the matrix clause. In this position, it successfully checks off its case feature by the matrix verb and thereby receives ACC.

(4.13) I consider him$_i$ [t_i to be intelligent].

4.2.4 Small clause

There is another instance in which the external argument appears in ACC rather than NOM. See (4.14) below.

(4.14) a. I saw [him run].
b. *I saw [he run].

In (4.14), the pronominal argument receives an external theta-role from the verb. However, it bears ACC, not NOM. This clause minimally consisting of an argument and a bare verb is called small clause, and is assumed to lack not only C but also T.[8] It is assumed that the NP receives an external theta-role from the verb by way of predication in the sense of Williams (1980).

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[7] This in turn indicates that the embedded clause of an ECM construction also lacks C. This conforms to the proposal of Stowell (1982) that NP-movement cannot cross a CP boundary.

[8] Note that small clauses contain Agr. In French, for example, the predicate of a small clause shows agreement with the subject.

(i) a. Je considère le garçon intelligent.
I consider the boy intelligent-m.s.
b. Je considère la fille intelligente.
I consider the girl intelligent-f.s.

(4.15) I saw [$_{SC}$ him [$_{Pred}$ run]

Since small clauses lack T, the external argument cannot have its case feature checked inside the clause. Therefore, it moves out of the embedded clause to [Spec, Agro] of the higher clause in order to check off its case feature.

(4.15) I saw him$_i$ [$_{SC}$ t_i [$_{Pred}$ run]

4.2.5 PRO and Null case

As noted earlier, one of the fundamental assumptions in this approach is that the infinitival clause cannot have an overt NP in the subject position. Hence, in raising constructions and ECM constructions, the subject NP raises to a closest higher [Spec, Agr] position. Due to this movement, the infinitival clause in these constructions contains an empty category, specifically a NP-trace. Infinitives permit another type of empty category in the subject position, namely, PRO. See (4.3b), repeated below as (4.16).

(4.16) It is important [PRO to attend the meeting].

Sentences like (4.16) suggest that PRO need not check off its case feature by T. This means either that PRO does not have a case feature or that PRO bears a special case feature that can be checked inside the infinitival clause. The current approach takes the latter view and assumes that PRO bears Null case (Chomsky and Lasnik 1993). In the standard approach, it is also assumed that the Null case feature is checked in [Spec, IP] of the minimal I, which lacks both T and Agrs.[9] Importantly, tensed T cannot check

[9] Bobaljik (1993) interprets this as follows: Agrs is defective in the [–T] environment. In this view, infinitival clauses lack T but contain Agrs.

Null case feature. This explains why PRO cannot appear in a tensed clause, as illustrated by (4.17) below.

(4.17) *I expect [that PRO will attend the meeting].

In short, we assume three types of structural case feature: [NOM], [ACC] and [Null], associated with tensed T, V, and infinite T, respectively.

4.3 Ergative case

The standard theory described above faces a difficulty when ergative case marking enters the scene. In ergative languages, S and O receive the same case ABS and A receives a distinctive case ERG. In other words, the contrast is not between the external argument and the internal argument. See (4.18) below.

(4.18)

Ergative		Accusative
ERG	A	
ABS	S, O	NOM, ACC

Thus, in an ergative case system, the external subject of an intransitive verb seems to check its case feature by V, rather than T as expected by the standard theory. However, if that is the case, why is it so? And what about the case feature of T? In this section, we will review some analyses hitherto proposed.

4.3.1 Unaccusative analysis

One approach is to assume that ABS-marked S is not an external argument but an internal argument (Levin 1983b, Laka 1993). In this view, intransitive verbs in an ergative language are all unaccusative. Consequently, S undergoes the same movement as O: raising to [Spec, Agro] to check off its case feature by V. As a result, S and O receive the same case. This analysis essentially assumes that unaccusative verbs in ergative languages bear a case feature, contradicting Burzio's generalisation. This analysis works neatly for Basque, in which the subject of an unergative verb appears in ERG. However, not all ergative languages distinguish unaccusatives and unergatives in a similar fashion. In such a case, S of an unergative verb checks its case feature in [Spec, Agro] in spite of the fact that it is assigned an external theta-role.

Some propose that S/O is generated in [Spec, VP] and A in [V, NP] (Plank 1979, Marantz 1984, Levin 1987). Consequently, S/O checks its case feature in [Spec, Agrs], while A checks its case feature in [Spec, Agro]. S and O are internal arguments in that the verb assigns an internal theta-role to them. Similarly, it is assumed that the verb assigns an external theta-role to A. In other words, it is assumed that the verb assigns the Agent theta-role to the internal argument and the Patient theta-role to the external argument. In this approach, ergative case marking arises not because the internal argument checks its case by T and the external argument checks its case by V, but because A is generated as the internal argument and O, as the external argument. ABS is regarded as an alias for NOM. The weakness of this analysis is that it assumes that

theta-role assignment is parameterised in such a way that the thematic hierarchy proposed by Jackendoff (1972) is reversed in ergative languages.

4.3.2 Inherent case analysis

Another approach is to assume that ERG is an inherent, rather than a structural, case (cf. Woolford 1996, Johns 1992). In this view, all the transitive verbs in an ergative language subcategorise for the lexically ERG-marked subject in the same way as some verbs subcategorise for the quirky case marked subject in Icelandic (cf. Sigurđsson 1991, Zaenen et al. 1985). Woolford (1996) proposes that ERG is an inherent case assigned by the verb in association with the agent theta-role. Woolford observes that ERG subjects behave like DAT subjects in the following respects: a) they are not permitted in intransitive constructions and b) they typically occur with NOM (ABS) objects and not with ACC objects. Woolford argues that similarity between ERG and DAT suggests that ERG is an inherent case just like DAT. Simply put, in this view, transitive verbs in the ergative languages require their subject to be inherently case marked with ERG.[10,11] The weakness of the inherent case analysis is that ERG is not necessarily associated with the agent theta-role: e.g., in Tongan, *'ofa'i* ("to love") takes an ERG-marked subject while *kai* ("to eat") takes an ABS-marked subject in an

[10] Note that Woolford's (1996) argument is originally motivated to account for the three-way case marking system, which is found in languages such as Nez Perce and Kalkatungu. In the three-way system, S is marked with NOM, A with ERG and O with ACC. Woolford argues that this system is in fact four-way rather than three-way, with two structural cases available for O, accusative (ACC) and objective (OBJ). It is further argued that a lexically cased subject cannot co-occur with an ACC object and that ACC in these languages is not morphologically overt. Hence, the possible patterns are NOM (intransitive), ERG-OBJ and NOM-ACC.

[11] Johns (1992) also proposes that ERG in Inuktitut is an inherent case, specifically, GEN. Johns argues that in Inuktitut a verb cannot project a VP. Therefore, transitive constructions are formed as relative clauses. For example, Inuktitut translation of the sentence "The man stabbed the bear" is " The bear is the man's stabbed one". The subject of a transitive verb appears in GEN and not ERG.

unergative construction. Furthermore, it fails to account for syntactic ergativity. The fact that some languages show an ergative pattern with regard to some syntactic operations suggests that ERG is somehow related to a particular structural position.

4.3.3 Dependent case analysis

Mahajan (1997, to appear) proposes that ERG is not only lexical but also dependent in the sense of Marantz (1991). Dependent case is assigned to the subject of a transitive in case the verb is not a structural case-marker. Specifically, if the verb fails to assign ACC to the internal argument, the external argument receives a dependent lexical case ERG.[12] Mahajan attempts to provide a parametric account for ergative case marking associated with the perfective. In this approach, it is assumed that the external argument of a transitive verb is universally generated as PP in past/perfect tense. In accusative languages such as English and French, P head of the subject PP is incorporated into the auxiliary. This P-incorporation makes ACC available for the internal argument. In other words, the incorporated P provides a case feature [ACC].[13] As a result, the internal argument receives ACC. The external argument receives NOM through case feature checking in [Spec, Agrs]. In contrast, in Hindi, P-incorporation is structurally impossible because the auxiliary is not adjacent to the external argument. Therefore, the external argument remains a PP and ACC is not available. Consequently, a dependent case ERG is assigned to the external argument.

[12] This view that ERG is assigned only when the verb fails to assign ACC is also proposed by Bok-Bennema (1991)

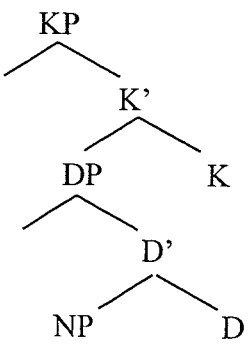
[13] In effect, Mahajan (1997, to appear) assumes that [ACC] is checked in [Spec, Aux] by the auxiliary.

Meanwhile, the internal argument moves to [Spec, Agrs] to receive NOM.[14] To summarise, in this approach, difference between ergative case marking and accusative case marking is reduced to a parameter whether or not P-incorporation is possible. However, this analysis cannot explain how ERG arises in the imperfective. Many languages show ergative case marking not only with the perfective, but also with the imperfective.

4.3.4 KP analysis

Bittner and Hale (1996a,b) attempt to account for ergative case marking in terms phrase structure, but not in a way the standard theory does. They postulate a functional category, KP, which is headed by case. KP is considered to be a nominal counterpart of the verbal category CP. KP has a structure illustrated by (4.19) below. D is considered an intermediate projection, equivalent to I in the verbal system.

(4.19)



Case assignment is governed by the following conditions: a) a K-less nominal must be c-commanded and governed by K-equivalent (i.e., either C or K) to satisfy the K-

[14] Mahajan (1997, to appear) proposes that P-incorporation is reflected in the form of auxiliary. The auxiliary surfaces as *have* after P-incorporation while it surfaces as *be* if P-incorporation does not take place. It is argued that the unaccusative verbs in Romance languages take the auxiliary *be* instead of *have* due to this condition.

Filter[15] and b) marked structural cases are K's that originate empty and therefore must be antecedent-governed at S-structure to satisfy the Empty Category Principle (Chomsky 1981). Consequently, KP's appear in the marked case and K-less nominals in the unmarked case. Overt realisation of the marked case is determined by the antecedent-governor (i.e., case assigner): it is realised as ERG if the case assigner is I (or D) and as ACC, if the case assigner is V (or P) and has an adjoined D.

It should be noted that essential notions in this approach are government and markedness. First, case is classified in terms of markedness. Thus, ABS and NOM are grouped together as unmarked case[16] and ACC and ERG are under the same category of marked case. It is also assumed that KP's receive a marked case and K-less nominals, an unmarked case. Second, adopting the GB approach, it is assumed that case is assigned under government: specifically, Infl assigns case to the external argument and the verb assigns case to the internal argument. The (marked) case is realised as ERG if assigned by Infl, and as ACC if assigned by the verb. This hypothesis correctly predicts that ERG is assigned to the external argument and ACC to the internal argument.[17]

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[15] K-Filter: let α be a K-less nominal (DP or NP) with a non-empty X^0 head and let α head an argument chain β. Then (a) α is c-commanded and governed by K or C, and (b) β does not contain any case-bound position (Bittner and Hale 1996b:542).

[16] To be accurate, NOM and ABS are not distinguished. It is assumed that the unmarked case is universally NOM.

[17] We may adapt this hypothesis to the feature-checking theory as follows: KP's bear [+marked] case feature and K-less nominals have [–marked] case feature. Case feature of the external argument is checked by T and that of the internal argument is checked by the verb.

This account, however, raises a question concerning the generation of nominals. It is not clear what determines whether a given nominal is generated as a KP or K-less. Structural positions do not seem to play a role in this respect. A nominal in [Spec, VP] (i.e., the external argument) may be generated K-less (and as a result, receive NOM) or as KP (and marked with ERG). Similarly, a nominal in [V, NP] (i.e., the internal argument) may be realised either K-less (receiving ABS) or as a KP (marked with ACC). In other words, there is no relation between the marked-unmarked difference and structural positions. In short, this assumption is rather ad-hoc.

4.3.5 Active Agr analysis

Finally, Bobaljik (1993) proposes an account along the lines of the feature-checking theory presented in §4.1 above. Thus, it is assumed that there are two structural cases: one is intrinsic to T and is checked in [Spec, Agrs]; the other is intrinsic to V and is checked in [Spec, Agro]. In addition, markedness is considered to be a key factor that determines whether a language shows accusative case marking or ergative case marking. Bobaljik (1993) proposes that UG requires that case X must be obligatorily assigned in a language (the Obligatory Case Principle (OCP)). X is the unmarked case in a given system and is determined by the following parameter.

(4.20) OCP parameter (Bobaljik 1993: 50)
a. In accusative languages, Case X is NOM (=ERG);
b. In ergative languages, Case X is ABS (=ACC).

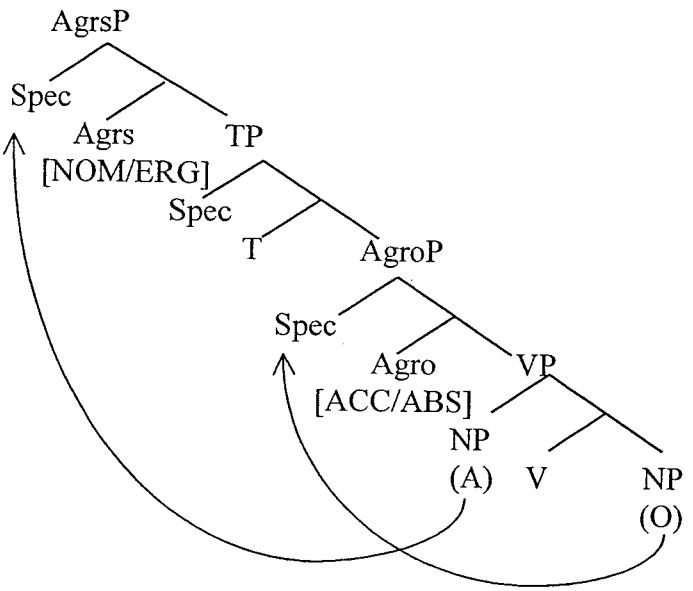
Note that NOM and ABS are considered to be different cases in this approach. Specifically, it is assumed that NOM is associated with T and ABS, with V. In effect, it is assumed that ERG corresponds to NOM and ABS is the equivalent of ACC in an

ergative system.[18] Let us call the former T-case and the latter, V-case. Whether a language has an accusative case system or an ergative one is determined by the OCP: namely, which case is unmarked. This contrasts with the view of Hale and Bittner (1996b) who argue that difference between the two is which NP receives the marked case (i.e., ACC/ERG): in an accusative system, it is O that receives the marked case while in an ergative system it is A. In Bobaljik's (1993) analysis, what matters is which case is unmarked: in other words, which case S receives. In an accusative system, S receives T-case. In an ergative system, S receives V-case.

Bobaljik (1993) proposes the active Agr hypothesis based on this assumption: in an intransitive construction, only one Agr is active.[19] The active Agr is selected according to the value of the OCP parameter. If case X is NOM in a language, the active Agr is Agrs. If it is ABS, then, the active Agr is Agro. Consequently, S will receive T-case in [Spec, Agrs] in an accusative system and V-case in [Spec, Agro] in an ergative system. As far as transitive constructions are concerned, the two systems do not differ from each other. A moves up to [Spec, Agrs] to receive T-case, and O raises to [Spec, Agro] to receive V-case. See (4.21) below.

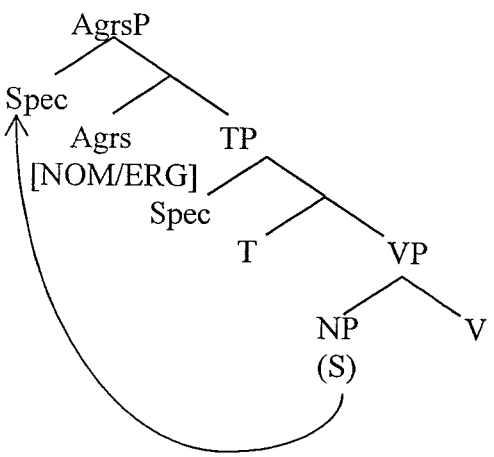
[18] Note the contrast with the view in which it is assumed that NOM is equivalent to ABS and ERG to ACC (Bittner and Hale 1993a, b, Murasugi 1992, among others).
[19] Relevant to this analysis is Laka (1993)'s proposal that it is case feature rather than Agr that can be active or inert.

(4.21)

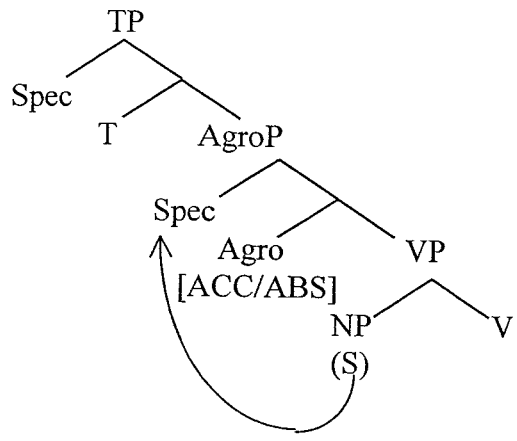


In an intransitive construction, only one Agr is active and the other one becomes inert. In effect, we have the following two structures.

(4.22) a. Accusative: intransitive



(4.22) b. Ergative: intransitive



This approach is preferred in two respects: a) ERG is accounted for in terms of phrase structure and b) ergative case marking and accusative case marking are differentiated by a single parameter.[20] Another problem is PRO. As mentioned earlier, PRO can occur either as A or S. It is also assumed that PRO bears Null case and that a case feature [Null] is intrinsic to [–tense] T. Thus, PRO checks its case feature in [Spec, Agrs] by [–tense] T. Apparently, this is a problem for the active Agr approach. If Agrs is inert in ergative languages, PRO should not occur as S because it fails to check off its case feature. Nevertheless, PRO can occur as S as well as A in ergative languages.

[20] On the other hand, as James Higginbotham (p.c.) points out, the active Agr analysis cannot explain how morphological split arises. If Agrs is not available in an intransitive construction, then, it would be impossible for S and A to receive the same case. We will return to this point in Chapter 6.

4.4 Hypothesis

4.4.1 Preliminaries

Having studied various proposals, we are now presenting our own proposal. Let us summarise some important facts concerning ergative case marking. First, the contrast between ergative case marking and accusative case marking is which argument receives the marked case. In an accusative system, O receives a marked case. In contrast, A receives a marked case in an ergative system. Thus, this difference may be related to a parameter that determines which type of case marking a language has. Second, there seems to be some connection between ERG case and a structural position. We have seen that some languages distinguish ABS-marked arguments from ERG-marked arguments in various syntactic operations. Syntactic rules are in general sensitive to structural positions. Thus, we assume that ERG is a structural case on a par with NOM and ACC. Given these facts, we consider that the active Agr analysis (Bobaljik 1993) is the most promising approach.

However, the active Agr analysis is challenged by two significant problems: morphological split and PRO. In some ergative languages, S and A appear in an identical form under a certain condition. Presumably, this pattern arises because S and A receive the same case, namely, T-case. This in turn suggests that S also checks its case feature in [Spec, Agrs]. However, this option is incompatible with the active Agr hypothesis, which assumes that Agrs be inert in an intransitive construction in ergative languages. As for PRO, the standard theory assumes that PRO has Null case and that

Null case is intrinsic to [–T] Infl. Consequently, Bobaljik (1993) assumes that PRO checks its case in [Spec, Agrs]. Given this assumption, the active Agr hypothesis incorrectly predicts that PRO should fail to occur as S in ergative languages because it would fail to check its case feature. In order for PRO to occur in an intransitive construction, the active Agr analysis has to make an exception and allow Agrs to be active instead of Agro. Nevertheless, allowing such an exception simply undermines the basis of this analysis. In this section, we will seek some alternative means to account for these phenomena keeping the spirit of the active Agr approach.

4.4.2 Proposal

We assume that ERG is a structural case. Thus, we assume that there are three types of structural case: T-case (i.e., NOM/ERG), V-case (i.e., ACC/ABS) and Null. Null case is assigned only to the null subject PRO. We also assume that case is assigned by means of feature-checking. Specifically, we assume that T-case is checked in [Spec, Agrs] and V-case in [Spec, Agro]. Adopting the active Agr hypothesis (Bobaljik 1993), we assume that only one Agr is available in an intransitive construction. If a language selects Agrs as the active Agr, it will have accusative case marking. In contrast, if a language chooses Agro to be the active Agr, it will have an ergative case system. In other words, ergative-accusative difference is determined by the active Agr parameter.

From this point on, we will diverge from the standard account. Note that in the standard account, case is considered to be intrinsic to T and V. Thus, T bears a case

feature [NOM/ERG] and V has a case feature [ACC/ABS]. In addition, [–tense] T has [Null] case feature. Note that we assume that infinitival clauses lack Agr but have TP. T of infinitival clauses is [–tense] in that it is not specified for a particular tense. We consider this [–tense] T a kind of tense anaphora that needs to be bound by T of the matrix clause. An NP is assumed to bear an associated case feature: either [ACC/ABS] or [NOM/ERG] if it is a full NP, and [Null] if it is PRO. What is important in the standard account is that Agr does not bear any case feature. The main function of Agr is to provide a position in which T, V and NP's may check their case features. Departing from the standard approach, we propose that Agr has a case feature: specifically, Agrs bears [T-case (NOM/ERG)] and Agro, [V-case (ACC/ABS)]. On the other hand, T and V have a case feature associated with a particular case, [T-case] and [V-case] respectively. These are associated case features in that they do not have authority to check off the feature [case] of a NP. As for NP's, they have an unspecified case feature [case]. The only exception is PRO, which needs to be licensed by receiving Null. Let us assume that PRO has a specified case feature [Null]. In this view, feature checking is twofold: features [T-case] and [V-case] of T and V need to be checked off by [T-case] and [V-case] of Agrs and Agro by means of adjoining to them. An NP checks its case feature in [Spec, Agrs/Agro] by the Agr head.

An additional assumption in our analysis is that Null case is an exception in the following respect. As mentioned above, the feature [Null] is considered to be intrinsic to [–tense] T and PRO. Extending this assumption, we propose that the case feature of PRO is checked in [Spec, TP] by [–tense] T. Both PRO and [–tense] T bear a

specified case feature [Null]. Thus [Null] of PRO and [Null] of [–tense] T can be matched and checked off in a Spec-head configuration in TP. Thus, PRO need not move higher to [Spec, Agrs]. With this assumption, the problem of PRO can be solved. PRO can successfully check its case feature even if Agrs is not available. Consequently, PRO may appear in an intransitive construction in ergative languages.

How about the split? Let us propose that a split occurs when morphological (as well as syntactic) rules are sensitive to theta-role rather than case. The standard theory assumes that a verb assigns an external theta-role to the NP in [Spec, VP] and an internal theta-role to the NP in [V, NP]. Note that crucially, an external theta-role is assigned either S or A and an internal theta-role is assigned only to O. Some rules distinguish arguments with an external theta-role from those with an internal theta-role. For example, as we will discuss in Chapter 6, clitic pronouns in Tongan are required to receive an external theta-role. An accusative pattern (i.e., split) reflects the distinction between the external theta-role and the internal theta-role. It arises independent of case.

4.4.3 Minimalist program and ergative case marking

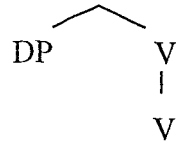
As mentioned earlier, the current approach assumes the earlier version of the minimalist program proposed by Chomsky (1991, 1993). Chomsky (1995) has further developed the minimalist program, replacing some of the fundamental assumptions with new ideas. Given such development, some explanation may be necessary as to why the current approach does not adopt the latest theory of minimalist program. In

this section, we will outline some of the important changes proposed by Chomsky (1995) and discuss what these changes imply with regard to case theory. It will be shown that these changes bring about some unwelcome consequences in accounting for ergative case marking.

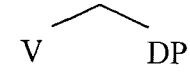
4.4.3.1 Assumptions

One of the drastic changes is the introduction of bare phrase structure theory. Leaving details aside, the bare phrase structure theory assumes that a phrase is constructed by the operation Merge. The operation Merge picks up two syntactic objects, α and β, and replaces them by a new combined syntactic object γ. Either α or β is projected as the head of the combined object. The label of the complex will be that of the head. For example, Merge(D, NP) will form a DP with D being the head of the new object. Merge(V, DP) will form a VP if it is an intransitive verb or V' if it is a transitive verb, in which case VP is subsequently formed by Merge(V', DP). With this definition, the operation Merge fails to distinguish two types of intransitive, unaccusative and unergative, since it does not specify whether the DP is a specifier or a complement. In other words, Merge(V, DP) can form either (4.23a) or (4.23b).

(4.23) a.



b.



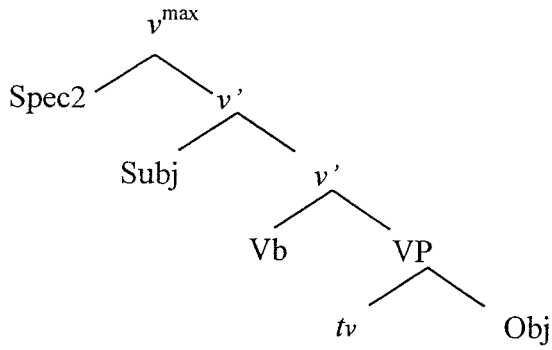
For this reason, Chomsky (1995) assumes, following Hale and Keyser (1993), that unergatives are transitive with a covert object.

Another key notion is the operation Attract. Movement of a syntactic object is defined in terms of attraction. The operation Move picks up a syntactic object α and adjoins it to or replaces it with another object. The operation Move is possible if a feature F is checked by the operation or it is a necessary step for a feature-checking operation that will take place later. In other words, movement is permitted only for case-checking purposes. This operation is regarded as attraction instead of raising of a syntactic object α. Attract is defined as follows: target K attracts α that is the minimal element including F, if F is the closest feature that can enter into a checking relation with a sublabel of K (Chomsky 1995: 297). Features are either [+Interpretable] or [–Interpretable]. The latter must be eliminated by deletion before the computation reaches the LF interface. Features are deleted when checked and erased if possible. The deleted element is invisible at LF but accessible to the computation. Erased features are inaccessible to any operation. Case features are [–Interpretable]: once checked, they are inaccessible to the computation. This predicts that case-marked NP's cannot move further.

As for case feature checking, the original assumptions are still maintained to a certain extent: a) case features are intrinsic to V and T; and b) these features must be checked for the derivation to converge. However, here another drastic change is proposed: checking does not take place in Agr. The function of Agr is nothing but to provide a structural configuration in which features can be checked. Therefore, if the features can be checked in the domain independent of Agr, it no longer has a raison d'être. Chomsky (1995) argues that multiple-Spec structures make feature checking possible

without assuming Agr. [–Interpretable] features, [(assign)ACC] and [(assign) Case (NOM or Null)] are checked in [Spec, *v*] and [Spec, T], respectively. Thus, in transitive constructions *v* projects two Spec positions, as illustrated by (4.24) below. Transitive constructions, including unergatives, are all assumed to have a double-VP structure, extending the proposal of Larson (1988) and Hale and Keyser (1993). V raises overtly to the light verb *v* to form the complex Vb. The subject is inserted in [Spec, *v*] by the operation Merge and receives an external theta-role by predication in the *v*-VP configuration. Spec2 is provided for the object raising so that the object can have its case feature checked in this position.

(4.24)



Similarly, [(assign) Case (NOM/Null)] is checked in [Spec, TP]. As for the case feature of NP's, it is assumed that case features are added arbitrarily as a noun is selected for the numeration. In other words, a NP includes a case feature [NOM], [ACC] or [Null]. Case feature of T attracts a NP with a feature [NOM] or [Null], and that of V attracts a NP with a feature [ACC], so that the NP moves to an appropriate Spec position.

4.4.3.2 Problems concerning ergative case marking

How is ergative case marking explained in this analysis? Assuming that ERG corresponds to NOM and ABS to ACC, we then assume that T has [(assign)Case (ERG or Null)] and V, [(assign)ABS]. NP's bear an associated case feature, [ERG], [ABS] or [Null]. Given this assumption, an external argument bears [ERG] and an internal argument, [ABS]. Consequently, an external argument moves up to [Spec, T] while an internal argument moves up to [Spec2, *v*]. This raises one problem. In this approach, unergatives are considered to be transitive. Thus, the subject of an unergative verb is an external argument. By definition, it bears the feature [ERG]. This assumption is borne out with regard to a few languages such as Basque (Bittner 1983, Laka 1993), but not with others. In many ergative languages, the subject of an unergative verb appears in ABS, not ERG. Hence, we need to stipulate that the external argument of an unergative verb bears [ABS]. Consequently, we have to distinguish three cases: an external argument with [ERG], b) an external argument with [ABS], and c) an internal argument with [ABS]. Will the problem be solved if we assume, following Bittner and Hale (1996a,b), that ERG corresponds to ACC? If we take this view, then [ABS] is checked in [Spec, T] and [ERG] in [Spec2, *v*]. We still have to distinguish the three patterns: the external argument of a transitive verb bears [ERG] while the internal argument bears [ABS] and so does the external argument of an unergative verb. In short, in this approach, case feature of a NP is specified in the numeration. Therefore, the difference between ergative case marking and accusative case marking is which case feature the external argument of an unergative bears. If it is [NOM/ERG], the system turns out to be accusative. If it is [ACC/ABS], then it

gives rise to an ergative pattern. Note that in this view, the Case Filter need be strengthened in the following sense: an NP must bear a specific case, otherwise the derivation crashes.

Another problem concerns PRO. It is assumed that PRO can only be the subject. In other words, external arguments and the internal argument of an unaccusative verb can bear the case feature [Null]. This in turn means that all of these arguments move to [Spec, T]. Here we need to distinguish two types of internal arguments: that of a transitive verb and that of an unaccusative. Consequently, with regard to accusative languages, we have three rules: a) external arguments check their case feature in [Spec, T]; b) internal arguments of transitive verbs check their case feature in [Spec, *v*]; and c) internal arguments of unaccusatives check their case feature in [Spec, T]. See (4.26) below. In contrast, as for an ergative system, we need to stipulate five different rules: a) external arguments check their case feature in [Spec, T]; b) external arguments of unergatives check its case in [Spec, *v*] if they are full NP's; c) external arguments of unergatives check its case in [Spec, T] if they are PRO; d) internal arguments check their case in [Spec, *v*]; e) internal arguments of unaccusatives check their case in [Spec, T] if they are PRO. Consider (4.27) below.

(4.26) Accusative case system

	full NP	PRO
External argument	[Spec, T]	[Spec, T]
Internal argument transitive	[Spec, *v*]	N.A.
Internal argument unaccusative	[Spec, T]	[Spec, T]

(4.27) Ergative case system

	full NP	PRO
External argument transitive	[Spec, T]	[Spec, T]
External argument unergative	[Spec, *v*]	[Spec, T]
Internal argument transitive	[Spec, *v*]	N.A.
Internal argument unaccusative	[Spec, *v*]	[Spec, T]

In short, it is impossible to postulate a parameter to distinguish accusative case marking from ergative case marking in this approach. In contrast, our proposal accounts for the above complication in terms of a single parameter, namely, choice of the active Agr.

4.4.4 Unaccusatives in ergative languages

Whether we take the active Agr approach or the minimalist approach, unaccusatives in ergative languages prove to be a problematic case. Unaccusatives take only one argument and this sole argument is generated in [V, NP] as an internal argument. Following Burzio (1986), it is assumed that unaccusatives do not have a case feature. Burzio's generalisation is based on the observation that the internal argument of an unaccusative verb appears in NOM rather than ACC.[21] In the minimalist approach, case assignment in an unaccusative construction is explained by assuming that the internal argument of an unaccusative verb has the feature [NOM]. Therefore, this NP is attracted by T and checks its case in [Spec, T]. Note that in this account, Burzio's generalisation becomes irrelevant: whether or not the verb lacks case feature is not the matter. In other words, contrast between unaccusatives and unergatives is understood

[21] Note that in the GB theory, it is assumed that case is assigned under government: specifically, ACC by the verb and NOM by T. In an unaccusative construction, the internal argument fails to receive case because the verb is not endowed with case-assigning ability. Consequently, the NP in question moves to [Spec, T] to receive NOM so that the Case Filter will not be violated.

not in terms of verbs, but in terms of NP's. This seems to lose the point of distinguishing unaccusatives from unergatives. In the active Agr approach, case checking in an unaccusative construction is explained as follows. In accusative languages, the active Agr is Agrs. Consequently, an unaccusative construction contains only Agrs. Case feature [case] of the internal argument of an unaccusative verb is thus checked in [Spec, Agrs], being realised as T-case, namely, NOM.

Unaccusatives in ergative languages, however, brings up a serious challenge to Burzio's generalisation. The internal argument of an unaccusative verb appears in ABS. This contradicts Burzio's generalisation. The minimalist account must stipulate that the case feature of the internal argument of an unaccusative verb is [ABS] and that unaccusatives have the case feature [(assign)ABS]. In the active Agr analysis, the feature [case] of the internal argument of an unaccusative verb is checked by the active Agr, namely, Agro. Agro bears a feature [V-case]. As a result, the NP appears in V-case, i.e., ABS. Hence, some argue that Burzio's generalisation does not hold in ergative languages (Bittner 1983, Levin and Massam 1986, and Laka 1993). However, in our approach, it is possible to maintain Burzio's generalisation. Since the feature [V-case] is intrinsic to Agro, [V-case] is available whether or not the verb itself has an associated feature [V-case]. This point can be regarded as additional advantage of the current analysis.[22]

[22] Whether it is necessary to maintain Burzio's generalisation is another question. However, we will not pursue this question further here.

4.5 Summary

In this chapter, we reviewed the standard theory of case assignment and proposed an alternative approach. Fundamental assumptions are a) NP's must have case (the Case Filter) and b) structural case is assigned by means of feature checking in Agr. The standard theory assumes that a) T and V have case features [NOM] and [ACC], respectively and that b) external arguments check case in [Spec, Agrs] by T and internal arguments in [Spec, Agro] by V. The only exception is unaccusative constructions, in which the internal argument checks its case in [Spec, Agrs] instead of [Spec, Agro]. This exception is due to the fact that unaccusatives lack case feature (Burzio 1986). Since the internal argument of an unaccusative verb fails to check off its case feature in [Spec, Agro], it is forced to move up to [Spec, Agrs] in order to satisfy the Case Filter. Another assumption concerns PRO. PRO is assumed to have a special structural case Null. The feature [Null] is assumed to be intrinsic to [–T] Infl. Accordingly, it is assumed that PRO checks its case in [Spec, IP] of the minimal I. This in turn explains why PRO can occur only as subjects but not as objects.

The standard theory, however, fails to provide a sufficient account of ergative case marking. In an ergative case system, the subject of an intransitive verb, unergative as well as unaccusative, receives the same case as the internal argument of a transitive verb. Put differently, both the external argument of an unergative verb and the internal argument of an unaccusative verb check its case in [Spec, Agro]. This raises two problems. First, one of the principal assumptions that external arguments check their

case in [Spec, Agrs] does not hold. Second, another fundamental assumption that unaccusatives lack case feature must also be rejected.

We then presented an alternative analysis with minimal modification to the standard theory. Specifically, we maintain the idea that case assignment is feature checking in a Spec-head configuration. Following Bobaljik (1993), we assume that only one Agr can be active in intransitive constructions. The difference between accusative case marking and ergative case marking can be accounted for in terms of the active Agr parameter. If a language chooses Agrs as the active Agr, it will have accusative case marking, with S checking its case feature in [Spec, Agrs]. On the other hand, if Agro is selected, then case marking shows an ergative pattern, with S checking its case feature in [Spec, Agro]. Thus, the first problem is solved. As for the second problem, we propose that case features are intrinsic to Agr, and not to T and V as assumed in the standard theory. To be accurate, we assume the following two case features: [T-case] and [V-case], each intrinsic to Agrs and Agro. T and V have an associate case feature, [T-case] and [V-case], respectively. NP's have an unspecified case feature [case]. In accordance with the standard theory, we assume unaccusatives lack an associate case feature [V-case]. What happens in unaccusative constructions is that the internal argument moves to [Spec, Agro], as it is the active Agr, and have its case feature checked by [V-case] of Agro. Consequently, the internal argument of an unaccusative successfully receives V-case (ABS) although the verb itself lacks case feature.

The active Agr approach, however, faces two crucial problems. One is case checking of PRO and the other is split. The standard account assumes that PRO bears a special case feature [Null] and that [Null] is intrinsic to [–T] Infl. This in turn explains why PRO occur only as subjects. However, in the active Agr approach, this raises a problem. If we are to assume that [Null] is checked in [Spec, Agrs], PRO should not be permitted in intransitive constructions in ergative languages because [Spec, Agrs] is inert in intransitive constructions. However, PRO does occur in intransitive constructions. Consequently, we have to allow PRO to check the feature [Null] in both [Spec, Agrs] and [Spec, Agro]. In other words, we are forced to assume that [Null] is intrinsic not only to [–T] Infl but also to V. However, two different elements bearing the identical case feature is not a welcome situation. Instead, we propose that the feature [Null] is intrinsic to [–tense] T and PRO, and that PRO checks its case feature in [Spec, TP]. This will allow PRO to appear in intransitive constructions in ergative languages because Null case feature checking does not require Agrs. As for the split, we argue that an accusative pattern arises when a syntactic/morphological rule is sensitive to theta-role rather than case. In other words, an accusative pattern reflects the contrast between the external theta-role and the internal theta-role in the sense of Williams (1980). This in turn accounts for the relative stability of accusative case marking, namely, why languages with accusative case marking do not show any ergative pattern at any level. In an accusative case system, external arguments consistently receive one case (NOM) and internal arguments receive another (ACC). Thus, syntactic/morphological rules that are sensitive to case and those that are sensitive to theta-role distinguish arguments in a similar manner: S/A vs. O. As a

result, accusative languages consistently show an accusative pattern at any level. In contrast, languages with ergative case marking inevitably have two patterns. On the one hand, those rules that are sensitive to case will distinguish A from S and O. On the other hand, those that are sensitive to theta-role will distinguish O from S and A.

Finally, we discussed how ergative case marking is explained by the minimalist program proposed by Chomsky (1995). We pointed out that in the minimalist approach, case assignment is governed by case feature of NP's. Consequently, it is necessary to stipulate five different instances in order to account for ergative case marking: e.g., the external argument of a transitive verb have [ERG], but the external argument of an unergative verb have [ABS] etc. We argue that the difference between ergative case marking and accusative case marking cannot be reduced to a single parameter in the minimalist approach and that therefore, our analysis is more advantageous. With the hypothesis proposed above in mind, we will proceed with our inquiry into ergativity in Tongan.

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$_i$/*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$_i$/*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 preposition[3] 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.

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 sweet potato
"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.

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[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]

(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*-coordintation, 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, Agro]. 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.

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[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 anphor 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 conjuntive (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.

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 <b> 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

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Thus, 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.

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[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 occurs 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.

Chapter 6
Morphological Split: Accusative Behaviour of Pronouns

As mentioned in the previous chapters, Tongan shows a morphological split based on types of nouns. Specifically, full NP's are divided into ERG and ABS, while pronouns show an accusative pattern: S and A appear as a subject pronoun, while O is realised in a distinct form. We will argue, however, that the accusative pattern does not mean that the pronouns receive NOM in the subject position and ACC in the object position. Rather, it is due to the fact that pronominal subjects are realised as clitics in Tongan. We will argue that the form of a subject clitic reflects the theta-role it bears and not the case. In particular, we will argue that despite the identical phonological form, a subject clitic receives ERG when it refers to A, and ABS when it refers to S.

In §6.1, we will look at the data that demonstrate the apparent accusative pattern, which Tongan pronouns show. Our data demonstrate another peculiar property of the Tongan pronouns, namely, the compulsory word order alternation. In §6.2, we will argue that the SVO order results from the fact that the subject pronouns are clitics attached to T. We will also argue that object pronouns are full pronouns. Object clitics are not part of the lexical inventory of Tongan. In §6.3, we will develop the hypothesis that the subject clitics in Tongan are theta-role absorbers in the sense of Aoun (1985) and therefore, are arguments. This hypothesis explains why the pronouns in Tongan show an accusative pattern. First, pronominal O has a distinct form from that of

pronominal A/S, because the former is a full pronoun while the latter is a clitic. Secondly, pronominal S and pronominal A appear in the identical form because the form of a subject clitic reflects the theta-role it bears, and not the case. It will be shown also that this sensitivity to theta-role is manifested in other syntactic phenomena such as control and raising. Finally, in §6.4, implication of the current analysis with regard to the other instances of the similar type of morphological split will be considered. We will argue that the so-called morphological split is not so much a morphological phenomenon as a syntactic one, namely, a consequence of a syntactic operation of cliticisation.

6.1 Accusative pattern of pronouns

As discussed in Chapter 3, in Tongan, a full NP is accompanied by a case marker: the ERG-case marker precedes A, while S/O are preceded by the ABS-case marker, as illustrated in (6.1) below.[1]

(6.1) a. Na'e 'alu 'a Sione.
Pst go ABS Sione
"Sione went."

b. Na'e kai 'e Sione 'a e ika.
Pst eat ERG Sione ABS def fish
"Sione ate the fish."

In contrast, forms of the pronouns show an accusative pattern. S and A are realised as the same pronominal form, while a distinct form is used for O. Let us tentatively call the former "subject pronoun" and the latter "object pronoun". Compare the sentences

[1] The ABS-case marker *'a* can be, and frequently is, omitted when immediately followed by a definite article *e*. This optional nature of the ABS-case marker will play a significant role in analysing the distribution of the pronouns below.

in (6.2) with those in (6.1).

(6.2) a. Na'a ne 'alu.
Pst 3.s. go
"He went."

b. Na'a ne kai 'a e ika.
Pst 3.s. eat ABS def fish
"He ate the fish."

c. Na'e kai ia 'e Sione.
Pst eat 3.s. ERG Sione
"Sione ate it."

The paradigm of pronouns in Tongan is given in (6.3) below.

(6.3)

	Subject (S/A)	Object (O)
1st Excl. s.	te	kita
1st Excl. d.	ma	kimaua
1st Excl. pl.	mau	kimautolu
1st Incl. s.	ou/ku/u	au
1st Incl. d.	ta	kitaua
1st Incl. pl	tau	kitautolu
2nd s.	ke	koe
2nd d.	mo	kimoua
2nd pl.	mou	kimoutolu
3rd s.	ne	ia
3rd d.	na	kinaua
3rd pl.	nau	kinautolu

This accusative pattern may well be considered an instance of a typical morphological split found in the so-called ergative languages: full NP's are treated in an ergative manner, while pronouns are divided on an accusative basis. As discussed in Chapter 2, traditionally, such a morphological split was analysed in terms of the animacy hierarchy (Silverstein 1976, Dixon 1979). However, this approach encounters a number of problems. Furthermore, given the assumption that ERG is a structural case (i.e., the case morphology reflects syntax), we would like to account for the seemingly contradictory phenomenon in terms of syntax rather than semantics, in a more

comprehensive manner. Below, we will argue that the accusative pattern results from the fact that the subject pronouns in Tongan are clitics, and that the subject clitics are sensitive to theta-role rather than case.

The occurrence of pronouns affects the word order. The subject pronouns must appear immediately preceding the verb. As illustrated by (6.2c), the object pronouns appear immediately following the verb. One might speculate that the fact that pronouns in Tongan are required to appear adjacent to the verb suggests that these elements are actually agreement morphemes.[2] However, this analysis is untenable because subject pronouns cannot co-occur with a coreferential subject. See (6.4) below.

(6.4) a. *Na'a ne$_i$ 'alu 'a Sione$_i$.
Pst 3.s. go ABS Sione
"Sione went."

b. *Na'a ne$_i$ kai 'e Sione$_i$ 'a e ika.
Pst 3.s. eat ERG Sione ABS def fish
"Sione ate the fish."

Nor can the object pronouns appear with a coreferential NP in the object position.

(6.5) *Na'e 'ave ia$_i$ 'e Sione 'a Mele$_i$.
Pst take 3.s. ERG Sione ABS Mele
"Sione took Mele."

If these elements were agreement morphemes, they would be allowed to co-occur with the corresponding arguments. Since this is not the case, we conclude that these elements are not agreement morphemes.

Another possibility is to analyse these elements as clitics. It would explain why pronouns may violate the normal VSO order if we assume that the subject clitics

attach to T, and the object clitics attach to V. The ungrammaticality of (6.4) and (6.5) would also be accounted for by stipulating that clitic doubling is not allowed in Tongan. As it will be shown shortly, empirical evidence suggest that the subject pronouns are in fact clitics, but the object pronouns are not. In fact, "object pronouns" are independent pronouns and thus may also be used to refer to A/S. We will consider the relevant properties of the Tongan pronouns in the next section.

6.2 Inventory of the Tongan pronouns

We will argue that Tongan has two sets of pronouns: a) subject clitics (henceforth SCL) and b) independent pronouns. It is argued above that the adjacency requirement on the distribution of the Tongan pronouns suggests that these elements are clitics. This is true as far as the subject pronouns are concerned. They cannot appear in any other positions, nor can they be accompanied by a case marker. See (6.6) below.

(6.6) a. *Na'e 'alu ('a) ne.
Pst go ABS 3.s.
"He went."

b. *Na'e kai ('e) ne 'a e ika.
Pst eat ERG 3.s. ABS def fish
"He ate the fish."

However, the distribution of the "object pronouns" is not restricted to the position immediately following the verb. For example, they may appear in a prepositional phrase, following a preposition, as illustrated in (6.7) below.[3]

[2] Thanks to Katrina Hayward for pointing out this possibility.
[3] The prepositions, *'i* ("in"), *ki* ("to"), and *mei* ("from") change their forms into *'iate*, *kiate* and *meiate*, when followed by a pronoun.

(6.7) a. ‘Oku sai’ia ‘a Sione ‘iate koe.
Prs like ABS Sione in-person 2.s.
“Sione likes you.”

b. Na’e ‘omi ‘e Sione ‘a e tohi kiate au.
Pst bring ERG Sione ABS def book to-person 1.s.
“Sione brought the book to me.”

Sentences in (6.7) suggest that the object pronouns are not clitics, as the object pronoun is arguably not attached to the verb in these examples. In fact, the sentences become ungrammatical if the pronoun appears immediately after the verb.

(6.8) a.*‘Oku sai’ia koe ‘a Sione.
Prs like 2.s. ABS Sione.
“Sione likes you.”

b. *Na’e ‘omi au ‘e Sione ‘a e tohi.
Pst bring 1.s. ERG Sione ABS def book
“Sione brought the book to me.”

This means that the object pronouns can be licensed in this position under some particular circumstances. We will return to this point shortly. In addition, unlike the subject pronouns, the object pronouns may occur in the object position, preceded by the ABS-case marker. See (6.9) below.

(6.9) Na’e taki ‘e Sione ‘a kinautolu.
Pst lead ERG Sione ABS 3.pl.
“Sione led them.”

(6.9) suggests that the object pronouns are on a par with full NP's. Furthermore, not only can they appear in the case-marked object position, the object pronouns may also appear in the subject position with the case marker. See (6.10) below.

(6.10) a. ‘Oku nofo ‘a kimautolu.
Prs stay ABS 2.excl.pl.
"We stay."

b. Na’e faka’osi ‘e kimoutolu ‘a e vai.
Pst finish ERG 2.pl. ABS def water
“You finished the water.”

Given examples like (6.10a,b), it is not appropriate to regard these pronominals as “object” pronouns. In essence, these pronouns are used anywhere except for the position immediately preceding the verb, in which the subject pronouns exclusively occur. The above observation leads us to postulate that these pronominals are independent words rather than clitics, and that consequently, they may occur both as an object and as a subject.

There is ample evidence that testifies that the Tongan object pronouns are not clitics. Zwicky (1985) lists a series of tests to distinguish independent pronouns from clitics. The Tongan object pronouns fail these tests. In contrast, the same tests verify that the subject pronouns are indeed clitics. First, some of the “object” pronouns are morphologically too complex for a clitic. Zwicky (1985) notes that clitics are rarely composed of a more than one morpheme. The dual and plural “object” pronouns in Tongan, however, consist of three morphemes: e.g., *kinautolu* can be broken down into *ki-nau*(3.pl)-*tolu*(“three”). These pronouns are more word-like than clitic-like in this respect. In contrast, the subject pronouns all consist of one morpheme. Secondly, clitics, being parts of words, cannot occur with a specifier, modifier, or a conjunction (Zwicky 1985). The Tongan “object” pronouns go against this generalisation as well. For example, they can be freely conjoined with another NP by a conjunction. See (6.11) below.

(6.11) a. Ko koe mo au.
Pred 2.s. and 1.s.
"It's you and me."

b. Na'e nofo 'a kimautolu mo kinautolu.
Pst stay ABS 1.pl.excl. and 3.pl.
"We and they stayed."

On the other hand, conjunction is impossible with the subject pronouns.

(6.12) *Na'a mau mo nau nofo.
Pst 1.pl.excl. and 3.pl. stay
"We and they stayed."

Thirdly, phonological tests further confirm that the clitic status of the subject pronouns. For example, the subject pronouns trigger an accent shift. Words in Tongan have a penultimate accent. Thus, bisyllabic tense markers, *'oku*, *na'a*, and *kuo* have a stress on the first syllable. However, when followed by a monosyllabic pronoun, the accent is shifted to the second syllable, which effectively is the penultimate syllable of the tense marker + pronoun cluster. That is, the tense marker and the pronoun form a compound that is regarded as one word. See (6.13) below.

(6.13) a. 'óku --> 'okú ne
b. ná'a --> na'á ne
c. kúo --> kuó ne

The subject pronouns also undergo some sandhi rules. In the spoken language, some tense marker + pronoun clusters are customarily pronounced in shortened forms when the pronoun is monosyllabic. Some examples are given in (6.14) below.

(6.14) a. na'a ke -> nake
b. na'a ku -> na'u
c. na'a ne -> nane
d. kuo u -> kou

Data such as (6.13) and (6.14) strongly suggest that these pronominals are clitics attached to T. To summarise, empirical evidence suggests that Tongan has a set of

subject clitics (henceforth, SCL's) and a set of independent pronouns (henceforth, pronouns). Consequently, we assume that by default the pronouns appear in an argument position with a case marker, just like full NP's.

Given the assumption that the object pronouns are not clitics, it is necessary to explain the examples like (6.15), in which the pronoun appears immediately after the verb without accompanying a case marker.

(6.15) Na'e 'ave au 'e Sione.
Pst take 1.s. ERG Sione
"Sione took me."

We assume that (6.15) above is derived from (6.16) below.

(6.16) Na'e 'ave 'e Sione 'a au.
Pst take ERG Sione ABS 1.s.

We may conjecture that Tongan has an (optional) rule that moves a pronominal object to right-adjoin to the verb, yielding the structure (6.17) below.

(6.17) Na'e 'ave au_i 'e Sione t_i.

Note that this rule applies exclusively to pronouns that are base-generated in the object position. Thus, full NP's cannot undergo this rule, as illustrated by (6.18).

(6.18) *Na'e 'ave $Mele_i$ 'e Sione t_i.
Pst take Mele ERG Sione
"Sione took Mele."

(6.19) shows that the crucial condition is not the case but the grammatical role, i.e., a pronoun must be O in order to undergo this fronting rule. Fronting the ABS-marked pronominal subject yields ungrammaticality.

(6.19) *Na'e 'alu au_i t_i.
Pst go 1.s.
"I went."

This could be understood as incorporation of a pronoun into the verb in the sense of Baker (1988).[4] We may conjecture that Tongan optionally allows incorporation of a pronominal O. Note also that when a pronoun is right-adjoined to the verb, the ABS-case marker is obligatorily omitted. We assume that the ABS-case marker *'a* is an overt realisation of the feature [ABS] of Agro. Thus, it appears on an argument when the argument checks its case feature in [Spec, Agro]. If we assume that the pronominal O is incorporated into a verb, it can no longer undergo any movement on its own. Accordingly, it cannot move up to [Spec, Agro]. As a result, *'a* cannot appear on the pronoun. Let us assume that the case feature [case] of an incorporated pronoun is checked along with the case feature of the verb by adjoining to Agro.

6.3 Properties of subject clitics in Tongan

6.3.1 Theories of cliticisation

In this subsection, we will briefly review the various accounts of cliticisation. The most extensively studied are the direct object clitics (henceforth, OCL's) in Romance. Kayne (1975) first proposed the theory that the Romance OCL's are base-generated as the complement of V and subsequently move to attach to the verb. Kayne's movement theory is motivated by the fact that OCL's cannot co-occur with a coreferential NP in the object position. The main argument of this approach is that the position [V, NP] is occupied by a trace, and thus cannot be filled by any other argument. Consider the French example below. As illustrated by (6.20c), the ODL *les* cannot appear if the

[4] Thanks to William O'Grady for bringing this point to my attention.

coreferential NP is present in the object position. In other words, clitic doubling is not allowed.

(6.20) French

a. Jean mange les pommes.
Jean eat-3.s. def.pl. apples
"Jean eats the apples."

b. Jean les mange.
Jean def.pl. eat-3.s.
"Jean eats them."

c. *Jean les mange les pommes.
Jean def.pl. eat-3.s def.pl. apples
"Jean eats them the apples."

Some other Romance languages, however, do allow clitic doubling, as illustrated by the Spanish example below.

(6.21) a. Lo veo.
3.s.masc. see-1.s.
"I see him."

b. Lo veo a Juan.
3.s.masc. see-1.s. to Juan
"I see him Juan."

The phenomenon of clitic doubling gave rise to an alternative account of cliticisation. Specifically, clitics are attached to the host in the base structure (Rivas 1977, Jaeggli 1986b). The position [V, NP] can be filled either by an overt NP or an empty category. Clitic doubling can be explained in this approach by stipulating a language-specific rule. French allows only the latter to generate in this position, while Spanish allows both.

The idea that clitics are base-generated in the clitic position is further developed by Aoun (1981, 1985), who argues that some clitics absorb case. Case absorption renders

the position [V, NP] a non-case position. Overt NP's are excluded from this position due to the Case Filter. Clitic doubling is possible only if the clitic is not a case absorber. Along the same line, Borer (1981, 1983) regards clitics as the spell-out of the case feature, which matches with that of the element, either an overt NP or an empty category, generated in the position [V, NP] in the base structure.

Association of clitics with theta-roles is also proposed in the literature. Aoun (1985), for example, proposes that clitics may absorb not only case but also theta-role. Everett (1986, 1989), following Aoun (1985), postulates four types of clitics based on the features [±C(ase)] and [±A(rgument)]. [+C] clitics require case, [+A] clitics require a theta-role. This paradigm predicts that [+A] clitics render the position [V, NP] a non-argument position, and thereby forbid clitic doubling. Similarly, doubling a [+C] clitic is expected to cause a case conflict.[5] Following Aoun (1985) and Everett (1987, 1989), we will assume that properties of clitics vary cross-linguistically with regard to their requirement of case and theta role. We will argue that SCL's in Tongan are typologically [+A, +C]. As to the derivation, we will assume that SCL's in Tongan are base-generated in the subject position [Spec, VP] and subsequently move to adjoin to T. We assume that the host is T because of the phonological evidence mentioned earlier: T and a SCL behave as a cluster and undergo phonological rules such as accent shift and sandhi. Granted that the movement theory has been rejected for the reasons mentioned above, we argue that the derivation of clitics may also be

[5] However, Everett (1989) argues that the case conflict does not necessarily prohibit doubling; for example, in Yagua clitics acquire morphological visibility by attaching to the verb, and thus escape the case requirement. Consequently, case conflict is resolved and the case-marked NP may double the clitic.

parameterised. Specifically, derivation of OCL's and that of SCL's need not be the same. We will verify our hypothesis below.

6.3.2 Generation of SCL's in Tongan

Based on the phonological facts, we assume that SCL's in Tongan are attached to T, and not V. As mentioned above, we argue that the Tongan SCL's are [+A, +C]. They are [+A], in that they require a theta-role. To be specific, an SCL must bear the external theta-role.[6] This requirement is crucial to ensure that only the external argument (S/A, but not O) may be realised as a clitic. As we have seen above, pronominal O must always be realised as a pronoun, not as a clitic. These two assumptions together make the base-generation approach infeasible. If we assumed that a SCL is generated attached to T in the base structure, it would not be clear how this SCL receives a theta-role from the verb. Thus, we assume that they are generated in the [Spec, VP] position, where it can be theta-marked by the verb, and subsequently moves up to adjoin to T.[7]

This analysis predicts that the subject of an unaccusative verb cannot appear as a SCL. The subject of an unaccusative verb is generated as an internal argument and thereby does not bear the external theta-role. To verify this prediction, it is necessary to specify the verbs belonging to the unaccusative class. Perlmutter and Postal (1984: 98-

[6] *Theta-role* here refers to the external/internal theta-role in the sense of Williams (1980, 1981), and not a particular thematic (semantic) role such as Agent, Patient, etc. It is assumed that a verb assigns the internal theta-role to the argument in the complement position and the argument in [Spec, VP] receives the external theta-role from V' by predication.

[7] Manzini (1986) supports the movement theory with regard to SCL's in French. Manzini argues that the French SCL's originate in [Spec, NP] and attach to the verb later.

99) propose that the class of unaccusatives typically includes the following predicates: a) adjectives, b) predicates whose initial nuclear term is semantically a patient, c) predicates of existing and happening, d) involuntary emission of stimili that impinge on the senses, e) aspectual predicates, and f) durative. In Tongan, there is a way to find out whether an argument bears an external theta-role or an internal theta-role. Tongan has two sets of possessive pronouns, alienable and inalienable. The alienable possessive pronouns start with *'e-*, e.g., *'eku* (1.s.), *'ene* (3.s.).[8] The inalienable possessive pronouns, on the other hand, start with *h-*, e.g., *hoku* (1.s.), *hono* (3.s.). The two sets of possessive pronouns are also used with a verb, more or less equivalent to the English possessive + gerund (e.g., "His passing the exam will be a surprise."). What is very interesting is that the alienable possessive and the inalienable possessive are used in different contexts. When an alienable possessive pronoun precedes a verb, it refers to the subject of the verb (either A or S). In contrast, an inalienable possessive pronoun preceding a verb refers to O. See (6.22) below.

(6.22) a. 'ene tamate'i
alienable.poss.3.s. kill
"his killing (something)"

b. hono tamate'i
inalienable.poss.3.s. kill
"his being killed (by somebody/something)"

As illustrated by (6.22a), when used with a transitive verb, an alienable possessive pronoun refers to A. In contrast, (6.22b) shows that an inalienable possessive pronoun must refer to O when used with a transitive verb.[9] In other words, possessive pronouns

[8] However, note that the second person possessive pronouns are exceptions. The second person alienable possessive pronouns are *ho'o* (2.s.), *ho'omo* (2.d.), and *ho'omou* (2.pl.) as opposed to the second person inalienable possessive pronouns, *ho* (2.s.), *homo* (2.d.), and *homou* (2.pl.).

[9] Based on these characteristics, Churchward (1953) called the alienable possessive pronouns "subjective possessive pronouns" and the inalienable, "objective possessive pronouns".

are sensitive to theta-role. Predicates that are categorised as unaccusatives by Perlmutter and Postal (1984) almost invariably take an alienable possessive pronoun. See (6.23) below.

(6.23) a. 'ene/*hono faka'ofo'ofa[10]
its being beautiful

b. 'ene/*hono too
its falling

c. 'ene/*hono hoko
its happening

d. 'ene/*hono nanamu
its being smelly

e. 'ene/*hono toolonga
its lasting

As for aspectual predicates, they exhibit peculiar characteristics. First, the subject must be inanimate, as illustrated by (6.24) below.

(6.24) a. Na'e kamata 'a e lea.
Pst begin ABS def speech
"The speech began."

b. *Na'e kamata 'a Sione.
Pst begin ABS Sione
"Sione began."

'Osi is another example. See (6.25) below.

(6.25) a. Kuo 'osi 'a e me'akai.
Perf finish ABS def food
"The food is already finished."

b. *Kuo 'osi 'a Sione.
Perf finish ABS Sione
"Sione has already finished."

[10] *Hono faka'ofo'ofa* is acceptable if *faka'ofo'ofa* is taken to be a noun: thus, meaning "its beauty". Same as (6.23d): *hono nanamu* "its odour".

Thus, it is quite likely that the ABS-marked argument in (6.24a) and (6.25) is an internal argument. *Kamata* and *'osi* rarely occur with a possessive pronoun, but if it does, it has to be an inalienable possessive pronoun. See (6.26) below.

(6.26) (Kuo 'osi 'a e me'akai.) Na'e vave *'ene/ʔhono 'osi.
Perf finish ABS def food Pst quick its finish
"(The food is already finished.) They have gone quickly."
Lit. "its finishing was quick."

As predicted, the subject of *kamata* and *'osi* cannot be a SCL. Thus,

(6.27) a. *Na'a ne kamata.
Pst 3.s. begin
"It began."

b. *Kuo nau 'osi.
Perf 3.pl. finish
"They are finished."

These examples support our hypothesis that the subject of an unaccusative verb cannot be a SCL.[11]

An apparent counter-example is sentences like (6.28) below.

(6.28) 'Oku nau kamata ngaaue he hiva.
Prs 3.pl. begin work def nine
"They started to work at 9:00."

In (6.28), a SCL, *nau*, is used with *kamata* contrary to our prediction. Note, however, that *kamata* is immediately followed by another item, *ngaaue*. We may assume that *kamata* and *ngaaue* form a complex verb, *kamata-ngauue*, which is derived as follows. Note that *kamata* is also used as a transitive verb.

[11] On the other hand, one may argue that the sentences in (6.27) are ruled out because the personal pronouns are used to refer to inanimate objects. In other words, the restriction is that personal pronoun cannot be [–animate] rather than a SCL cannot be an internal argument. Even so, our data show that potentially unaccusative verbs, *kamata* and *'osi*, cannot take a SCL as the subject.

(6.29) Na'a nau kamata 'a e ngaaue.
Pst 3.pl. begin ABS def work
"They began the work."

Let us assume that *ngaaue* in (6.28) is an incorporated object. The complex verb *kamata-ngaaue* is a consequence of incorporation in the sense of Baker (1988): the object NP has been incorporated into the verb *kamata* to form an intransitive (unergative) verb of the form *kamata*-NP. Similar object-incorporation is permitted with other transitive verbs: e.g., *inu-pia* ("to beer-drink"), *ifi-tapaka* ("to cigarette-smoke"), and *kai-mango* ("to mango-eat"). In short, *kamata* in (6.28) is not an unaccusative verb, but an unergative derived from a transitive verb by object-incorporation. Thus, the subject can be a SCL because it bears an external theta-role.

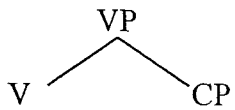
Other verbs belonging to the unaccusative class are one-place predicates that take a sentential complement such as the negative *'ikai* and *pau* ("to be determined"). As discussed in Chapter 3 (§3.5.2), these verbs on the one hand allow *pro* to occur in the subject position, and on the other cannot take a thematic subject. We thus assume that these verbs do not assign an external theta-role.

(6.30) a. 'Oku 'ikai *pro* [ke sai'ia 'a Sione 'ia Mele].
Prs not that like ABS Sione in-person Mele
"Sione does not like Mele."
Lit. "It is not that Sione like Mele."

b. *'Oku 'ikai 'a Sione [ke sai'ia 'ia Mele].
Prs not ABS Sione that like in-person Mele

Thus, we assume that these verbs are unaccusatives with the base structure (6.31) below.

(6.31)



Verbs of this class cannot occur with alienable possessive pronouns. Furthermore, they cannot they take inalienable possessives. See (6.32) below.

(6.32) Ko e ʻuhinga, ko *ʻene/*hono ʻikai ke haʼu ʻa Sione.
Pred def reason, Pred its not that come ABS Sione
"The reason is that Sione is not coming."
Lit. "The reason is its being not that Sione come."

In short, unaccusatives in Tongan are either aspectual verbs or one-place predicates that take a sentential complement. Empirical evidence shows that the internal argument of these verbs cannot occur as a SCL. Thus, we conclude that SCL's in Tongan must be assigned an external theta-role.

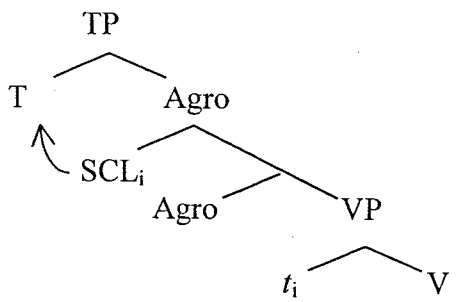
Let us consider how SCL's in Tongan are generated. As mentioned above, we assume that the Tongan SCL's are [+C] and [+A]. That is, they must bear a case and a theta-role. Let us assume, following Berendsen and Zonneveld (1984), that clitics are a bundle of features.[12] Specifically, we assume that the Tongan SCL's bear the case feature and phi-features. In addition, there is a language-specific constraint that requires that a SCL be assigned an external theta-role in the base position. The assignment of an external theta-role is the licensing condition on the SCL's in Tongan. This is the reason why only the subjects (i.e., external arguments) may be realised as a clitic. A clitic generated in [Spec, VP] receives a theta-role from the verb, while a clitic generated in [V, NP] fails to do so. Note that at this stage, the case feature of

[12] Note that Berendsen and Zonnenveld (1984) take the base-generation hypothesis. Thus, it is assumed that the feature bundle is generated as part of the host, i.e., verb. I see no problems in adopting the essence of this proposal in assuming that the feature bundle is generated in the [Spec, VP] in Tongan.

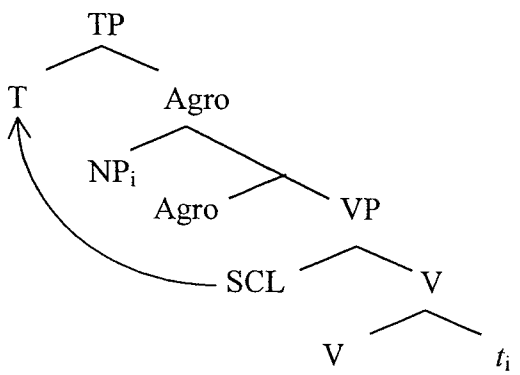
SCL remains unchecked. The case feature can be checked off, by raising the relevant SCL to an appropriate Agr. In other words, we assume that the SCL's in Tongan undergo the same movement as full NP's in order to receive case; SCL's generated as S will move up to [Spec, Agro] and receive ABS, and those generated as A will move up to [Spec, Agrs] and receive ERG. Note that the case-absorption in the sense of Aoun (1981) cannot explain the case assignment of the Tongan SCL's. Aoun proposes that clitics, by attaching to the verb, absorb case in a manner similar to the way that a passive affix absorbs case of the verb (i.e., ACC). However, case absorption cannot work straightforwardly in Tongan because Tongan has an ergative case system. Although SCL's generated as S may absorb case of the verb (ABS), those generated as A could not, as this would leave the complement NP case-less. Given the base-generation hypothesis, the approach regarding clitics as the spell-out of case feature should also be rejected.

As to when cliticisation takes place, we assume that a SCL attaches to T in TP, forming a cluster, $[_T[_T T+SCL]+V]$. In an intransitive construction, a SCL first moves to [Spec, Agro] and checks off its case feature and subsequently cliticises onto T. In contrast, in an intransitive construction, a SCL attaches to T before it moves to [Spec, Agrs]. See (6.33) below. (6.33a) represents an intransitive construction and (6.33b), a transitive.

(6.33) a.



b.



Thus, in (6.33b), the SCL cannot check its case feature in [Spec, Agrs]. We may assume that the SCL in (6.33b) checks its case feature when the host T moves to adjoin to Agrs. That is, both T and the SCL check their case features by adjoining to Agrs. In this analysis, it is assumed that case is assigned to a SCL although it is not morphologically realised. This contrasts with full NP arguments that are always preceded by a case marker. The fact that case is not morphologically reflected in the form of SCL's may be regarded as an indication that case is a feature of secondary importance to SCL's. On the other hand, theta-role plays a crucial role in realisation of SCL's.

The idea that clitics are somehow associated with theta-role is not novel. Borer (1983), for example, argues that clitics are universally associated with (but not necessarily

assigned) a theta-role, possibly by means of co-indexing. We find a number of examples that support this assumption as well. A type of ergative split, in which clitic pronouns show an accusative pattern as opposed to nominals is commonly found in the Australian languages, Pama-Nyungan family in particular (Blake 1977, Dixon 1979, Hale 1983), Salish languages (Jelinek 1984, 1993) as well as Uto-Aztecan languages. Such a split is not so puzzling if we assume that it is not case, but theta-role that are reflected in the form of clitics. There is another piece of evidence that behaviour of clitics is controlled by theta-role. In languages that have both SCL's and OCL's the clitic must appear in a fixed order: namely, a SCL must precede an OCL. This is the case in Warlpiri (Hale 1983) as well as Kashmiri (Wali and Koul 1994). Kashmiri data is particularly insightful, as the inventory of Kashmiri clitics consists of ERG-CL's and ABS-CL's. Despite the fact that case is the factor that determines the clitic forms, the linear order is nevertheless governed by the theta-role. In the current analysis, Kashmiri clitics are classified as [+A, +C] as the Tongan SCL's. However, unlike Tongan, case is the prevalent feature, suppressing the theta-role feature. As a result, clitic forms show an ergative pattern.

6.3.3 Clitic doubling in Tongan

The current analysis of the Tongan SCL's predicts that clitic doubling is not possible in Tongan. Assuming that SCL's are [+A], requiring a theta-role, a sentence with a SCL should not contain a coreferential NP, as this will cause a violation of the Theta Criterion; the doubled NP cannot receive a theta-role from the verb. Moreover, generation of the doubled NP is configurationally impossible. Since it is assumed that a SCL is generated in [Spec, VP] and then moves to attach to T in the course of

derivation, this position is occupied by the trace. Consequently, an NP cannot be generated in this position. Examples below show that this prediction is actually borne out.

(6.34) a. *Na'a ne$_i$ 'alu 'a Sione$_i$.
Pst SCL3.s. go ABS Sione
"Sione went."

b. *Na'a ne kai 'e Sione 'a e ika.
Pst SCL3.s. eat ERG Sione ABS def fish
"Sione ate the fish."

However, the data such as (6.35) apparently present a puzzle.

(6.35) a. Te u$_i$ 'alu au$_i$.
Fut SCL-1.s. go 1.s.
"I will go."

b. Na'a ne$_i$ mohe ia$_i$.
Pst SCL3.s. sleep 3.s.
"He slept."

In these examples, the SCL is arguably doubled by a coreferential pronoun. How can these examples be accounted for?

Interestingly, not all SCL's may co-occur with a coreferential pronoun. As illustrated by (6.36) below, ERG-SCL's cannot accompany a coreferential pronoun, either immediately following the verb (6.36a) or in the base-generated position (6.36b).

(6.36) a. *Te u$_i$ 'ave au$_i$ 'a Sione.
Fut SCL1.s. take 1.s. ABS Sione
"I will take Sione."

b. *Te u$_i$ 'ave 'a Sione au$_i$.
Fut SCL1.s. take ABS Sione 1.s.
"I will take Sione."

The contrast between (6.35) and (6.36) suggests that the pronoun coreferential with a SCL in (6.35) is not doubling the SCL. One possible analysis is that the pronoun in

(6.35) is a kind of resumptive pronoun, an overt realisation of the trace of SCL.[13] However, if it is a resumptive pronoun, there is a puzzling fact. As discussed in Chapter 5, a resumptive pronoun is usually required for the trace of an ERG-argument and not an ABS-argument. In contrast, a coreferential pronoun may occur with an ABS-SCL but not with an ERG-SCL. Let us consider why the trace of an ABS-SCL but not that of an ERG-SCL can be overtly realised as a resumptive pronoun. This difference arises due to the timing of cliticisation. Earlier, we proposed that a SCL attaches to T in TP. Consequently, an ABS-SCL checks its case feature in [Spec, Agro] while an ERG-SCL cannot move to [Spec, Agrs]. The latter checks its case feature when the host T adjoins to Agrs. As a result, an ABS-SCL leaves a trace in [Spec, Agro], but [Spec, Agrs] does not contain a trace of an ERG-SCL. Consequently, it is impossible for [Spec, Agrs] to have a resumptive pronoun, for there is no trace. Thus, the distribution of resumptive pronouns argue for our hypothesis that SCL's have case; more accurately, either ERG or ABS although the morphological form of a SCL does not reflect its case. That the coreferential pronoun in (6.35) is indeed an overt realisation of the trace in [Spec, Agro] is confirmed by the fact that such a pronoun cannot co-occur with pronominal O.

(6.37) *'E 'ave koe_i 'e Sione koe_i.
Fut take 2.s.2.s. ERG Sione
"Sione will take you."

As discussed above (§6.2), the first *koe* in (6.37) has been incorporated into the verb

[13] The term "resumptive pronoun" might be misleading. As William O'Grady (p.c.) points out, resumptive pronouns usually do not appear so close to their antecedent. However, note that this is not an instance of *wh*-movement. Resumptive pronouns of *wh*-trace are inserted in many cases in order to avoid violation of the island condition and is therefore obligatory. As for SCL's in Tongan, a coreferential pronoun is optional and the position is vacated by cliticisation, which is arguably not *wh*-movement. Thus, we should not necessarily expect them to be governed by the same constraints and to show similar behaviour.

in the base structure and undergone the V-to-C movement with the verb. Consequently, *koe* does not pass through [Spec, Agro] in this construction. Accordingly, the resumptive pronoun cannot occur. Hence, the sentence is ruled out. To summarise, the pronoun coreferential with a SCL is the spell-out of a trace left in [Spec, Agro] as a result of cliticisation. The above data have shown that our hypothesis is borne out. First, Tongan SCL's have a theta-role (and thereby clitic doubling is not permissible) and second, Tongan clitics bear case (hence the restriction on the resumptive pronouns).[14] The latter in turn suggests that case assignment on SCL's is also ergative contrary to what their superficial forms misleadingly suggest.

On a different note, let us consider some sentences that seemingly present a counter-example for the current analysis. See (6.38) below.

(6.38) a. Na'e 'alu 'a Sione ia.
Pst go ABS Sione 3.s.
"Sione went."

b. Na'e talamai 'e Sione ia ['oku ne 'ofa 'ia Mele].
Pst tell-me ERG Sione 3.s. Prs SCL3.s. love in Mele
"Sione told me that he loves Mele."

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[14] *Pea*-coordination provides additional evidence for the [+C] status of SCL's. As discussed in Chapter 5, in coordinate constructions involving *pea*, ABS-arguments cannot be coreferential with ERG-arguments. Examples below show that SCL's are subject to the same restriction: in (i) the SCL *nau* bears ABS while in (ii) it bears ERG.

(i) a. Na'a nau_i pau'u pea taa'i 'e he faiako pro_i.
Pst 3.pl. naughty and hit ERG def teacher
"They were naughty and the teacher hit (them)."
b. *Na'a nau_i pau'u pea taa'i pro_i 'a e faiako.
Pst 3.pl. naughty and hit ABS def teacher
"They were naughty and (they) hit the teacher."

(ii) a. Na'a nau_i 'ave 'a e ta'ahine$_j$ ki he maaketi pea fiefia $pro_{i*/j}$.
Pst 3.pl. take ABS def girl to def market and happy
"They took the girl to the market and (*they/she) was happy."
b. Na'a nau_i 'ave 'a e ta'ahine$_j$ ki he maaketi pea fakatau mai $pro_{i/j*}$ 'a e kumala.
Pst 3.pl. take ABS def girl to def market and buy ABS def sweet potato
"They took the girl to the market and bought the sweet potato."

In (6.38a), the presence of the third person singular pronoun *ia*, presumably coreferential with the ABS-subject, *Sione*, does not rule out the sentence. Moreover, in (6.38b), *ia* co-occurs with an ERG-subject, yet the sentence is grammatical. Examples like these seem to undermine the current analysis. (6.38a,b) should be ruled out if it is assumed that a coreferential pronoun may occur only with a ABS-SCL. Note, however, that *ia* in question appears in an odd position. According to our analysis, the pronoun appears immediately after the verb. However, *ia* in (6.38) appears in the position immediately following the subject NP. It should be noted that putting *ia* in the position immediately following the verb will result in an ungrammatical sentence.

(6.39) a. *Na'e 'alu ia 'a Sione.
Pst go 3.s. ABS Sione
"Sione went."

b. *Na'e talamai ia 'e Sione ['oku ne 'ofa 'ia Mele].
Pst tell-me 3.s. ERG Sione Prs SCL3.s. love in Mele
"Sione told me that he loves Mele."

This *ia* can occur with SCL's whose features are not [3.s.]. See (6.40) below.

(6.40) a. 'Alu koe ia.
go 2.s. *ia*
"(You) go!"

b. Na'e kei fai ai pee 'e he ni'ihi ia 'enau ngaaue.
Pst still do there only ERG def some *ia* their work
"Some kept doing their work"
(Churchward 1953: 158)

In (6.40a), *ia* occurs with the second person singular pronoun *koe*. In (6.40b), it occurs with the third person plural subject. Sentences like (6.40a,b) suggest that *ia* occurring immediately after the subject NP is not the third person singular pronoun. Furthermore, *ia* may occur even with a SCL and its resumptive pronoun, as illustrated by (6.41). Obviously, *ia* in this case cannot be interpreted as coreferential with the

subject.

(6.41) 'Oku ou_i taala'a ai au_i ia.
Prs SCL1.s. doubtful there 1.s. *ia*
"I am doubtful about it."
(Churchward 1953: 158)

It is most plausible to assume that *ia* in these examples is an emphatic adverb, and not a pronoun. Churchward (1953:157) lists *ia* as a demonstrative, noting however, that it has "a very common idiomatic use in which it may be regarded as adverb, qualifying the whole sentence [as an emphatic]". Churchward hesitantly adds that *ia* in this context might be a cognate of the Fijian *ia* ("but, however"). Considering the sentences in (6.40) and (6.41), we take that Churchward's speculation is correct, and assume that *ia* in these sentences is an adverb, an independent lexical item, which happens to be a homonym of the third person singular pronoun. Thus, we have proved that the seemingly counterexamples do not invalidate the current analysis of the Tongan SCL's.

6.3.4 [+A] clitics and raising in Tongan

Thus far, we argued that SCL's in Tongan requires both case and theta-role. For this reason, the Tongan SCL's are generated in the [Spec, VP] position to be assigned an external theta-role by the verb. The fact that the Tongan SCL's are [+A] correctly predicts that clitic doubling is not allowed in Tongan. A seeming exception is the fact that ABS-SCL may occur with a coreferential pronoun. We argued that the coreferential pronoun in such a case is actually a kind of resumptive pronoun, the phonological realisation of the trace coindexed with the SCL. A study of occurrence

of such a resumptive pronoun has revealed that SCL's bear case, and that ABS-SCL's are distinguished from ERG-SCL's at the level of syntax, despite the fact that the case of a SCL is not morphologically visible. A crucial assumption is that SCL's are more sensitive to theta-role than they are to case. It is the theta-role feature that is responsible for giving rise to the phonological form of a SCL. Case is a secondary condition, which is not reflected in the form of a SCL.

The assumption that the Tongan SCL's are sensitive to theta-role has an interesting consequence. It accounts for a peculiar property of the construction analogous to what has been called raising in Niuean. As we will discuss in full detail in Chapter 7, Tongan permits what appears to be raising with a subset of one-place predicates, e.g., *totonu* ("advisable"). See (6.42) below.

(6.42) a. 'Oku totonu [ke 'alu 'a Sione].
Prs advisable ke[15] go ABS Sione
"It is advisable that Sione goes."

b. 'Oku totonu 'a Sione$_i$ [ke 'alu t_i].
Prs advisable ABS Sione ke go
"Sione had better go."

Raising in Tongan differs from raising in most other languages in two respects: a) raising is optional, and b) a raised NP is able to receive case inside the embedded clause. In general, raising is motivated by a case-related reason. When an argument fails to receive case clause internally, it is raised to a matrix case position in order to avoid the Case Filter violation. In Tongan, however, the raised NP can receive case within the embedded clause, and therefore, there is no need to raise this argument.

[15] *ke* is an element that introduces infinitival clauses in Tongan. We assume that *ke* is an example of tense anaphora. See Chapter 10 for discussion.

Such a redundant movement should be prohibited by the Chain Condition (Chomsky 1981, 1986b): a chain may contain a unique case position. Nevertheless, (6.42b) is grammatical. Therefore, we will argue that sentences like (6.42b) are not derived by raising. Rather, the argument in the matrix subject position is base-generated there and is coindexed with the empty element in the embedded clause by an empty operator.

We assume from (6.42b) that the landing site is a case marked position. (6.42a) shows that the same position is not a theta-position, in which a (null) expletive may occur. What is relevant to our current discussion is that a SCL cannot appear in the matrix subject position of such a construction. See (6.43) below.

(6.43) a. ʻOku totonu [ke ne ʻalu].
Prs advisable ke 3.s. go
"It is advisable that he goes."

b. *ʻOku ne$_i$ totonu [ke t_i ʻalu].
Prs 3.s. advisable ke go
"He had better go."

The ungrammaticality of (6.43b) results from that fact that theta-role is a crucial factor for SCL's in Tongan. The Theta Criterion requires SCL's to appear in a theta-position because they are arguments. (6.43b) is ruled out because the SCL appears in a non-theta-position and consequently fails to receive the external theta-role.

6.4 Further implications of the current analysis

The discussion above has shown that the apparent accusative pattern which Tongan pronominals exhibit is only deceptive, and that pronouns, both clitic and independent,

are also treated in an ergative manner. The accusative pattern directly reflects the fact that theta-role is the crucial factor that governs the generation of clitics in Tongan, and that consequently, only those with the external theta-role may be realised as a clitic. External arguments (in effect, S and A) have a clitic form whereas internal arguments (i.e., O) must always be realised as an independent pronoun. Thus, S/A appear in an identical form (SCL) as opposed to O (pronoun), giving rise to a superficial accusative pattern. It should be emphasised that external arguments may also be realised as an independent pronoun, and that in such a case, the ERG-ABS contrast is visible in the morphology, i.e., by the form of case markers. However, external arguments, when pronominal, are rarely realised as an independent pronoun. To conclude, what seems to be a morphological split in Tongan turned out to be nothing more than a consequence of some independent syntactic restrictions.

In this final section, we will consider the application of the current analysis to other instances of the similar type of morphological split. As mentioned above, a split between full NP's and pronouns is commonly found across the so-called ergative languages. Traditional accounts appealed to semantic/pragmatic factors, either postulating the Agency hierarchy (Silverstein 1976, Dixon 1979), or assuming the similar hierarchy of topic-worthiness (Blake 1977, 1986; DeLancey 1981). In the approach developed in the current research, an ergative split of this type is accounted for as a syntactic phenomenon without postulating such a semantic/pragmatic condition.

We have argued above that those pronominals that show an accusative pattern are

clitics, which are, due to their [+A] feature, sensitive to theta-role. As a result, their forms reflect theta-role (i.e., the external theta-role vs. the internal theta-role) instead of case. There are three possibilities: a) a language may have SCL's but not OCL's; b) a language may have OCL's but not SCL's, in which case S/A constantly appear as a pronoun, while O takes a clitic form; and c) a language may have both SCL's and OCL's. In any case, pronominal S will appear in an identical form as a pronominal A, while a distinct form is used for pronominal O. A slightly different situation is where independent pronouns also show an accusative pattern. This is commonly found in Australian languages, in particular, those of the Pama-Nyungan family (Jelinek 1984). Such a case can be explained by assuming that theta-role sensitivity spreads over the whole range of [+pronominal] elements.[16]

Jelinek (1984), rejecting the traditional approaches, proposes an alternative account somewhat similar to the current analysis. Specifically, Jelinek (1984) argues that in those languages that show an accusative case marking on clitic pronouns the clitics are arguments. It is argued that such a clitic argument bears a G(rammatical)-case, which reflects its grammatical function.[17] This is an observation parallel to that of the current analysis; clitic are [+A] and consequently their forms reflect the theta-role.[18]

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[16] This analysis is valid if the accusative pattern is manifested by the form of the pronouns, and not by case markers. If the pronouns are of invariant forms and marked with a case marker, whose distribution shows an accusative pattern, we have a problem. However, we may argue that an element accompanying a pronoun is not a case marker but something else, e.g., definiteness marker. This is the case for the suffix *–ko* in Hindi. Although *-ko* has been traditionally analysed as the ACC-case marker, recent studies on ergativity in Hindi show that *–ko* marks not all ACC arguments, but only those which are [+definite] (Mahajan 1997, to appear). Unfortunately, I have not come across relevant data to test this hypothesis.

[17] On the other hand, ERG and ABS are referred to as L(exical)-case, which appears on the coreferential nominal. Jelinek considers L-case marked nominals are non-argumental (cf. Footnote 18 below).

[18] However, note that Jelinek regards nominals in such a language as non-argumental adjuncts, which

More complicated is a split which differentiates first and second person pronouns from third person pronouns. In such a case, first and second person pronouns (clitic or otherwise) show an accusative pattern, while third person pronouns are marked ergatively. Dyirbal is a famous example of this type of morphological split (cf. Chapter 2, §2.2.1). Again, traditional accounts depend on the semantic/pragmatic aspect, arguing that third person is less likely to be Agent, or topic, than first and second person. Leaving aside the validity of this argument, let us consider whether it is possible to account for such cases solely in terms of syntax. Obviously, appealing to [±A] distinction would not work. It would be outrageous to claim that in such a language first and second person pronouns are [+A], but third person pronouns are [–A]. Therefore, we assume that there is some independent condition that excludes third person pronouns. Jelinek (1993) proposes that it is the person hierarchy (1/2 > 3). We find various instances in which the person hierarchy is manifested. First, third person is arguably less marked than first and second person. For example, third person singular agreement is often realised as a zero morpheme (e.g., Warlpiri (Jelinek 1984), Yoruba (Pulleyblank 1986), and many of the Bantu languages (Givón 1976)). In Tongan, only the arguments with the feature [3.s.] may be realised as *pro*. It should also be noted that expletives in the subject position are universally taken to be third person singular. Furthermore, with regard to definiteness, first and second person arguments are always marked for [+definite], while third person arguments are not necessarily so. As a second, third person is syntactically more restricted than first and

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are linked with a clitic. This assumption in turn explains the fact that clitic doubling is optionally allowed in such a language. Jelinek proposes that agreement morphemes of the *pro*-drop languages can be analysed in the similar manner, namely, by regarding agreement morphemes as arguments and the subject NP, which may be optionally present, as a non-argumental adjunction.

second person. Specifically, in Warlpiri and Lummi third person arguments cannot be the subject unless the object is also third person (Jelinek 1984, 1993). These and other examples show that the person hierarchy to some extent universally governs arguments. Thus, citing Lummi, a Straits Salish language, Jelinek (1993) argues that the person hierarchy, in combination with the language-specific rule that transitive subjects must be [+definite], prevents third person arguments from appearing as a transitive subject. Unlike first and second person arguments that are always [+definite], third person arguments, when occurring as a transitive subject, need be marked for definiteness. This gives rise to an ergative marking on the third person arguments in this language.[19] In short, the clitic forms of the third person pronouns in Lummi (and possibly in other languages that show a similar type of split) show an ergative pattern not because they reflect case rather than theta-role. Rather, the form is determined by syntactic factors, namely the person hierarchy and the definite subject constraint.

To conclude, the current analysis seems to be able to account for the various instances of morphological split of the similar sort. If this hypothesis is to be borne out, then the morphological split can be regarded as nothing but a syntactic phenomenon, rather than a mixed use of two different case systems in a single language. The Tongan data studied in this chapter present a piece of evidence that under the cover of the superficial accusative morphology, the ERG-ABS distinction nevertheless exists and

[19] The ABS-marked third person arguments are realised as a zero morpheme in Lummi. This suggests that third person arguments are only marked for the feature [person]. Thus, the ergative marking on the third person arguments does not undermine our assumption that form of a [+A] clitic reflects its theta-role. Pronominal S and pronominal O appears in the same form (i.e., null) not because they bear the same theta-role, but because they need not be marked for definiteness.

is respected in syntax. This observation leads us to conclude that ERG/ABS case is not merely a morphological notion, but a syntactic phenomenon.

Chapter 7
Raising or No Raising?

Tongan has a phenomenon analogous to what has been called raising in Niuean, another Polynesian language that belongs to the Tongic subgroup. In this construction, the embedded clause contains an empty element coreferential with the argument in the matrix subject position, which is arguably a non-theta-position. However, raising in Tongan/Niuean differs from the raising in the ordinary sense in the following respects; a) it involves movement from a case position to another case position, and b) raising of object is also allowed. Considering that raising is generally allowed only from a non-case position to a case position, raising in Tongan should not be permitted. In this chapter, we will study a phenomenon in Tongan that superficially resembles raising. Our data show that raising in Tongan not only is a movement from a case-marked position, but also demonstrates the following peculiar characteristics: a) raising of O is allowed, but that of A is disallowed, and b) a pronominal argument cannot appear in the subject position of the raising verb We will argue that these peculiar properties of Tongan raising construction suggest that these structures actually do not involve raising at all; rather, it is an instance of operator movement.[1].

[1] As Gillian Ramchand and Lisa Travis (p.c.) point out, the lack of subject clitics in the matrix clause does not necessarily argue for an A-bar movement account as against an A-movement account; either way there needs to be some way for the NP in this position to acquire some kind of theta-role. As we will see below, what I call raising verbs here cannot take a thematic subject and that the NP in the matrix subject position of the raising construction must receive a theta-role by predication, i.e., coindexation with an operator. The reason why the subject clitic cannot occur in this position is because

Since raising verbs are a special instance of a subclass of intransitive verbs, traditionally called "unaccusatives", in §7.1, we will first discuss the characteristics of unaccusatives and consider how unaccusatives are captured in an ergative language. In §7.2, we will discuss how raising is treated in the standard theory. In §7.3, we will study the data of what seems to be raising in Tongan, and point out the problems which the raising analysis fails to account for. There are fundamentally six problems that need be explained: a) it is movement from a case position (hence, unlike English); b) it is movement across the CP boundary (contrary to the arguments of Stowell (1982) and Williams (1986)); c) movement is optional; d) raising of O is also permissible; e) raising of A is disallowed; and f) it does not apply to pronominal arguments. In §7.4, the properties of *ke*-clauses will be discussed. We will argue that the Tongan *ke*-clauses are on a par with what Raposo (1987) calls inflected infinitives. In §7.5, we will consider various accounts of raising in Niuean proposed in the literature (Seiter 1980, 1983; Chung and Seiter 1980; Massam 1985; Levin and Massam 1986, 1988). Having shown that none of the existing approaches satisfactorily accounts for the problems, an alternative account of the problematic phenomenon in Tongan will be proposed in §7.6. Specifically, we will argue that what seems to be raising is actually an instance of operator movement. In this view, A cannot appear in the matrix subject position of the construction in question due to the resumptive pronoun requirement. Prohibition of raising of pronominal arguments is due to the language-specific restriction that clitics must appear in a theta-position. The operator movement analysis assumes that an element in the matrix subject position is

the subject clitic cannot be licensed unless it receives an external theta-role in the base generated position.

base-generated in that position, which is crucially a non-theta-position. Consequently, a pronominal argument cannot appear in that position because (clitic) pronouns in Tongan are licensed by being assigned an external theta-role in the base-generated position (cf. Chapter 6). Finally, in §7.7, we will consider the *tuku*-construction, which is similar to what has been regarded as raising-to-object in Niuean. Altogether, it will be shown that the Tongan constructions analogous to what has been claimed to be raising in Niuean in the literature can be explained better if we do not assume that they involve raising.

7.1 Unaccusatives

Perlmutter (1978) observes that there is a special class of intransitive verbs, whose sole argument is initially generated as an internal argument and call them unaccusatives as opposed to unergatives whose sole argument is base-generated as an external argument. Burzio (1986) argues that an unaccusative verb fails to case-mark its internal argument and fails to theta-mark its external argument. This generalisation explains why the internal argument of an unaccusative verb appears in the surface structure in the subject position, bearing NOM instead of ACC. That is, why we have (7.1a) and not (7.1b) or (7.1c).

(7.1) a. I_i arrive t_i.

b. **e* arrive me.

c. *It arrives me.

Due to the EPP, which requires the subject position to be filled, (7.1b) is ruled out. The sentence (7.1c) with an expletive *it* in the subject position is also banned because the internal argument will then be left caseless, violating the Case Filter. The caseless internal argument raises to the subject position, which is a non-theta position (otherwise the Theta Criterion would be violated) and a case position, where its case feature is checked off.

Burzio's generalisation accounts for the generation of unaccusative constructions in an accusative language. However, note that in an ergative language the subject of an intransitive verb consistently appears in ABS, which is assumed to be the case assigned to O, the internal argument. See the Tongan example below.

(7.2) a. Na'e lava 'a e vaka.
Pst arrive ABS def boat
"The boat arrived."

b. Na'e langa 'e Sione 'a e vaka.
Pst build ERG Sione ABS def boat
"Sione built the boat."

It should be noted that Burzio's generalisation that unaccusative verbs do not have case assigning ability becomes irrelevant in the active Agr approach, which the current study assumes. Since it is assumed that case features are checked by Agr, the internal argument of an unaccusative verb successfully checks off its case feature in the Spec position of Agro, which is the active Agr in the given system. A crucial assumption is that in an unaccusative construction, the external argument position, [Spec, VP] is not generated, thus it counts as intransitive, activating only one Agr instead of two. Similarly, in accusative languages, the fact that the subject appears in NOM can be accounted for by the assumption that the active Agr is Agrs in these

languages. As a result, the sole argument, whether generated as an internal argument or an external argument, will receive NOM.

It should be mentioned that the latest minimalist approach fails to account for the fact that in ergative languages, the subject of unaccusative verbs appears in ABS. S generated as an internal argument cannot check off its case feature with V because an unaccusative V by definition lacks case feature. In order to ensure that S of an unaccusative verb appears in ABS, one need to abandon the assumption that unaccusative verbs fail to assign case. Consequently, a coherent definition of unaccusative verbs is lost. In accusative languages, unaccusatives must lack case features, so that S appears in NOM, not ACC, whereas in ergative languages, we must assume that unaccusative verbs bear case feature [ABS]. We therefore argue that the active Agr hypothesis has an advantage over the bare phrase structure approach.

Based on the fact that S receives ABS in ergative languages, some suggest that all intransitive verbs in ergative languages are unaccusative. Levin (1983b), for example, shows that all intransitive verbs in Basque in fact belong to the unaccusative class. Basque is generally regarded as an ergative language with a split, marking some S's in ERG. However, Levin argues that Basque is actually an accusative language, marking the subject of unaccusative verbs in ACC, simply reflecting the fact that it is generated as an internal argument.[2] Granted that Levin's argument may hold with regard to

[2] In fact, Levin's (1983) argument may be applicable to the so-called "active ergative" languages, which mark the subject of unergative verbs in ERG and that of unaccusative verbs in ABS. Bobaljik (1993), on the other hand, argues that in active ergative languages, an unergative verb is treated as a transitive with a abstract cognate object in the complement position, thus retaining the hypothesis that S of unergative verbs bears ERG rather than S of unaccusative appears in ACC. Adopting the proposal of

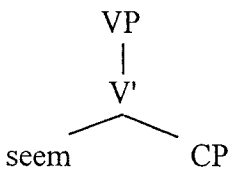
Basque, not all languages with ergative case marking allow S to appear in ERG. For example, in Tongan, S is invariably marked as ABS including arguably unergative (i.e., volitional) verbs such as *kai* ("to eat"). Therefore, it is inappropriate to claim that all intransitive verbs are unaccusative in Tongan. On the contrary, empirical evidence suggests that most of the intransitive verbs in Tongan are unergative. As discussed in Chapter 6, alienable possessive pronouns and subject clitics occur exclusively with an external argument. These rules predict that the sole argument of unaccusatives cannot be a referent of a SCL or alienable pronoun. Intransitive verbs except for a few aspectual verbs and one-place predicates taking a sentential complement fail to pass these unaccusative tests. Thus, we conclude that unaccusatives in Tongan include aspectual verbs such as *kamata* ("to begin") and *'osi* ("to finish") and one-place predicates such as the negative *'ikai* and *pau* ("to be determined"), which obligatorily take a sentential complement.

7.2 Raising

Raising verbs form a special subset of unaccusative verbs. It should be noted that the membership in this class is extremely limited. In other words, raising is a rare syntactic phenomenon. Raising predicates typically take a sentential complement and no thematic subject. We assume the phrase structure (7.3) below for the raising verb.

Hale and Keyser (1993), Bobalijik argues that the operation normally taking place in the lexical syntax takes place at the overt syntax in active ergative languages.

(7.3)



The subject position is arguably non-theta position, for an expletive may appear in this position, as illustrated in (7.4a) below. The appearance of the expletive *it* is forced by the EPP.

(7.4) a. It seems [that John likes rugby].

b. John$_i$ seems [to t_i like rugby].

c. *It seems [to John like rugby].

d. *John$_i$ seems [that t_i likes rugby].

Some raising verbs may also take an infinitival clause as the complement. However, in this case, the embedded subject moves up to the matrix subject position as illustrated in (7.4b). This movement is obligatory due to the Case Filter; because the infinitival T cannot assign case, the embedded subject would remain caseless inside the embedded infinitival clause. For this reason, (7.4c) is ruled out. Therefore, the argument moves out of the embedded clause to the matrix subject position where it can check off its case feature. Note that raising out of the tensed clause is disallowed, as illustrated by (7.4d). The ungrammaticality of (7.4d) confirms that arguments cannot move from a case-marked position.

In terms of the active Agr hypothesis, we may assume that [–tense] clauses do not project Agrs (i.e., the Agr projection that is associated with T)[3]. Accordingly, the subject NP, which would fail to check its case feature, needs to undergo raising to the

matrix [Spec, Agrs] position in order to save the derivation. Raising is a movement driven by case reasons. Consequently, raising of objects is forbidden. Since infinitival clauses contain Agro (where applicable), the object can always check its case features inside the embedded clause. Raising from a case-marked position is prohibited as illustrated in (7.5) below.[4]

(7.5) a. It seems [that John likes Mary].

b. *Mary$_i$ seems [to John like t_i].

To summarise, raising involves movement from a caseless position to a case position, which at the same time is not a theta-position. These two conditions are a consequence of the chain condition (Chomsky 1981, 1986b) that requires an (A-)chain to contain a unique theta-position and a unique case position.

7.3 Data: raising in Tongan

In this section, we will consider some Tongan data that demonstrate the construction analogous to what has been called raising in Niuean.[5] Our data show the following two curious facts about Tongan: a) raising applies to only S/O but not A, showing an

[3] However, as we will see shortly, it is a parametric choice. For example, Portuguese has a type of infinitival clause which arguably contains Agrs (Raposo 1987).

[4] In Relational Grammar, Postal (1974) observes the same restriction on raising: namely, only subjects may undergo raising.

[5] It should be mentioned that the phenomenon which our data exemplify has been overlooked in the literature. For example, Chung (1978: 153) argues that "raising is governed by a single verb, *lava*, and is not triggered by other modal, negative, or aspectual verbs". Specifically, Chung argues that a) *lava* allows raising of S/A from *ke*-clauses and that b) raising changes *ke* into *'o*. However, contrary to her claim, our data show that verbs like *totonu* permits raising, which is more similar to that of Niuean: raising of O is also allowed, and *ke* remains *ke*. Problems with Chung's analysis of *lava-'o* construction are discussed in Chapter 5.

ergative pattern and b) it does not apply to pronominal arguments. These with other peculiar facts lead us to question the very assumption that the construction in question involves raising.

7.3.1 Ergative pattern

A few verbs in Tongan, such as *totonu* ("to be advisable") and *ngalingali* ("to seem"), occur in a construction that is analogous to what has been called raising in Niuean. These verbs take a sentential complement and the subject position does not contain any overt element. See (7.6) below.

(7.6) a. 'Oku totonu *pro* [ke 'alu 'a Sione].
Prs advisable that go ABS Sione
"It is advisable that Sione go."

b. 'Oku totonu *pro* [ke tuku 'e Sione 'a e ngaaue].
Prs advisable that stop ERG Sione ABS def work
"It is advisable that Sione stop the work."

Granted that the EPP applies universally, we assume that the subject position of the sentences in (7.6) is occupied by a null expletive *pro*.[6] These verbs optionally allow raising of an embedded argument, as illustrated by (7.7) below.[7]

(7.7) 'Oku totonu 'a Sione$_i$ [ke 'alu t_i].
Prs advisable ABS Sione that go
"Sione had better go."

However, this derivation is problematic in the following respects. First, note that the embedded clause is introduced by the same element *ke* in both (7.6) and (7.7), indicating that there is no difference with respect to finiteness of the embedded clause. This makes the grammaticality of (7.7) puzzling, because (7.6) clearly shows that S/O

[6] See Chapter 3 for discussion on the null expletive in Tongan.

as well as A can check its case feature inside *ke*-clauses. Given (7.6), raising out of *ke*-clauses should be banned, as it necessarily involves movement from a case position. Secondly, raising is optional in this case. In contrast, in English raising is compulsory (with infinitives) due to the Case Filter. Thirdly, as illustrated in (7.8) below, O may undergo similar optional raising. As mentioned above, it is acknowledged that raising of O is universally banned because O is always case-marked in the embedded clause.

(7.8) a. 'Oku totonu *pro* [ke taa'i 'e he faiako 'a e tamaiki pau'u].
Prs advisable that hit ERG def teacher ABS def children naughty
"It is advisable that the teacher hit the naughty children."

b. 'Oku totonu 'a [e tamaiki pau'u]$_i$ [ke taa'i 'e he faiako t_i]
Prs advisable ABS def children naughty that hit ERG def teacher
Lit. "The naughty children are advisable that the teacher hit."

Considering that raising of S already involves movement from a case-marked position in Tongan, the fact that raising of O is permitted is not so surprising. Nevertheless, some explanation is in order. What is even more puzzling is the fact that raising of A is prohibited. Thus, for example, it is impossible to derive (7.9) from (7.8a). Raising of A results in ungrammaticality.

(7.9) *'Oku totonu 'a e faiako$_i$ [ke taa'i t_i 'a e tamaiki pau'u].
Prs advisable ABS def teacher that hit ABS def children naughty
"The teacher had better hit the naughty children."

(7.9) is ruled out not because the embedded A appears in ABS in the target position. Even if the raised A is preceded by the ERG-case marker, the sentence is still considered ungrammatical, as illustrated by (7.10) below.[8]

[7] It should be noted that native speakers consider (7.6a) by far preferable than (7.7), in which the embedded S appears in the matrix subject. Thus, although (7.7) is not considered ungrammatical, it is a highly marked construction and rarely used in ordinary conversation.

[8] It should be noted that native speakers consider (7.9) relatively more acceptable than (7.10). More importantly, native speakers find the ERG case marker in (7.10) absolutely unacceptable. This judgement confirms that the raised argument receives case in the target position, and not in the embedded clause.

(7.10) *'Oku totonu 'e he faiako$_i$ [ke taa'i t_i 'a e tamaiki pau'u].
Prs advisable ERG def teacher that hit ABS def children naughty
"The teacher had better hit the naughty children."

Some may argue that the raising of A is illicit because of the case conflict. A requires ERG, but ERG cannot be assigned in the target position, [Spec, Agro] of the matrix clause. As a result, derivation crashes. However, even this account needs to explain why raising of an argument from a case-marked position is permitted at all. Finally, it should be noted that the data show that raising applies exclusively to ABS-argument (i.e., S/O). This could be regarded as another example of syntactic ergativity in Tongan. In our attempt to account for the puzzling data of raising in Tongan, we need to consider why raising shows an ergative pattern, rather than allowing any argument to undergo raising.

7.3.2 Raising of pronouns

Another peculiar fact about raising in Tongan is that it does not apply to pronominal arguments. Thus, (7.11b) with a clitic pronoun in the matrix subject position is ungrammatical, while the pre-raising structure (7.11a) is grammatical.

(7.11) a. 'Oku totonu *pro* [ke u 'alu].
Prs advisable that 1.s. go
"It is advisable that I go."

b. *'Oku ou$_i$ totonu [ke t_i 'alu].
Prs 1.s. advisable that go
"I had better go."

As we would expect, raising of pronominal A is disallowed as well.

(7.12) a. 'Oku totonu *pro* [ke u tuku 'a e ngaaue].
Prs advisable that 1.s. stop ABS def work
"It is advisable that I stop the work."

b.*'Oku ou$_i$ totonu [ke t_i tuku 'a e ngaaue].
Prs 1.s. advisable that stop ABS def work
"I had better stop the work."

Note that in Tongan subject pronouns are clitics adjoined to T. Thus, sentences like (7.11a) and (7.12a) confirm that *ke*-clauses contain some tense element, to which a clitic may attach.

On the other hand, as we argued in Chapter 6, pronominal objects are not clitics. When a pronoun appears in the position immediately after the verb, we assume that the optional pronoun incorporation has applied: the incorporated pronoun has undergone the V-to-C movement along with the verb. (7.13) shows that raising of O is also prohibited.

(7.13) a. 'Oku totonu *pro* [ke taa'i koe 'e he faiako].
Prs advisable that hit 2.s. ERG def teacher
"It is advisable that the teacher hit you."

b.*'Oku totonu koe$_i$ [ke taa'i t_i 'e he faiako].
Prs advisable 2.s. that hit ERG def teacher
"You are advisable that the teacher hit."

It should be noted, however, that if the raised pronominal O is preceded by a case-marker, the sentence becomes slightly acceptable, although it is still quite marginal.

(7.14) ?'Oku totonu 'a kinautolu$_i$ [ke taa'i t_i 'e he faiako].
Prs advisable ABS 3.pl. that hit ERG def teacher
Lit. "They are advisable that the teacher hit."

Similar effect obtains with regard to pronominal S. If pronominal S is realised as an independent pronoun and appears with a case marker, the acceptability of the sentence improves.[9]

(7.15) ?'Oku totonu 'a kinautolu$_i$ [ke t_i 'alu].
Prs advisable ABS 3.pl. that go
"They had better go."

In brief, the data show that raising of clitics is strictly banned, while that of independent pronouns is relatively more acceptable.

In the subsequent sections, we will attempt to account for the aforementioned problems concerning raising in Tongan. As mentioned above, similar kind of raising from a case-marked position is also found in Niuean. Therefore, some Niuean data will also be included in our discussion.

7.4 *Ke*-clauses

So far, we have not defined the status of *ke*-clauses in Tongan. We have observed that *ke*-clauses are on a par with finite clauses in that case (both ABS and ERG) can be assigned inside *ke*-clauses. Assuming the active Agr model, the fact that ERG is assigned in *ke*-clauses means that they contain Agrs. In addition, the fact that pronominal clitics may also appear in *ke*-clauses suggests that *ke*-clauses must contain

[9] Note that raising of pronominal S/O in this sense is definitely more acceptable with dual and plural pronouns, i.e., pronouns whose forms are not mono-morphemic. I suspect that it is because the rule of pronoun incorporation hardly applies to the dual and plural pronouns, while it almost obligatorily applies to singular pronouns.

a T-element, to which clitics may attach. However, the latter speculation is problematic because apparently *ke*-clauses do not contain a regular tense marker. Lack of tense marker in turn suggests that *ke*-clauses are infinitives. In short, *ke*-clauses exhibit properties that are characteristic of finite clauses as well as those characteristic of infinitives. It is necessary to clarify the status of *ke*-clauses in analysing the raising construction in Tongan, for a crucial factor that motivates raising is ascribed to the finiteness of the clause. In this subsection, we will discuss the properties of *ke*-clauses. We will argue that the Tongan *ke*-clauses are equivalent to inflected infinitives in Portuguese (Raposo 1987): they are infinitives in the sense that T is [–tense], while at the same time they contain agreement, both Agrs and Agro.

7.4.1 Properties of *ke*-clauses as infintives

Tongan *ke*-clauses behave like infinitives in the following respects. First, *ke*-clauses do not contain a regular tense marker; they are [–tense] in that they are not specified for a particular tense. Temporal interpretation of *ke*-clauses is determined by the matrix verb. With control verbs, tense of *ke*-clauses is interpreted as "unrealised" in the sense of Stowell (1982). With raising verbs, tense of *ke*-clauses is understood to be in the same time frame as that of the matrix clause. This kind of temporal interpretation is typical of infinitival clauses. In this respect, T of *ke*-clauses contains a kind of tense anaphora, which is somehow linked to the matrix tense. Secondly, *ke*-clauses allow a null subject, which appears to be PRO.[10] See (7.16) below.

[10] See Chapter 10 for analysis of control constructions in Tongan. It is not entirely clear whether or not the null subject in (7.16) is indeed PRO. Here we tentatively assume that it is, given the examples like (i) below, in which first person singular pronoun is the antecedent of the null subject. As we discussed in Chapter 4, in Tongan only third person singular pronoun may be *pro*. Thus, the empty category in (i) is most likely to be PRO, because the sentence would be ruled out otherwise.

(7.16) a. ‘Oku loto ‘a Sione [ke PRO ‘alu].
Prs want ABS Sione that go
“Sione wants to go.”

b. Na’e feinga ‘a Sione [ke PRO langa ‘a e fale].
Pst try ABS Sione that build ABS def house
“Sione tried to build the house.”

In the standard theory, it is assumed that PRO is allowed only in the subject position of infinitives. Therefore, sentences like (7.16a,b) strongly support the view that *ke*-clauses are infinitival.

7.4.2 Properties of *ke*-clauses as finite clauses

Ke-clauses, however, also show some properties that are characteristic of finite clauses. For example, *ke*-clauses may contain an overt subject. See (7.17) below.

(7.17) a. ‘Oku loto ‘a Sione [ke ‘alu ‘a Mele].
Prs want ABS Sione that go ABS Mele
“Sione wants Mele to go.”

b. ‘Oku totonu [ke ‘alu ‘a Sione].
Prs advisable that go ABS Sione
“It is advisable that Sione go.”

In (7.17a), the *ke*-clause contains an overt subject *Mele* instead of PRO. (7.17b) is an example of a raising verb. Note that crucially, ERG is also assigned in *ke*-clauses.

(7.18) a. ‘Oku loto ‘a Sione [ke tuku ‘e Mele ‘a e ngaaue].
Prs want ABS Sione that stop ERG Mele ABS def work
“Sione wants Mele to stop the work.”

b. ‘Oku totonu [ke tuku ‘e Mele ‘a e ngaaue].
Prs advisable that stop ERG Mele ABS def work
“It is advisable that Mele stop the work.”

(i) ‘Oku ou loto [ke PRO ‘alu].
Prs 1.s. want that go
“I want to go.”

In the standard theory, ERG is assigned by [+tense] T. The fact that ERG is assigned inside the *ke*-clause indicates that the clause is finite, containing [+tense] T. Given the active Agr hypothesis, *ke*-clauses in (7.18) must contain Agrs, in which ERG is assigned.

In addition, verbs inflect for agreement in *ke*-clauses. In Tongan, only few intransitive verbs show agreement in number. *Ha'u* ("to come") is such an exceptional verb. It agrees with the subject in number, with the plural form being *oo mai*. In (7.19) below, the embedded verb shows agreement with the embedded subject.[11]

(7.19) 'Oku totonu [ke oo mai 'a e tamaiki].
Prs advisable that come pl. ABS def children
"It is advisable that children come."

This is unexpected if *ke*-clauses are infinitives. Verbs do not inflect in infinitival clauses while in finite clauses agreement is mandatory. Consider the English examples in (7.20).

(7.20) a. John wants [to go/*goes].

b. John goes/*go.

These properties of *ke*-clauses seem to suggest that they are in fact finite.

[11] Seiter (1983:326) cites the following examples to show that Niuean *ke*-clauses also contain Agr. See (i) below.
(i) a. Kua kamata tuai e tagata naa [ke hake motokaa].
Perf begin Perf ABS person that ke go-up car
"That person has begun to go up by car."
b. Kua kamata tuai e tau tagata naa [ke oo hake motokaa].
Perf begin already ABS pl. person that ke pl. go-up-pl. car
"Those people have begun to go up by car."

7.4.3 The subjunctive analysis

The data presented above suggest that Tongan *ke*-clauses are both finite and infinitival. Similar properties are shared by *ke*-clauses in other Polynesian languages such as Niuean (Seiter 1983, Chung and Seiter 1980) and Pukapukan (Chung 1977). Traditionally, the Polynesian *ke*-clauses are regarded as subjunctive clauses, with *ke* analysed as the subjunctive marker. It seems that the term "subjunctive" has been used because *ke*-clauses could be understood as both finite and infinitive, as shown above. As for Tongan, Churchward (1953) calls *ke* "prospective or forward-looking" conjunction. Churchward's insight shares our observation that *ke*-clauses have the unrealised temporal interpretation.

7.4.4 Inflected infinitives

Given the fact that *ke*-clauses permit PRO in the subject position, we would like to keep the assumption that *ke*-clauses are infinitival. On the other hand, we need to account for the problematic fact that an overt NP may also appear and be case-marked in the same position. Raposo (1987) points out that a similar construction exists in European Portuguese, and shows that what he calls inflected infinitives in European Portuguese contain Agr(s) despite its lack of tense. Generally, if a clause lacks tense it also lacks agreement features (e.g., English infinitives). Raposo argues, however, that lack of tense does not necessarily entail lack of agreement. This is what we find in European Portuguese. See (7.21) below. The embedded verb shows agreement with the embedded subject, but does not inflect for tense.

(7.21) European Portuguese (Raposo 1987: 86)

a. Será difícil [eles apro*varem* a proposta].
"It will be difficult they to-approve-Agr the proposal."

b. Será difícil [PRO apro*var* a proposta].
"It will be difficult to-approve the proposal."

c. *Será difícil [eles apro*var* a proposta].
"It will be difficult they to-approve the proposal."

Note that European Portuguese also has non-inflected infinitives, which do not allow an overt element to appear in the subject position, as illustrated by (7.21c) above. The inflected infinitive form cannot be used in finite clauses, as illustrated by (7.22a) below. (7.22b) shows that the correct inflection is *-vam* in finite clauses.

(7.22) European Portuguese (Raposo 1987: 86)

a. *Será difícil [que eles apro*varem* a proposta].
"It will be difficult that they to-approve-Agr the proposal."

b. Eles apro*vam* a proposta.
"They approve the proposal."

Thus, the inflected form *-varem* is used exclusively for a certain type of infinitives. Raposo argues that the overt subject receives case inside the infinitival clause; since adjectives are not case-assigners in Portuguese, ECM is not possible in structures such as (7.22a). Raposo proposes that Agr in the inflected infinitives assigns case in place of the absent [+tense] T. In terms of the active Agr model, this means that Agrs checks off the case of NP. As we have argued earlier in this chapter, presence of T (or absence thereof) is irrelevant to case assignment to an argument. It is thus assumed that uninflected infinitives do not project Agrs.[12]

[12] On the other hand, an empty subject is also allowed in the inflected infinitives. Raposo (1987) claims that the empty category subject in the inflected infinitives is *pro*, and not PRO. See (i) below.
(i) Será difícil [*e* aprovarem a proposta]
We will return to this point in Chapter 10.

Clauses of a similar sort are also found in Modern Greek (*oti*-clauses) and Romanian (*ša*-clauses) (cf. Watanabe 1993a,b). Such clauses are analysed as subjunctive in the literature, yet the mystery remains as to why the empty subject (presumably PRO) is permitted in these clauses. Watanabe (1993a,b) argues that what is allowed in the subject position depends on the contents of tense of the embedded clause. Watanabe proposes that tense of these clauses is richer than that of infinitives but more deficient than that of indicatives, and that as a result, it may license both overt NP and Null subjects.[13] While the empty subject is assumed to be PRO in this approach, other approaches mostly assume that the empty category subject is *pro*, thus bears case assigned by T, avoiding the problem that the clauses in question allows both overt subjects and PRO.

Given the striking resemblance of *ke*-clauses to the inflected infinitives in European Portuguese, we follow Raposo's (1987) analysis that these clauses lack tense, but crucially contain Agr projection(s). As mentioned above, the embedded verb shows agreement, indicating that Agr exists in *ke*-clauses. T contains a tense anaphor, which itself is [–tense] and dependent on the matrix tense for its temporal interpretation. Case is checked by Agr: ABS is checked by Agro, and ERG, by Agrs.[14] In the subsequent discussion, we assume that *ke*-clauses are inflected infinitives.

[13] To be precise, Watanabe (1993a,b) proposes that tense of such clauses is associated with both NOM and Null, and that whether a particular clause allows an overt subject or PRO is determined by the feature checking by C. See Chapter 10 for more details.

[14] We leave open the question of whether the empty subject is PRO or *pro*. Control phenomenon in Tongan is discussed in Chapter 10.

Finally, note that we also assume that *ke*-clauses are CP's for the following reason. Word order inside *ke*-clauses is VSO. As argued above, we assume that VSO order results from the V-to-C movement. Thus, we consider that the VSO order in *ke*-clauses is also a consequence of the V-to-C movement. Because of this assumption, *ke* cannot be a complementiser, base-generated in C. C must be empty in the base structure so as to serve as a landing site for the T+V cluster. Instead, we propose that *ke* is a tense anaphor, which has a phonetically overt form. The fact that subject clitics appear immediately after *ke* supports this view, for clitics in Tongan attach to T.

7.5 Raising in Niuean

We have observed in §7.3 that raising in Tongan is odd in the following respects. First, raising is optional. Second, arguments move from a case position, which generally is not permissible. Thirdly, raising of O is allowed, while that of A is prohibited. This is contrary to the universal restriction on raising that only subjects may undergo raising.[15] Finally, raising does not apply to pronouns: pronouns cannot appear in the matrix subject position. So far, we have been referring to the phenomenon as raising, because the construction in question is analogous to what has been called raising in Niuean in the literature.[16] In this section, we will consider the

[15] However, note that this generalisation does not exactly apply to ergative languages under the current approach, because ABS-arguments, namely, S and O are governed (i.e., case-marked) inside the embedded clause. Thus, theoretically, raising of S/O is expected to be illegal. Nevertheless, our Tongan data show a reverse situation.

[16] Chung (1977) notes that Pukapukan also exhibits a similar type of optional raising.

Niuean data and various analyses proposed in the literature. It will be shown that none of the existing proposals successfully account for the peculiarity of the data.

7.5.1 Data

Raising in Niuean exhibits the properties similar to those of raising in Tongan: it is a movement from a case marked position, and raising of O is allowed.[17] See (7.23) below.

(7.23) Niuean (Seiter 1980: 158)

a. Kua kamata [ke hala he tama e akau].
Perf begin that cut ERG child ABS tree
"It began that the child cut the tree."

b. Kua kamata e tama$_i$ [ke hala t_i e akau].
Perf begin ABS child that cut ABS tree
"The child began to cut the tree."

c. Kua kamata e akau$_i$ [ke hala he tama t_i].
Perf begin ABS tree that cut ERG child
"The tree began for the child to cut."

The verb *kamata* takes a sentential complement and a non-thematic subject. As illustrated by (7.23b) and (7.23c), the embedded A as well as O may also appear in the matrix subject position. Sentences like (7.23b) and (7.23c) have been considered as derived as a result of raising (Seiter 1980, 1983; Chung and Seiter 1980; Massam 1985; Levin and Massam 1986, 1988). There has been much discussion concerning (7.23c), in which the embedded O presumably has been raised. As mentioned above, raising of O is universally banned because it is a movement from a case-marked position. Curiously enough, raising of A, (7.23b) has been taken for granted in the

[17] However, as we will see shortly, unlike Tongan, raising of A is allowed in Niuean. Moreover, raising freely applies to pronominal arguments as well.

literature despite the fact that this also involves movement from a case-marked position. As argued above, raising out of *ke*-clauses is problematic, whether the raised argument is S, A or O, because it necessarily involves movement from a case-marked position.

7.5.2 Analyses

Attempts were made to account for the problematic properties of the raising construction in Niuean. However, none of them seem to be empirically tenable or theoretically feasible. For example, Chung and Seiter (1980) propose that raising of O is a consequence of the passive-to-ergative reanalysis, which took place some time ago in the history of the Polynesian languages. The passive-to-ergative reanalysis hypothesis was originally proposed in an attempt to account for the distribution of two types of case marking in the Polynesian languages. It is argued that the Proto-Polynesian had an accusative case-marking system with a passive rule, which alters the underlying O into the surface S and the underlying A into some oblique argument (Chung 1977, 1978; Hohepa 1969).[18] The Proto-Polynesian passive construction was then reanalysed as an ergative construction, with the oblique-marked agent reanalysed as the ERG subject. In this view, ABS-marked O in Niuean was the passive S prior to reanalysis, and being S, it should be allowed to undergo raising. One crucial flaw in this argument is that it overlooks the fact that case is the key factor that forces (or allows) raising. Raising of O is prohibited in accusative languages because O appears

[18] Note that some others argue for the ergative-to-passive reanalysis (Clark 1976, Gibson and Starosta 1990).

in a case position, and not because it is not the subject. Besides, this approach cannot explain why in Tongan raising of A is not possible.

Seiter (1980) argues for the raising analysis as follows. First of all, Seiter gives the following reasons for rejecting the possibility that the argument in the matrix subject position in sentences like (7.23b, c) is base-generated. First if it were base-generated in the matrix subject position, the embedded clause would contain only one argument, and therefore, the sole argument should be marked in ABS. However, in (7.23c), the sole argument appears in ERG. Second, the embedded verb shows agreement with the argument in the matrix subject position. Thirdly, quantifier float is possible: a quantifier modifying the argument in the matrix subject position may appear on its own in the embedded clause. He argues that these facts suggest that the embedded clause must contain an argument that triggers each of these phenomena at some stage of derivation. The null pronoun analysis is also rejected because an overt pronoun cannot appear in the embedded clause in place of the gap.[19] Finally, the PRO analysis is refuted as well. Noting that in Niuean control of PRO applies exclusively to S/A, but not O or oblique objects, Seiter argues that the PRO analysis fails to provide a comprehensive account because a) in Niuean sentences involving verbs such as *kamata* the gap may occur as O as well as S/A, and b) they do not allow oblique objects to be the gap. It is argued that it is impossible to posit a rule, which derives the full range of sentences involving the *kamata*-type verbs. It should be noted that in Relational Grammar, on which Seiter's argument is based, raising is also considered

[19] Note that all of these problems can be solved by the operator movement analysis, which will be discussed shortly. In the operator movement analysis, the embedded clause contains an operator, which acts on behalf of the coindexed argument.

to apply exclusively to S/O (Postal 1974). Seiter argues that the Niuean data is a counter-example, which suggests that Postal's generalisation should be modified.

Massam (1985) suggests that raising of the type represented by (7.23b) and (7.23c) above involve two cyclic movements. Massam argues that Niuean has a rule that moves an embedded argument to the position adjoined to the embedded clause, which she calls Spec 2. This movement is a kind of scrambling, hence optional. (7.24) below is an example of this type of raising.

(7.24) Niuean (Seiter 1980: 196)

a. To nakai toka e au [ke kai he pusi e ika].
   Fut Neg let ERG 1.s. that eat ERG cat ABS fish
   Lit. "I will not let that the cat eat the fish."

b. To nakai toka e au [e pusi$_i$ [ke kai t_i e ika]].
   Fut Neg let ERG 1.s. ABS cat that eat ABS fish
   "I will not let the cat eat the fish."

Massam argues that in (7.24), the matrix verb *toka* is a case assigner: it assigns ABS to the complement. Therefore, the moved NP is case-marked in this position, and thus remains there.[20,21] On the other hand, it is argued that raising verbs such as *kamata* are not case assigners. Consequently, the raised NP is forced to move further up to the matrix subject position in order to satisfy the Case Filter. In this approach, sentence (7.23b) is considered to have the structure (7.25) below.

[20] In the current approach, what Massam (1985) suggests may be taken as an instance of Exceptional Case Marking. In this view, the raised argument subsequently moves up to [Spec, Agro] of the matrix clause, where it may check off its case feature. However, note that Massam does not assume this subsequent movement.

[21] Tongan has a corresponding verb, *tuku* ("to leave, let"), which appears in the similar constructions. We will return to this point shortly.

(7.25) Kua kamata e tama$_i$ [*t'*$_i$ [ke hala t_i e akau].
Perf begin ABS child that cut ABS tree
"The child began to cut the tree"

The embedded A has undergone two cyclic movements: first to Spec 2 and then to the matrix subject position. Because the movement to Spec 2 is scrambling, it is optional and is applicable to A, S and O.

However, it should be noted that scrambling generally applies after case assignment. Therefore, usually a NP that undergoes scrambling carries its case along. For example, in Japanese, NP's are always accompanied by the same particle indicating its case whether or not scrambling has taken place.

(7.26) Japanese

a. Taro-ga Hanako-ni hon-o age-ta.
Taro-NOM Hanako-Goal book-ACC give-Pst
"Taro gave Hanako a book."

b. Hon-o Taro-ga Hanako-ni age-ta.
book-ACC Taro-NOM Hanako-Goal give-Pst

c. Hanako-ni Taro-ga hon-o age-ta.
Hanako-Goal Taro-NOM book-ACC give-Pst

Similarly, in Tongan, case markers appear on the same NP regardless of the word order.[22]

(7.27) a. Na'e tamate'i 'e Sione 'a Taniela.
Pst kill ERG Sione ABS Taniela
"Sione killed Taniela."

b. Na'e tamate'i 'a Taniela 'e Sione.
Pst kill ABS Taniela ERG Sione

[22] Here we assume that the VOS order is generated as a result of scrambling. See Chapter 8 for discussion.

Therefore, Massam's assumption that the moved argument must be case-marked in the target position by the matrix verb raises a question. Apparently, the moved argument does not carry its case, as the raised argument is always marked in ABS.[23] This fact makes the scrambling hypothesis dubious. Besides, if one were to assume that the raised argument has its case feature checked in the target position, it would be necessary to explain why case features are checked in *ke*-clauses in some cases and not in some others.

In contrast, Yoon (1996) considers that sentences (7.23b,c) and (7.24b) are instances of ECM: the raised NP is in [Spec, Agro] of the matrix clause. Yoon argues that case is assigned in two positions, proposing that a chain may contain multiple case positions as long as each case position is uniquely governed by a case governor. In this approach, the raised NP in (7.24) first receives ERG in the embedded clause and subsequently receives ABS in the matrix clause. Adapted to the feature-checking approach, this means that the NP bears two case features [ABS] and [ERG], both of which need be checked off. Yoon's proposal is motivated by a phenomenon called case-stacking found in languages like Korean and Cuzco Quechua. In Korean, it is possible for an NP to appear with two case-markers, as shown below.

(7.28) Korean (Yoon 1996: 110)
Na-eykey-(man)-i paym-i mwusepta.
I-DAT-(only)-NOM snake-NOM fearful
"I am afraid of snakes."

[23] Thus, presumably that the following sentences are considered illicit although such data have never been cited in the literature.
(i) a.* To nakai toka e au [he pusi$_i$ [ke kai t_i e ika]]
Fut Neg let ERG 1.s. ERG cat that eat ABS fish
b.* Kua kamata he tama$_i$ [t'_i [ke hala t_i e akau]
Perf begin ERG child that cut ABS tree

Case-stacking is allowed if one case is an inherent case and the other is a structural case. Yoon (1996) explains that it is possible because two case-markers occupy different slots. On the other hand, case-stacking is not permissible if two cases are both structural. This is because two case-markers are competing for a single slot. Therefore, only one case may surface. In Niuean, the case assigned on a later cycle has precedence over the one assigned on an earlier one.[24] Yoon's analysis, however, fails to account for the sentences like (7.23c), repeated below.

(7.23c) Kua kamata e akau$_i$ [ke hala he tama t_i].
Perf begin ABS tree that cut ERG child
"The tree began for the child to cut."

In (7.23c), the raised argument has checked its case in [Spec, Agro] of the embedded clause. It is infeasible that the NP has two [ABS] features that need be checked in different positions. Thus, we have to give up the multiple case-marking analysis as well.

Finally, Levin and Massam (1988) propose another account, arguing that case assignment is optional in Niuean. If it is assigned, the argument is case-marked and therefore raising is not allowed. If, on the other hand, case is not assigned, then the argument moves to the matrix subject position, where it may receive ABS. This seems to account for the optional nature of raising in Niuean. However, their assumption of case assignment being optional is theoretically highly undesirable. As to why raising

[24] Incidentally, this analysis provides evidence for the claim that ERG is not an inherent case. Based on the Korean case-stacking data, Yoon (1996) argues that when there is a competition between an inherent case and a structural case, inherent case must always override the structural case: thus, with Icelandic quirky case subjects, inherent case surfaces suppressing the structural NOM. If this hypothesis is correct, whenever there is a competition between ERG and ABS, ERG should override ABS. However, in the Niuean examples, the raised argument consistently appears in ABS, suppressing

of O is permitted, Levin and Massam (1988) argue that the Binding Conditions A and B (Chomsky 1981) do not apply in Niuean. Note that Levin and Massam (1988) assume that raising of O in general is prohibited due to the Binding Condition A violation.[25,26] Binding Condition A requires that a NP-trace be bound within its governing category. In the current case, the governing category for the trace is the embedded *ke*-clause. Thus, according to the Condition A, it must be bound by the subject. However, the trace is not bound within its governing category, yet the sentence is considered grammatical. The solution Levin and Massam propose is to assume that Binding Condition A does not apply in Niuean. The weakness of this account is that it allows case feature checking to be optional. It is not clear what determines whether a certain case feature is to be checked or not. In the case of Niuean raising, both ABS and ERG may or may not be checked inside the embedded clause. It is necessary to specify the condition(s) under which case feature checking becomes optional in order to justify this hypothesis.

In summary, despite the attempts to account for the peculiar properties of raising in Niuean, there has not yet been a satisfactory account in the literature. Since we cannot depend on any of the existing analysis to solve the puzzles our Tongan data pose, an alternative solution needs to be sought. In the following section, an alternative

the case previously assigned, whether ABS or ERG. This in turn suggests that both ERG and ABS are structural cases.

[25] Binding Conditions: (A) an anaphor must be bound within its governing category; (B) a pronoun must be free within its governing category; and (C) a R-expression must be free. NP-traces are anaphors. (Chomsky 1981).

[26] It should be also noted that in the GB framework, case assignment is also capitulated in terms of government; an argument is case-marked by a case assigner that governs it.

analysis is proposed. Specifically, we will argue that the construction in question does not involve raising, but is an instance of operator-movement.

7.6 Operator-movement analysis

The puzzling facts about the Tongan raising data can be accounted for rather elegantly if we assume that the construction in question does not involve raising, but is an instance of operator movement, something similar to the English *easy-to-please* construction.[27] See the following example.

(7.29) a. John$_i$ is easy [PRO to please t_i].

b. It is easy [PRO to please John].

At a glance, (7.29a) seems to be derived from (7.29b) by raising the embedded O to the matrix subject position. However, this movement should not be allowed for the reasons mentioned above. Chomsky (1977, 1981) suggests that the correct representation of the sentence "*John is easy to please*" is not (7.29a), but in fact (7.30), which involves movement of an empty operator OP.

(7.30) John$_i$ is easy [OP$_i$ [PRO to please t_i]].

In this analysis, the subject *John* is base-generated in the matrix subject position, and linked to the empty operator in [Spec, CP] of the embedded clause by means of coindexation.

7.6.1 Tongan data

Adopting this analysis, let us propose that the Tongan raising construction have the structure below.

(7.31) a. 'Oku totonu 'a Sione$_i$ [OP$_i$ [ke 'alu t_i]].
Prs advisable ABS Sione ke go

b. 'Oku totonu 'a [e tamaiki pau'u]$_i$ [OP$_i$ [ke taa'i 'e he faiako t_i]].
Prs advisable ABS def children naughty ke hit ERG def teacher

c. *'Oku totonu 'a Sione$_i$ [OP$_i$ [ke tuku t_i 'a e ngaaue]].
Prs advisable ABS Sione ke leave ABS def work

In this analysis, an argument in the matrix subject position is base-generated in this position. The biggest puzzle, why raising in Tongan allows movement from a case position, is now solved. There is no NP-movement to begin with. The same reason accounts for the fact that the embedded O may appear in the matrix subject position. It is not an instance of raising of O, but simply an instance of operator movement from the embedded O-position.[28]

Furthermore, this analysis correctly accounts for the other two peculiar properties of the Tongan raising. First, note that it is assumed that the argument in the matrix position is base-generated in that position and that the matrix subject position is a non-theta position. Since subject clitics in Tongan must be generated in a theta position in order to be licensed, pronominal arguments cannot appear in the subject position of these verbs. As for the independent pronouns, our data show that their appearance in

[27]Thanks to Gillian Ramchand for bringing this point to my attention.
[28] Marantz (1984:116) also notes that the argument in the matrix subject position bears an A-bar relation with the embedded constituent, and not A-relation. To use his own terms, it is an s- structure constituent that does not correspond to an l-s constituent.

the matrix subject position is, albeit marginally, acceptable. This is because independent pronouns are not subject to the theta-role constraint.[29]

Our analysis also explains why (7.31c) is ruled out, in which the matrix subject is linked with the trace of an empty operator in [Spec, Agrs]. As discussed in Chapter 5, the position vacated by operator movement must contain a resumptive pronoun if it is in [Spec, Agrs]. If we assume that the raising in question actually involves operator movement and that the empty category in the embedded subject is a trace, then naturally, the resumptive pronoun rule applies: a trace in A-function must be phonetically realised as a pronoun. On the other hand, a trace in S or O function remains phonetically null. The resumptive pronoun requirement correctly explains why (7.31c) is ruled out while (7.31a) and (7.31b) are fine. (7.32) below supports this account. If a pronoun appears in place of the trace, some native speakers consider the sentence acceptable, or at least somewhat better.

(7.32) ?'Oku totonu 'a Sione$_i$ [OP$_i$ [ke ne$_i$ tuku 'a e ngaaue]].
Prs advisable ABS Sione that he stop ABS def work
Lit. "Sione had better he stop the work."

The puzzling facts about raising in Tongan can be accounted for if we assume that the structure involves not raising but operator movement. It does not require movement from a case-position. The argument that appears in the matrix subject position is base-generated in that position. It receives a theta-role by a rule of predication, by being

[29] Note that a case marker must also be present for appearance of a pronoun to be legitimate. See (7.13b), repeated below. (7.13b) is ungrammatical for the following reason. A pronoun can appear in the position immediately following the verb if it has been incorporated into the verb. However, in (7.13b), incorporation of the pronoun *koe* into the verb *totonu* is impossible.
(7.13b) *'Oku totonu koe$_i$ [ke taa'i t_i 'e he faiako].
Prs advisable 2.s. that hit ERG def teacher
"You are advisable that the teacher hit."

coindexed with the operator in [Spec, CP] of the embedded clause. Thus, neither the Case Filter nor the Theta Criterion is violated. Since it is an instance of operator movement, the matrix subject may be coindexed with the embedded O. Because of the language specific rule that requires a trace in the ERG-marked position to be phonetically realised as a pronoun, sentences like (7.31c) are ruled out. Pronominal clitics are disallowed in the matrix subject position of this structure, because they would not satisfy the requirement that they be licensed by being assigned an external theta-role in the base-generated position.

There is another piece of evidence that the *totonu*-construction in question actually involves operator movement. It is known that *wh*-movement is constrained by the leftness condition: a *wh*-trace cannot be coindexed with a pronoun to its left (Chomsky 1976). Consider (7.33) below. (7.33a) is an example of strong crossover (SCO) and (7.33b), weak crossover (WCO).

(7.33) a. *Who$_i$ does he$_i$ say [his$_i$ mother loves t_i]?

b. *Who$_i$ does his$_i$ mother love t_i?

Koopman and Sportiche (1982) propose that sentences like (7.33a,b) are ruled out due to the Bijection Principle, which requires that every A-bar position locally bind one and only A-position and every variable be locally bound by one and only A-bar position. In (7.33), *who* in an A-bar position binds more than one A-position and therefore, these sentences are ungrammatical. Crossover gives rise to ungrammaticality with regard to *totonu*-constructions, as illustrated by (7.34) below.

(7.34) a. *Na'e totonu 'a Sione$_i$ [OP$_i$ [ke ne$_i$ pehee [na'e 'ave 'e he'ene$_i$ fa'ee t_i].
Pst advisable ABS Sione that 3.s. say Pst take ERG his mother
Lit. "Sione$_i$ was advisable that he$_i$ said his$_i$ mother took (him$_i$)."

b. ?'Oku totonu 'a Sione$_i$ [OP$_i$ [ke 'ave 'e he'ene$_i$ fa'ee t_i].
Prs advisable ABS Sione that take ERG his mother
"Sione$_i$ is advisable that his$_i$ mother take (him$_i$)."

Although some speakers accept WCO, allowing coreference between *he'ene* and *Sione*, (7.34a) involving SCO is considered totally nonsensical.[30] Chomsky (1977) also points out that *wh*-movement observes the complex NP constraint, as illustrated by (7.35b) below.

(7.35) a. I found a book$_i$ [OP$_i$ [for you to insist that Bill should read t_i].

b.*I found a book$_i$ [OP$_i$ [for you to insist on the principle that Tom should read t_i].

We find a parallel between the sentences in (7.35) and *totonu*-constructions in (7.36).

(7.36) a. 'Oku totonu 'a Sione$_i$ [OP$_i$ [ke fakangofua'i 'e Pila 'a Mele [ke 'ave PRO t_i].
Prs advisable ABS Sione that allow ERG Pila ABS Mele to take
"It is advisable that Pila allows Mele to take Sione."
Lit. "Sione is advisable that Pila allows Mele to take."

b.*'Oku totonu 'a Sione$_i$ [OP$_i$ [ke fakamahino'i 'e Pila 'a Mele
Prs advisable ABS Sione that convince ERG Pila ABS Mele
'a e 'aonga [ke 'ave PRO t$_i$].
of def importance to take
"It is advisable that Pila convinces Mele of the importance of taking Sione."
Lit. "Sione is advisable that Pila convince Mele of the importance of taking."

(7.36a) shows that the structure is an example of A-bar movement. If it were an A-movement, such a long distance movement should be ruled out because it would be an example of super-raising. Thus, we have a strong evidence for the operator-movement analysis. On the other hand, the fact that (7.36b) is ruled out shows that the *totonu*-

[30] As we will see in Chapter 10, a pronoun in the *ke*-clause is generally required to be disjoint in reference from a matrix argument. Thus, one may argue that (7.34a) is ruled out due to this disjoint reference requirement rather than because of the strong crossover violation. On the other hand, (7.35)

construction does involve movement.[31] These examples strongly support the operator movement analysis.[32]

7.6.2 Niuean data

Note also that our alternative analysis can account for the Niuean data as well. According to the current analysis, the sentences in (7.23) above are assumed to have the following structure.

(7.37) Niuean

a. Kua kamata e tama$_i$ [OP$_i$ [ke hala t_i e akau].
Perf begin ABS child that cut ABS tree

b. Kua kamata e akau$_i$ [OP$_i$ [ke hala he tama t_i].
Perf begin ABS tree that cut ERG child

As illustrated by (7.37a), the position vacated by the operator movement contains a trace instead of a resumptive pronoun in Niuean. This apparent problem is easily resolved if we consider relativisation in Niuean. In Niuean, a relativised argument does not require a resumptive pronoun whether it is S, A or O (Seiter 1980, Chung and Seiter 1980). As illustrated by (7.38) below, occurrence of a (resumptive) pronoun yields ungrammaticality.

below strongly supports our hypothesis that the *totonu*-construction is an instance of A-bar movement. I am grateful to Gillian Ramchand and Lisa Travis for bringing this point to my attention.

[31] Raising from prepositional objects is also possible, though marginal, as illustrated by (i) below.

(i) ?'Oku totonu 'a Sione$_i$ [OP$_i$ [ke lea 'a Mele ki ai$_i$]].
Prs advisable ABS Sione that speak ABS Mele to there
"It is advisable that Mele talks to Sione."
Lit. "Sione is advisable that Mele talk to (him)."

(Thanks to Gillian Ramchand and Lisa Travis for bringing this point to my attention).

Note that the trace in PP requires a resumptive pronoun. It seems that a resumptive pronoun somehow degrades the acceptability of the *totonu*-sentences. As shown earlier, raising of ERG-arguments with a resumptive pronoun is equally marginal.

[32] Thanks to William O'Grady for bringing this point to my attention.

(7.38) Niuean (Seiter 1980: 94)

a. e tama [ne hau (*a ia) i Makefu]
ABS child Nft come ABS he from Makefu
"the child who comes from Makefu"

b. ke he tama [ka kai (*e ia) e tau pateta]
to child Fut eat ERG he ABS pl. potato
"to the child who is going to eat the potatoes"

Thus, (7.37a) in which *ke*-clause contains a trace coindexed with the matrix subject does not violate any condition in Niuean.[33] Consequently, we may conclude that the operator movement analysis satisfactorily accounts for the Niuean data as well.

Another point to be noted is that pronominal arguments may freely occur in the matrix subject position in Niuean, as illustrated by the following examples. *Maeke* ("to be possible") belongs to the same verb group as *kamata*.

(7.39) Niuean (Seiter 1980: 165, 180)

a. Ai maeke a ia_i [OP_i [ke nofo t_i e nofoa nei].
not possible ABS he that sit ABS chair this
"He can't sit on this chair."

b. To maeke a au_i [OP_i [ke aahi he kapitiga haaku t_i].
Fut possible ABS 1.s. that visit ERG friend my
"It will be possible for me to be visited by my friend."

Note, however, that the pronoun in the matrix subject position is accompanied by a case marker. Niuean pronouns are independent pronouns, and not clitics, thereby not governed by the theta-role constraint. Therefore, sentences like (7.39a, b) are permissible.

[33] It should be noted that unlike Tongan, Niuean does not have clitic pronouns. Therefore, pronouns are preceded by a case marker in the sentences in (7.38).

7.6.3 Raising-to-object

The operator movement analysis proposed above also provides a satisfactory account for what has been called raising-to-object in Niuean (Seiter 1980, Massam 1985), exemplified by (7.24) repeated below.

(7.24) Niuean (Seiter 1980: 196)

a. To nakai toka e au [ke kai he pusi e ika].
Fut Neg let ERG 1.s. that eat ERG cat ABS fish
Lit. "I will not let that the cat eat the fish."

b. To nakai toka e au [e pusi$_i$ [ke kai e_i e ika]].
Fut Neg let ERG 1.s. ABS cat that eat ABS fish
"I will not let the cat eat the fish."

Tongan has a corresponding verb *tuku* ("to leave, let"), which takes a *ke*-clause complement with the matrix subject marked in ERG. See (7.40a) below. As illustrated by (7.40b), the embedded subject may appear instead in the matrix object position.

(7.40) a. Na'e tuku 'e Sione [ke tangi 'a e peepee].
Pst leave ERG Sione ke cry ABS def baby
Lit. "Sione let that the baby cry."

b. Na'e tuku 'e Sione 'a e peepee$_i$ [ke tangi e_i].
Pst leave ERG Sione ABS def baby ke cry
"Sione let the baby cry."

Sentences (7.24b) and (7.40b) are now understood to have the structure below.

(7.41) a. To nakai toka e au e pusi$_i$ [OP$_i$ [ke kai t_i e ika]]
Fut Neg let ERG 1.s. ABS cat that eat ABS fish

b. Na'e tuku 'e Sione 'a e peepee$_i$ [OP$_i$ [ke tangi t_i]
Pst leave ERG Sione ABS def baby ke cry

The operator movement analysis, however, is confronted with one problem: (7.42) below apparently shows that with *tuku*, the argument in the matrix [Spec, Agro] can be coindexed with not only the trace in [Spec, Agro] but also the one in [Spec, Agrs].

(7.42) 'Oua 'e tuku 'a e kulii$_i$ [ke tuli pehee'i kinautolu e_i].
Not Fut leave ABS def dog ke chase like-that 3.pl.
"Don't let the dog chase them like that."
(Churchward 1959: 507)

However, careful investigation proves that this is only an apparent problem. See (7.43) below.

(7.43) a. *Na'e tuku 'e Sione 'a e pusi$_i$ [ke kai t_i 'a e ika].
Pst leave ERG Sione ABS def cat that eat ABS def fish
"Sione let the cat eat the fish."

b. Na'e tuku 'e Sione 'a e pusi$_i$ [ke ne$_i$ kai 'a e ika].
Pst leave ERG Sione ABS def cat that 3.s. eat ABS def fish

c. Na'e tuku 'e Sione 'a e ika$_i$ [ke kai 'e he pusi t_i].
Pst leave ERG Sione ABS def fish that eat ERG def cat

My own research reveals two significant facts concerning the native speaker's judgement on the sentences involving *tuku*. First, my informants consider (7.43a), in which the trace is in [Spec, Agrs], ungrammatical. They all insist that a clitic pronoun *ne* is obligatory in order for the sentence to be acceptable, as illustrated by (7.43b). Secondly, (7.43c), in which the trace is in [Spec, Agro] is definitely much preferred to (7.43b). Their judgement coincides with what the operator movement analysis predicts.

The question is why then (7.42) is permitted. We may argue that the key factor is a feature [±human]. As discussed in Chapter 6, personal pronouns cannot be used to refer to a [–human] entity. Therefore, *kulii* ("dog") is realised as *pro* [3.s.] but not as *ne*.

(7.43) Ko 'eku kulii, 'oku *ne/*pro* poto.
Pred my dog Prs 3.s. smart
"My dog, *he/it is smart."

Thus, we may speculate that due to this restriction, in (7.42) the resumptive pronoun cannot be *ne*. Instead, we may assume that there is a covert resumptive pronoun *pro*. However, it is impossible to tell from the surface form whether the position contains a trace or a covert resumptive pronoun *pro*. Thus, some speakers exceptionally allow a personal pronoun *ne* as a resumptive pronoun to refer to a non-human entity.[34] To conclude, we have shown that the operator movement analysis can account for what has been called raising-to-object as well.

7.7 Summary

In this chapter, we studied a Tongan construction that is analogous to what has been regarded as raising in Niuean. First, we pointed out that the raising analysis is questionable because of the following peculiar properties of the construction in question: a) it involves movement from a case marked position, and b) raising of O is allowed. Having shown that none of the previous approaches satisfactorily accounts for the puzzling Niuean data, we put forth an alternative account, proposing that the construction in question actually does not involve raising but should be considered as an instance of operator movement. In our alternative approach, the construction in question does not involve NP-movement. Thus, it is not necessary to assume that an argument in the matrix subject position has undergone illegitimate movement out of a case-marked position. For the same reason, what has been taken as raising of O is no longer a problem; an argument in the matrix subject position may be coindexed with

[34] We could hypothesise that this exceptional use of *ne* has spread and now become obligatory.

an empty operator in the embedded O position. We have also shown that our alternative analysis offers a simple solution to the following puzzling facts about our Tongan data: a) the embedded A argument cannot appear in the matrix subject position, and b) pronominal arguments are excluded from the matrix subject position. We argued that the former is due to the resumptive pronoun constraint. As we have discussed in Chapter 5, in Tongan [Spec, Agrs] requires a resumptive pronoun when it is vacated as a result of operator movement. The latter is explained in terms of the licensing condition on clitic pronouns in Tongan: clitic pronouns in Tongan must be assigned an external theta-role in the base structure (cf. Chapter 6). Since the matrix subject position of the construction in question is a non-theta position, a clitic pronoun cannot be base-generated in that position. It was also shown that the operator movement analysis accounts for what has been claimed to be raising-to-object in Niuean (Seiter 1980, Massam 1985). In this construction, the argument in the matrix object position is coreferential with a null argument of the embedded clause.

To conclude, we have shown that the two constructions analogous to what has been claimed to be raising in Niuean do not involve raising. Raising constructions that exhibit similar problematic properties are also found outside the Polynesian languages. Haitian Creole (Déprez 1992), Modern Greek (Rivero 1986), Romanian (Watanabe 1993a, Williams 1987), and Igbo (Ura 1996) are said to allow raising from a case-marked position. We leave it to future research whether the alternative accounts proposed in the current study can also accommodate these odd instances of raising.

Chapter 8
Passive

It is sometimes argued that ergative case marking and passive are incompatible (Laka 1993, Levin and Massam 1986). This argument is partly based on fact and partly based on a theoretical assumption. Many ergative languages do not have passive constructions; instead, they have antipassive constructions, in which A and O of the corresponding transitive verb appear as S and some oblique argument, respectively. In addition to such empirical data, the standard definition of passive predicts that passive cannot exist in languages with an ergative case marking. It is generally assumed that passive involves case-absorption/assignment by the passive morpheme (Jaeggli 1986a, Roberts 1987). Put in our view of case assignment, passive involves either inactivating Agro or feature-checking of some element different from the internal argument by Agro. Either way, the internal argument of a passive verb cannot have its case feature checked, and consequently, the derivation crashes.

However, some ergative languages are said to have passive constructions. In order to accommodate such data, the definition of passive needs to be reconsidered. With regard to Tongan, there have been a few studies on Tongan passive, which generally argue that Tongan does not have a passive construction (Chung 1978, Tchekhoff

1973a).[1] However, all of these studies assume the standard definition of passive. Thus, in §8.1, we will put forth an alternative definition of passive. We will propose that there are two kinds of passive: syntactic and lexical. We will argue that although syntactic passive and ergative case system are mutually exclusive, lexical passive can exist in an ergative language. In §8.2, we will show that our hypothesis is borne out by reviewing various studies on passive constructions in ergative languages. In §8.3, we will consider five constructions in Tongan that are often interpreted as passive when translated into English. It will be shown that none of them involve syntactic passivisation. Instead, we will argue that Tongan uses other means, including the lexical passive, to reflect semantic/pragmatic factors that would be expressed by syntactic passivisation in a language that has a syntactic passive construction. Our conclusion is that syntactic passive and ergative case marking are mutually exclusive. However, ergative languages have other means to reflect semantic/pragmatic factors that are usually dealt with by means of syntactic passivisation.

8.1 Definition of passive

8.1.1 GB approach

The passive construction in accusative languages has the following characteristics: a) the verb is affixed by a passive morpheme; b) the internal argument appears in the subject position, bearing NOM instead of usual ACC; and c) the external argument may appear as an oblique argument, usually as a prepositional phrase (e.g., English

[1] Also see Lynch (1972), who argues that passive exists in Tongan.

by-phrase). In the GB framework, characteristics of passive are considered a result of absorption of the external theta-role by the passive suffix. Following the proposal by Jaeggli (1986a) that case/theta-role absorption should be understood as case/theta-role assignment to the passive suffix, Roberts (1987) proposes that the passive morpheme such as English *-en* is an argument that is base-generated as an external argument. Accordingly, the passive morpheme is assigned an external theta-role and (ACC) case by the verb. In the GB approach, it is assumed that case is assigned under government by a case assigner: NOM by tense and ACC by the verb. Baker et al. (1989) propose that *-en* is a clitic that attaches to the verb. In this view, the agentive *by*-phrase is understood as an instance of clitic doubling. In the feature checking theory, this analysis can be interpreted as follows. The passive morpheme *-en* is base-generated in [Spec, VP] and assigned an external theta-role by the verb. It then cliticises onto V, which subsequently adjoins to Agro. Let us assume that *-en* checks its case feature by virtue of adjoining to Agro. Once the case feature of Agro has been checked off, it is no longer available. Consequently, the internal argument moves up to [Spec, Agrs] to check its case feature and receive NOM. According to this analysis, the sole argument of a passive construction is expected to appear in ERG in an ergative language because it checks its case feature in [Spec, Agrs]. However, such a construction, i.e., [V+pass NP-ERG] does not exist. On the other hand, the internal argument could not appear in ABS because Agro is not available. Thus, [V+pass NP-ABS] could not be derived. In short, this analysis predicts that passive could not exist in ergative languages.

Others regard passive as a type of unaccusative. In this view, the passive suffix

absorbs the external theta-role, which thereby renders the verb intransitive. Consequently, the internal argument will necessarily receive NOM rather than normal ACC, due to Burzio's generalisation. Thus, Laka (1993: 168) argues that passive does not exist in ergative languages because Burzio's generalisation does not hold of ergative languages. Since the active Agr is Agro in ergative languages, the sole argument of an intransitive construction, whether internal or external, receives ABS. In other words, absorption of the external theta-role does not entail case absorption as far as ergative languages are concerned because the internal argument consistently appears in ABS regardless of the voice of the construction.

Laka's argument that passive is incompatible with ergative case marking, however, is not valid unless we assume that case absorption is a necessary condition for passive. Besides, it has been shown that some ergative languages do have passive constructions (cf. Cooreman 1988 for Chamorro, England 1988 for Mam, Morin and Tiffou 1988 for Burushaski, and Rude 1988 for Nez Perce). In studying passives in Niuean, Levin and Massam (1986) also argue that the essential nature of passive is case absorption. As they take the GB approach, it naturally follows from this definition that passives cannot exist in ergative languages: if the verb lost its ability to assign (ABS) case, S of the passive verb cannot receive case, violating the Case Filter. Facing this problem, Levin and Massam (1986) propose that in ergative languages such as Niuean, the loss of case assigning ability is explained not as case absorption but as case transmission to VP, whereby VP will be able to assign ABS to a NP that has moved to the external

argument position.[2] Thus, in Niuean the subject of a passive clause is marked in ABS despite the loss of case assigning ability of the verb.[3] However, this approach involves two highly unusual operations, case transmission to VP and the subsequent case assignment by VP.

In brief, a major obstacle for the approaches outlined above is that the sole argument of a passive verb somehow manages to receive case in ergative languages. This problem, however, can be resolved if we take the active Agr approach. As discussed in Chapter 7, the active Agr hypothesis explains case assignment in the unaccusative construction without assuming that an unaccusative verb is deprived of its case assigning ability. Note that we assume that the case feature of an argument is checked by Agr, and not by the verb itself. It follows that even if the verb loses its case assigning ability, the internal argument is still able to have its case feature checked in the active Agr. Thus, in an ergative system S, whether generated as the external or internal argument, checks its case feature in the active Agr. However, it should be noted also that this advantage of the active Agr hypothesis is valid only if we assume that passivisation derives an intransitive verb from a transitive verb.

At this point, it is necessary to distinguish the two phenomena that have been referred to as passive. There are two types of passive: one involving theta-role assignment and the other involving theta-role absorption. In the former, the verb remains transitive. In

[2] Note that their hypothesis, case transmitted to VP (i.e., maximum projection of the head V) does not fit in the GB case theory. Generally, it is assumed that T assigns case to a NP in the subject position. Levin and Massam (1986) assume that VP may assign ABS to the NP in [Spec, VP].

[3] What they call passive in Niuean is a construction similar to the subject-less transitive in Tongan, which is discussed below (§8.3.2). However, whether this construction is passive or not is a question.

contrast, theta-role absorption renders the verb intransitive: there is only one argument that need to check its case feature. This process derives an intransitive verb similar to the so-called English middle verbs such as *sell* as in "This book sells well". We assume that theta-absorption takes place in lexicon and not in syntax. In studying passive constructions in ergative languages, it is important to distinguish the two passives. Let us call passives involving theta-role assignment *syntactic* passives and those involving theta-role absorption *lexical* passives. The current approach predicts that ergative languages may have lexical passives, but not syntactic passives. In both cases, what characterises passive is elimination of the external theta-role.

8.1.2 Relational Grammar (RG) approach

In fact, Perlmutter and Postal (1983) cite the following examples to show that case is not a crucial factor that characterises passive. For example, West Greenlandic Eskimo, an ergative language, shows a passive construction, in which the (underlying) O appears in ABS, the same case it bears in the corresponding active construction.

(8.1) West Greenlandic Eskimo (Perlmutter and Postal 1983: 7)

a. Gimmi-p miiraq kii-va-a.
   dog-ERG child-ABS bite-3.s.-3.s.
   "The dog bit the child."

b. Miiraq gimmi-mik kii-tsip-puq.
   child-ABS dog-INSTR bite-pass-3.s.
   "The child was bitten by the dog."

Furthermore, consider the following example from Basque, another ergative language. In (8.2b), not only the (underlying) object, but also the (underlying) subject appears in the same case as they do in the corresponding active sentence.

(8.2) Basque (Lafitte 1962 cited by Perlmutter and Postal 1983: 8)

a. Piarresek egin du etchea.
Peter-ERG make has house-ABS
"Peter built the house."

b. Piarresek egina da etchea.
Peter-ERG made is house-ABS
"The house was built by Peter."

In (8.2b), the verb is arguably intransitive because *da* is used with intransitive verbs as opposed to *du*, which is used with transitive verbs. These examples show that case is irrelevant to voice.

Moreover, Perlmutter and Postal argue that the passive morpheme, at least a visible one, is not a necessary condition for passive, either. See (8.3) below.

(8.3) Mandarin Chinese (Cummins 1976 cited by Perlmutter and Postal 1983: 8)

a. Zhù lâoshī píyè-le wô-de kâoshí.
Zhu professor mark-ASP my test
"Prof. Zhu marked my test."

b. wô-de kâoshí bèi Zhù lâoshī píyè-le.
my test by Zhu professor mark-ASP
"My test was marked by Prof. Zhu."

Note that the verb appears in the same form in both active and passive sentences. Similar phenomenon is observed in Achenese (Lawler 1977).

Thus, Perlmutter and Postal (1983: 9) formulate the following two universals of passivisation: a) a direct object of an active clause is the (superficial) subject of the corresponding passive; and b) the subject of an active clause is neither the

(superficial) subject nor the (superficial) direct object of the corresponding passive.[4] The two conditions predict that a passive clause is an intransitive construction. Their observation that neither case nor verbal morphology can be regarded as a necessary condition for passive is insightful. However, the universals they postulate raise a question as to how the terms, subject and direct object are defined. In RG, these grammatical relations are assigned rather arbitrarily, as long as subjecthood or direct objecthood of a NP can be proved by some syntactic rules that apply exclusively to subject or direct object. On the other hand, in the GB approach, subject and direct object are generally distinguished in terms of structural position in the surface structure. Grammatical relations are understood in terms of external/internal theta-roles in the GB approach. However, the RG terms, subject and direct object do not necessarily correspond to the GB terms, external argument and internal argument, respectively: an internal argument may appear in the subject position of the surface structure in the case of unaccusative construction. Subjects of unaccusative and passive are derived subjects that end up in the subject position as a result of movement, motivated by the Case Filter. In other words, the GB theory considers that an argument appears in the subject position of a passive construction as a result of passivisation, while RG considers passivisation as the result of revaluing grammatical relations. Considering that the thematic relation between the verb and the internal argument remains intact, we take the former view. In other words, we do not consider that the internal argument becomes the external argument. Passivisation involves

[4] Babby (1994: 632) also argues that "the only absolute universal property of passivisation is internalisation of the verb's external theta-role; everything else, including the presence of passive morphology, the verb's transitivity, movement of the direct object, case absorption, and agreement are language-specific phenomenon."

elimination of the external theta-role. The fact that the internal argument appears in the subject position is an outcome of the elimination of the external theta-role.

8.1.3 Definition of passive

It should be noted that the RG approach outlined above does not distinguish lexical passive from syntactic passive. On the other hand, in the GB approach lexical passives are not regarded as passive at all. As mentioned above, in studying passive constructions in ergative languages, it is particularly important to distinguish the two types of passive. Let us assume that both syntactic and lexical passives involve the affixation of the passive morpheme (including the zero-morpheme). In the case of a lexical passive, the affixation takes place in the lexicon and causes the theta-role absorption, while in the case of a syntactic passive the affixation takes place in the syntax and involves the theta-role assignment. Specifically, we assume, following Baker et al. (1989), that the passive morpheme is base-generated in [Spec, VP] and receives an external theta-role from the verb. Note that in this view the passive construction is considered a transitive construction, containing two Agr phrases. The passive morpheme, which is virtually the external argument of the verb, checks its case feature by adjoining to Agro when the verb to which it cliticises adjoins to Agro. Consequently, the overt argument in [V, NP] moves to [Spec, Agrs] via [Spec, TP] to check its case feature. This process takes place at the level of syntax. In contrast, a lexical passive involves a similar operation, but all is done in the lexicon and not in the syntax. A (passive) morpheme affixes to a transitive verb and absorbs the external theta-role. Therefore, a derived verb is syntactically intransitive: it has only one theta-role to assign. At the level of syntax, lexical passive constructions behave like any

other intransitive constructions. Thus, S will check its case feature in the active Agr. As a result, it appears in ABS in an ergative language. Note that with this definition the underlying O of a syntactic passive would appear in ERG in an ergative language because feature checking takes place in [Spec, Agrs].

Given that the above definition of passive is an arbitrary one and that the following discussion largely relies on this particular definition of passive, it is necessary to mention that some other definitions of passive will lead to a different conclusion. Let us consider two other definitions of passive below before proceeding with our discussion. First, consider the following definition: the syntactic affixation of the passive morpheme absorbs the external argument of the verb and therefore renders the verb unaccusative. In this view, the passive construction is intransitive. Accordingly, the underlying O receives case in the active Agr. Thus, in the English passive, the underlying O appears in NOM. This definition predicts that the underlying O would appear in ABS in the passive construction in ergative languages. However, this is always the case: in transitive constructions, O consistently appears in ABS. This definition cannot distinguish passive constructions from active constructions. With this definition, all verbs can be regarded as passive in ergative languages.[5] Secondly, following the RG approach, one may assume that the crucial condition of passive is the demotion of the agent argument. In this view, due to the demotion of the agent argument, the underlying O is promoted to the subject, because the EPP would be violated otherwise. Thus, the underlying O in a passive construction acquires the

[5] For example, the claim that in ergative languages the patient arguments are generated as the subject in [Spec, VP] (Marantz 1984 and Levin 1987) seems to suggest that the ergative transitive constructions are like passives.

subject properties and behaves like a subject. In an ergative language, the underlying O would receive ABS because that is the case which the intransitive subject receives. In both approaches, the underlying O is expected to appear in ABS, and consequently, the passive construction does not differ from the intransitive construction.

The major difference between our definition and the alternative definitions mentioned above is that the former considers that the (syntactic) passivisation does not affect the transitivity of the underlying construction.[6] This assumption is crucial in the following two respects. First, assuming that the (syntactic) passive can exist in ergative languages, we would like to avoid obscuring the syntactic differences between the passive and the active. In other words, we would like to have a definition that can exclude the active constructions. Second, it also plays an essential role in our attempt to capture the facts in terms of structural positions: specifically, which position the underlying O of the passive construction ends up. This is important because, as argued in Chapter 5, some of the syntactic rules in Tongan are sensitive to the structural case position. Thus, our definition of passive is as follows.

(8.4) Syntactic passive

a) affixation of a passive morpheme to a transitive verb in the syntax;
b) the external theta-role is assigned to the passive morpheme;
c) the overt argument checks its case feature in [Spec, Agrs].

[6] Note that although these alternative definitions seem to argue for the existence of passive in ergative languages, the following discussion on the Tongan data shows that the passive-like constructions, in which the underlying O appears in ABS, cannot qualify as syntactic passive. As will be shown shortly, the ABS-marked argument in the passive-like constructions does not have the subject properties: a) it cannot be realised as a clitic; b) it cannot be part of the *mo*-construction, and c) it cannot serve as PRO.

(8.5) Lexical passive

a) affixation of a passive morpheme in the lexicon;
b) the derived verb is intransitive;
c) the overt argument checks its case feature in the active Agr.

We also assume that the passive morpheme can be a zero morpheme. Note also that the fact that a sentence could have a passive interpretation does not qualify it as a syntactically passive construction.

8.2 Passive in ergative languages

The preceding discussion led us to conclude that an ergative language can have a lexical passive, but not a syntactic passive. As illustrated by (8.1) and (8.3) above, West Greenlandic Eskimo and Basque, both ergative languages, do possess passive. In addition to these two, passive is found in the following ergative languages: Chamorro (Cooreman 1988), Mam (England 1988), Burushaski (Morin and Tiffou 1988), and Nez Perce (Rude 1988). A careful review of the relevant data reveals that all of these passive constructions belong to the class of lexical passive as defined in (8.5) above. This observation supports our hypothesis. On the other hand, in Polynesian, it is generally agreed that ergative case marking and passive construction are in complementary distribution. This argument is based on the distribution of the so-called Polynesian passive morpheme, *-Cia*. We will discuss these issues below.

8.2.1 Burushaski

Burushaski has a construction that is called agentless passive (Morin and Tiffou

1988). Informally, this construction is derived from a transitive construction by deleting the underlying A. The verb appears in the same form. However, the auxiliary *be* agrees with the sole argument, the underlying O. The latter indicates that O in the agentless passive has somehow acquired the status of subject, for the auxiliary agrees only with S or A in Burushaski. This property suggests that the agentless passive is in fact a lexical passive. Affixation of a passive morpheme (in this case, a zero morpheme) and absorption of the external theta-role take place in lexicon, deriving an intransitive verb that takes an underlying O as its sole argument. The agent argument cannot appear with the resulting verb, for its theta-role has been eliminated.

8.2.2 Nez Perce

Similarly, Rude (1988) observes that passive constructions in Nez Perce are always agentless. They are also morphologically intransitive in that the sole argument induces the subject agreement on the copula. These properties suggest that the Nez Perce passive is also lexical. In fact, Rude (1988) argues that the morpheme affixed to these passive verbs is a stative morpheme. Therefore, we may conclude that affixation takes place in the lexicon to derive an intransitive stative verb.

8.2.3 Chamorro

A similar phenomenon of the agentless passive is found in Chamorro (Cooreman 1988). The prefix *ma-* attaches to a verbal stem to derive a passive verb. The sole argument of the derived construction appears in ABS and the agent argument cannot appear in any form, including obliques. *Ma* passive in Chamorro also seems to be an

instance of lexical passive.[7]

8.2.4 Mam

According to England (1988), there are four passive morphemes in Mam: *-eet*, *-njtz*, *-j*, and *-b'aj*. Affixation of *-njtz* and *-j* is only semiproductive. Verbs affixed by *-njtz* and *-j* imply that the agent has lost or fails to have control over the patient. In other words, events described by these verbs are interpreted as accidental. The fact that affixation of these suffixes gives rise to a semantic difference suggests that this process takes place in the lexicon rather than syntax. In contrast, *-eet* is productive: it can attach to almost all transitive verbs. The agent appears in oblique case. However, there are two facts that suggest that *-eet* also involves lexical passivisation. First, some verbs do not permit oblique agents. Second, several verbs such as *kan-* ("to meet/find") are always used in the passive form. In these instances, affixation of *-eet* takes place in the lexicon. Finally, *-b'aj* behaves differently from the other three. Affixation of *-b'aj* implies that the action described by the verb happens because someone goes to do it. England (1988) regards *-b'aj* as one of the directional suffixes. With *-b'aj*, the agent is restricted to third person. Since affixation of *-b'aj* also results in some semantic difference, we may consider the process lexical rather than syntactic. Overall, passives in Mam can be regarded as instances of lexical passive. At least, none of them qualify as syntactic passive as defined in (8.4) above.

[7] According to Cooreman (1988), there is another construction that can be analysed as passive. When the infix *–in-* attached to a verbal stem, the derived verb has a passive meaning and the sole argument appears in ABS. However, crucially, the presence of the oblique agent is mandatory in *in* passive constructions. As Cooreman (1988) mentions, *in* passive in Chamorro is a reminiscence of the *in* focus construction found in Philippine languages. Thus, we assume that the Chamorro *in* construction technically is not passive.

8.2.5 Inuktitut and Inuit

A unique case is found in Inuit, a Canadian Eskimo language. What is called passive participle *-jaq-* appears not only in passive constructions but also in active constructions (Johns 1992). It can also attach to intransitive (unaccusative) verbs. Johns (1992) proposes that affixation of the Inuktitut passive participle is a category-changing operation. It derives a noun phrase from a verb by linking the internal argument to a referential index: e.g., *kapi* ("to stab") + passive → "the stabbed one". Since it is a category-changing operation, Johns argues, following Levin and Rappaport (1995), that affixation of *-jaq-* takes place in lexicon. This observation is in accordance with our hypothesis that passive in ergative languages is necessarily lexical. Bittner and Hale (1996b) propose that the Inuit passive morpheme is a nominal head, which selects a small clause complement. To summarise, we have shown that what has been called passive in ergative languages are all instances of lexical passive.

8.2.6 Passive in Polynesian

Polynesian languages are divided into three subgroups based on their morphological characteristics: Tongic (TON), Samoic-Outlier (SAM), and Eastern Polynesian (EP) (Pawley 1966). As far as case assignment is concerned, both accusative and ergative systems exist in Polynesian languages. Those belonging to the TON and SAM subgroups are said to have an ergative case system. In contrast, the EP languages show an accusative pattern of case marking.[8] The EP languages have a passive rule,

[8] However, Gibson and Starosta (1990) argue that Maori, an EP language is in fact ergative for the following empirical reasons: a) Pattern II is the basic transitive pattern in Maori if we consider text frequency, neutrality, and productivity as criteria of transitivity; and b) comparing Pattern II with

which is triggered by a passive suffix of variable form, conventionally represented as -*Cia*.[9] Affixation of -*Cia* places the underlying O in the unmarked case, and the underlying A appears as an obliquely marked agent. Consider the Maori example in (8.6) below. In Maori, a NP in NOM is unmarked and the one in ACC is preceded by a preposition *i* as illustrated by (8.6a). In (8.6b), where the passive suffix, *-mia* has been added to the verb, the underlying O, *te wai* is unmarked. The underlying A is preceded by the agent marker, *e*.

(8.6) Maori (Clark 1976: 68)

a. Ka inu te tangata i te wai.
Tns drink def man ACC the water
"The man drank the water."

b. Ka inu-mia te wai e te tangata.
Tns drink-Cia def water Agt the man
"The water was drunk by the man."

In contrast, TON and SAM languages show ergative case marking with A marked by *'e* and O unmarked[10], as exemplified by (8.7) below. It should also be mentioned that in TON and SAM, transitive verbs fall into two major classes: a) middle verbs, i.e., verbs of perception, emotion, and communication, and b) canonical transitive (CT) verbs, i.e., verbs denoting action by an agent directly affecting the object. Middle verbs have a different construction from that of CT verbs. Compare the CT construction with the middle, illustrated by (8.7) and (8.8) respectively.[11]

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intransitive clauses, S matches O in terms of case marking and accessibility to reference-related grammatical rules (e.g., relativisation).

[9] -*Cia* is the label generally used to represent variable forms of the so-called Polynesian passive suffix. The Polynesian passive suffix consists of a consonant (represented by *C*) followed by *i* (which is often optional) and *a*.

[10] In Tongan, O, as well as S, is preceded by the absolutive case marker, *'a*. This absolutive case marker is optional, and in fact often omitted.

[11] Some linguists regard this middle marking as accusative, with NPs preceded by *i/ki* being in ACC.

(8.7) Na'e kai 'e he tangata 'a e mango.
Pst eat ERG def man ABS def mango
"The man ate the mango."

(8.8) Na'e sio 'a e tangata ki he fefine.
Pst see ABS def man to def woman
"The man saw the woman."

Furthermore, the suffix *-Cia* is not as productive in the TON and SAM languages as in the EP languages nor does it necessarily change the underlying O into a derived subject. In other words, there is no suffix that systematically induces passivisation in the TON and SAM languages. For example, a Tongan suffix, *-'i* is generally considered to be a variant of the Polynesian passive morpheme, *-Cia* (Chung 1978). However, this suffix does not function as a passive morpheme. As shown by (8.9) below, this suffix attaches to a middle verb and makes it a transitive verb. Note that the affixation does not change voice although it does affect the transitivity of the verb.

(8.9) a. Na'e tokoni 'a e tamasi'i ki he fefine.
Pst help ABS def boy to def woman
"The boy helped the woman."
Lit. "The boy helped to the woman."

b. Na'e tokoni'i 'e he tamasi'i 'a e fefine.
Pst help ERG def boy ABS def woman
"The boy helped the woman."

Similarly, in Samoan, *-Cia* functions as a transitive suffix in a rather productive fashion (Chung 1978).

The idea is that these NP's are marked by the preposition. Besides, this preposition i/ki is the accusative case marker in EP subgroup. However, this paper holds a different view: *i/ki* in TON and SAM subgroups are locative prepositions (equivalent to English "in" and "to", respectively), independent from the EP accusative marker, *i*. Accordingly, the middle construction is considered canonically intransitive, with its object marked with oblique case (OBL). This view is motivated by the affectedness condition; namely, objects that are not directly affected by the action are less likely to be grammatically transitive (Hopper and Thompson 1980). Since middle verbs are typically those of perception, emotion, and communication, one may say that objects of these verbs are not directly affected.

There is a striking contrast between the EP languages on one hand and the TON and SAM languages on the other. Compare the four patterns schematised in (8.10) below. NP1 refers to the Agent/Experiencer argument and NP2, the Patient/Theme.

(8.10) a. EP active:	V		NP1	*i*	NP2
b. EP passive:	V-*Cia*		NP2	*e*	NP1
c. Non-EP middle:	V	(*a*)	NP1	*i/ki*	NP2
d. Non-EP CT:	V	(*a*)	NP2	*e*	NP1

From the point of view of historical linguistics, it is natural to hypothesise that there is some close relationship, possibly an evolutionary one, between (8.10a) and (8.10c), and between (8.10b) and (8.10d). That is, Proto-Polynesian (PPN) had either an accusative system like Maori, or an ergative system like Tongan, and one of the two systems is derived from the other.[12] If we assume the former, an ergative case system is derived by reanalysis of the PPN passive construction as transitive (i.e., ergative) construction: the agent marker *e* has been reanalysed as the ergative marker and the passive suffix *-Cia* has lost its function in TON and SAM languages (Hohepa 1969[13]; Hale 1970; Chung 1977, 1978[14] among others)[15].

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[12] On a different note, this kind of historical view offers an interesting way of explaining the phenomena of split ergativity. Split can be explained in this view that the change, either from ergative to accusative or from accusative to ergative, is still in process: the accusative case marking observed in an ergative language is either the residue of the old system or a hint of the new system. In short, split is attributed to neither syntactic nor semantic reasons; it is simply a by-product of a diachronic change. Split ergativity in Indic and Iranian languages (e.g., Hindhi) is also often attributed to a historical change (Anderson 1977).

[13] Hohepa (1969) proposes that there was a "drift" toward increasing use of the passive in PPN. Increasing use of the passive is attested by EP languages: e.g., in Maori, passive clauses have extraordinarily high text frequency (Chung 1978). The drift made the passive rule obligatory in TON and SAM. Consequently, the suffix *-Cia*, having lost the function of distinguishing the passive from the active, became optional in these languages, giving rise to a new structure schematised in (i).

(i) V *e* NP1 (A) NP2 (O)

The pattern (i) was then reanalysed as the ergative, with the *e*-marked NP being ERG and the unmarked NP, ABS. Hohepa (1969) concludes that this process is still continuing in TON and SAM languages, in which both ergative and accusative case marking exist. Note that in this view, the middle construction is considered accusative.

[14] Chung (1978) rejects the possibility of the drift to ergativity, by pointing out that the postulated obligatory-passive stage preceding reanalysis is not attested in any modern language. Instead, Chung

On the other hand, we could also hypothesise that PPN had an ergative case system (Clark 1976, Gibson and Starosta 1990). In this view, it is assumed that PPN had the ergative system and that the consistent accusative system of EP languages was an innovation that took place at the Proto-EP stage.[16] The function of the suffix *-Cia* is considered transitive rather than passive; *-Cia* is typically affixed to an intransitive verb, reversing its transitivity. Thus, PPN is assumed to have the following three constructions.

(8.11)

Pattern I	V		NP1 (A)	*i/ki* NP2 (O)
Pattern II	V	*-Cia*	*e* NP1 (A)	NP2 (O)
Pattern III	V		*e* NP1 (A)	NP2 (O)

TON and SAM exhibit all of these three patterns: CT verbs appear in Patterns II and III, and middle verbs in Pattern I. In EP languages, pattern III does not exist.[17] Clark (1976) claims that Pattern III was lost at the Proto-EP stage. Pattern II was then reanalysed as passive, giving rise to an accusative system.[18]

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postulates a condition that requires passive to be applied to clauses containing an affected direct object. Chung argues that a) as a result of this frequent application, the rule was highly opaque, and that b) subsequent changes occurred as an attempt to reduce this opacity. Specifically, EP languages dropped the condition and reduced the frequency of application of the passive rule; on the other hand, SAM and TON languages reanalysed passive clauses as active transitive (i.e., ergative), and lost the passive rule. In other words, the shift from PPN is taken to be a bifurcated track, rather than a trend towards one direction. As evidence for the passive-to-ergative reanalysis, Chung (1977, 1978) presents data from Pukapukan, a SAM language, in which all verbs may occur in three different patterns, i.e., accusative, ergative, and passive.

[15] Estival and Myhill (1988) support the passive-to-ergative reanalysis, arguing that passive construction in general is structurally similar to ergative construction in the following sense: a) (underlying) O appears in the same case as S, and b) (underlying) A appears in an oblique case.

[16] Note that Gibson and Starosta (1990) propose a slightly different account, arguing that the change took place later, specifically in the Central EP languages (e.g., Hawaiian and Tahitian), and not at the Proto-EP stage. This is due to their assumption that Maori is an ergative language contrary to the traditional consensus.

[17] However, Rapanui, an EP language spoken in Easter Island also exhibits Pattern III although Pattern I is the most common construction for transitive verbs. Clark (1976) suggests that this is a trace of the old ergative system.

[18] With regard to Tongan, Tchekhoff (1979) proposes that Tongan is going through the ergative-to-accusative reanalysis. Tchekhoff regards *-'i* as a perfective morpheme. She argues that this perfective aspect marker functions as a passive morpheme with certain verbs such as *tamate* ("to kill") and that this usage will eventually extend to all verbs, making *-'i* a passive morpheme.

The theories outlined above argue that passive does not exist in languages of the TON and SAM subgroups because *-Cia* does not function as a passive suffix. However, this could be a hasty conclusion. Although *-Cia* is the Polynesian passive suffix, nothing prevents us from assuming that its use is limited within the EP subgroup and that the TON and SAM languages have some other convention for passivisation. Considering some ergative languages outside Polynesian exhibit passive construction, it is not so absurd a suggestion. The question is, then, is there such an alternative for the TON and SAM languages? We will attempt to answer this question by studying the Tongan data.

8.3. Passive-like constructions in Tongan

Some linguists point out that some passive-like constructions are found in Tongan (Churchward 1953, Tchekhoff 1973a, Lynch 1972). These passive-like constructions include (a) lexical passive, (b) the subject-less transitive, (c) VOS word order[19], (d) verbs with *-Cia* suffix, and (e) verbs with *ma-* prefix. Lexical passive refers to a certain class of intransitive verbs that have passive meanings and do not have any corresponding transitive verb. These constructions typically have a passive interpretation. Churchward (1953) argues that it is simply a matter of interpretation and that Tongan does not have a syntactic equivalent of the passive typically found in the accusative languages. Tchekhoff (1973a) proposes a similar view with regard to *-'i*

[19] Note that the word order is systematically VSO in Tongan when both the subject and the object are full nouns. However, VOS order also freely occurs and considered perfectly grammatical.

suffix, arguing that there is no active-passive transformation in Tongan.[20] On the other hand, Lynch (1972) argues that subject-less transitive construction and VOS construction are passive constructions, yielded from affixation of a zero-morpheme. In this section, we will consider some Tongan data of each of the passive-like constructions mentioned above. It will be shown that Tongan possesses lexical passives, but not syntactic passives. The former involves passivisation at the lexical level and does not involve any syntactic operation.

8.3.1 Lexical Passive

Some verbs in Tongan are typical examples of lexical passive defined above in (8.5). These verbs are intransitive verbs with passive meanings: e.g., *lavea* ("to be injured"), *'osi* ("to be finished"), and *mole* ("to be lost"). These verbs are intransitive, taking only one argument, which is marked by the ABS-case marker, *'a*. See (8.12) below.

(8.12) a. Na'e lavea 'a e siana.
Pst be-injured ABS def man
"The man was injured."

b. Na'e 'osi 'a e me'akai.
Pst. be-finished ABS def food
"The food was finished (all gone)."

c. Na'e mole 'a e kii.
Pst be-lost ABS def key
"The key was lost."

As mentioned earlier, an understood argument is often omitted in Tongan, particularly when it is third person singular. Therefore, one may suspect that the sentences in (8.12) are instances of such a case, where the subject is *pro*. If it were the case, adding

[20] In fact, the function of *-'i* is more like a transitive morpheme. However, there are some other *-Cia* suffixes are found in Tongan, e.g., *-mia*, *-ngia*, *-sia*. Verbs with such a suffix are typically interpreted as passive. We will return to this point shortly.

an overt subject would not affect the grammaticality of these sentences. However, as illustrated by (8.13) below, the sentences in (8.12) cannot have an overt subject. The sentences are considered ungrammatical if an ERG-marked NP is present. Therefore, we conclude that the sentences in (8.12) are actually intransitive.

(8.13) a. *Na'e lavea 'e Sione 'a e siana.
Pst injure ERG Sione ABS def man
"Sione injured the man."

b. *Na'e 'osi 'e he tamaiki 'a e me'akai.
Pst finish ERG def children ABS def food
"The children finished the food."

What we need to consider now is whether these intransitive verbs with a passive meaning are the outcome of syntactic passivisation. Recall our definition of syntactic passive given above as (8.4): a passive construction has a corresponding active transitive construction. Sentences in (8.13) show that there are no corresponding active transitive verbs. This denies the possibility that a zero passive morpheme is attached to the verb in the sentences in (8.12). What is more, the agent argument cannot appear in the relevant sentences. In fact, in order for the agent argument to be present, the verb has to be transitivised by adding a causative prefix *-faka*. Compare (8.14) below with (8.13).

(8.14) a. Na'e fakalavea'i 'e Sione 'a e siana.
Pst cause-injure ERG Sione ABS def man
"Sione injured the man."

b. Na'e faka'osi 'e he tamaiki 'a e me'akai.
Pst cause-be-finished ERG def children ABS def food
"The children finished the food."

In other words, the active transitive counterpart is derived from the original passive intransitive verb. Thus, verbs like *lavea* are purely intransitive, and not derived. They form a particular class of intransitive verbs that originally have the passive meaning.

8.3.2 Subject-less transitive

As mentioned above, we frequently encounter Tongan transitive sentences with only one argument. What is curious is that such a sentence is sometimes interpreted as passive. See (8.15) below. The verb, *'ave* is a transitive verb and usually takes two arguments, as illustrated by (8.15a). In (8.15b), however, only one argument is present, which is marked for ABS.

(8.15) a. 'Osi 'ave 'e Sione 'a e tamasi'i ki he falemahaki.
Perf take ERG Sione ABS def child to def hospital
"Sione has taken the boy to the hospital."

b. 'Osi 'ave 'a e tamasi'i ki he falemahaki.
Perf take ABS def boy to def hospital
"(Someone) has taken the boy to the hospital."
"The boy was taken to the hospital."

Note that the sole argument is appear in ABS, not in ERG, in (8.15b). This suggests that this construction cannot be a syntactic passive according to our definition (8.4). Could it be a lexical passive? In an ergative case system, an ABS-marked NP is either S or O. Thus, theoretically, *tamasi'i* in (8.15b) could be analysed as either of the two. If the NP in question is S, (8.15b) is an intransitive construction. Then, there is a possibility that *'ave* in (8.15b) is a lexical passive verb. On the other hand, if it is O, then (8.15b) is a transitive verb with a *pro* subject.

As mentioned in Chapter 6, there is a way to test whether a verb is transitive or intransitive in Tongan. When an alienable possessive pronoun precedes a verb, it refers to the subject of the verb (either A or S). In contrast, an inalienable possessive pronoun preceding a verb refers to O. Thus, inalienable possessive pronouns cannot be used with an intransitive verb. See (8.16) below.

(8.16) a. 'ene foki
alienable.poss.3.s. return
"his returning"

b. *hono foki
inalienable.poss.3.s. return

c. 'ene tamate'i
alienable.poss.3.s. kill
"his killing (something)"

d. hono tamate'i
inalienable.poss.3.s. kill
"his being killed (by somebody/something)

As illustrated by (8.16a) and (8.16b), S must be represented by an alienable possessive pronoun. (8.16c) shows that when used with a transitive verb, an alienable possessive pronoun refers to A. In contrast, (8.16d) shows that an inalienable possessive pronoun must refer to O when used with a transitive verb.

Using this property of the Tongan possessive pronouns, we may find out whether a verb is intransitive by simply adding an alienable possessive pronoun to the verb. If the verb, *'ave* in (8.15b) is intransitive, it should be able to co-occur with an alienable possessive pronoun. (8.17) below, however, testifies against this hypothesis.

(8.17) a.*'ene 'ave ki he falemahaki
alienable.poss.3.1. take-pass to def hospital
"his being taken to the hospital"

b. 'ene 'ave ki he falemahaki
alienable.poss.3.1. take to def hospital
"his taking (someone) to the hospital"

c. hono 'ave ki he falemahaki
inalienable.poss.3.s. take to def hospital
"his being taken to the hospital"

As (8.17a) shows, *'ave* cannot occur with an alienable possessive pronoun and have a

passive meaning. Note that the phrase itself is grammatical, as long as the passive interpretation is not intended, as illustrated by (8.17b). Furthermore, (8.17c) confirms that the sole argument, *e tamasi'i* in (8.15b) is O, and not S. It should be also mentioned that the lexical passive verbs consistently occur with the alienable possessive pronouns. As illustrated by (8.18) below, an inalienable possessive pronoun cannot be used with a verb of this class. This confirms that lexical passive verbs are indeed intransitive.

(8.18) a. 'ene lavea
alienable.poss.3.s. be-injured
"his being injured"

b. *hono lavea[21]
inalienable.poss.3.s. injure
"his being injured"

The contrast between (8.17) and (8.18) suggests that the sole argument of subject-less sentences is syntactically O and not S.[22]

There is yet another way to test the transitivity of verbs, namely, the distribution of PRO. It is attested that universally, PRO can occur as A or S, but never as O. For example, consider the following English sentences.

(8.19) a. John wants [PRO to be praised].
b.*John wants [someone to praise PRO].

(8.19a) is grammatical because PRO is S of the embedded clause, whereas (8.19b) with PRO occurring as O is ruled out, as it violates the above-mentioned universal

[21] It should be mentioned that *hono lavea* is a legitimate phrase in Tongan if it is intended to mean "his injury", with *lavea* being a noun, not a verb.
[22] One may argue that this result in fact suggests that the subject-less sentences derive from syntactic passivisation. However, we reject this possibility because the sole argument is marked for ABS, and not ERG, whereby these constructions do not match the definition (8.4).

restriction on Control. If the Tongan subject-less transitive can occur in a Control construction, then, the sole argument of such a construction is S, thus it is a passive construction. If it cannot, the argument in question is O, indicating that the sentence is a transitive construction. Consider (8.20) below. The fact that (8.20b) is ungrammatical suggests that Sione in (8.20a) is O, not S.[23]

(8.20) a. Na'e fakalangilangi'i 'a Sione.
Pst. praise ABS Sione
"Sione was praised."

b. *'Oku loto 'a Sione [ke PRO fakalangilangi'i]
Prs want ABS Sione praise
"Sione wants to be praised."

To conclude, both tests have shown that the subject-less transitive is not intransitive, thus it cannot be derived by passivisation.

Having proved that the subject-less transitive is not a passive construction, we now have to account for the fact that these subject-less sentences nevertheless have a passive interpretation. We propose that the subject-less transitive is actually interpreted as active; the passive meaning arises only when such sentences are translated into English. We analyse the subject-less transitive as a transitive construction with a *pro* subject, as illustrated by (8.21) below.

(8.21) 'Osi 'ave *pro* 'a e tamasi'i ki he falemahaki.
Perf take ABS def boy to def hospital
"(Someone) has taken the boy to the hospital."

[23] However, note that *'Oku loto 'a Sione ke fakalangilangi'i* itself is a grammatical sequence if the passive interpretation is not intended. Consider (i) below. The embedded clause contains PRO subject controlled by the matrix subject *Sione*, and a null object *pro*, which is not coreferential with *Sione*. See Chapter 10 for discussion.
(i) 'Oku loto 'a Sione [ke PRO fakalangilangi'i *pro*].
"Sione wants to praise (him)."

When uttering or hearing sentences like (8.21), both the speaker and the hearer understand that there is someone that took the boy to the hospital. It is likely that the subject-less transitive is a way to indicate the emphasis on O in Tongan.[24] In (8.21), the focus of the sentence is the boy and not the one who took the boy to the hospital. In a language in which passive exists, passive is used when the emphasis is on O rather than A. Therefore, when translated into English, the subject-less sentences are translated as passive sentences. However, the fact that they are translated into passive sentences does not necessarily mean that the original sentences have the passive meaning in Tongan. What is crucial here is that a transitive sentence without a subject always implies that there exists the agent of the event. In fact, if a native speaker hears sentences like (8.21) in isolation, a natural response is "*'e hai?*" ("Who did?"). This suggests that native speakers interpret the subject-less transitive as transitive, not as intransitive.

In contrast, the lexical passive does not imply the existence of the agent. Compare the pair of sentences below. (8.22a) is a subject-less transitive construction and (8.22b), intransitive.

[24] Subject-less transitive is also found in Mam (England 1988) and Burushaski (Morin and Tiffou 1988), both of which are ergative languages. In these two languages, however, the subject-less transitive seems to be syntactically intransitive because the verb agrees with O. England (1988) notes that the subject-less transitive in Mam is used due to discourse considerations rather than for syntactic ones.

(8.22) a. Na'e fakalavea'i *pro* 'a e siana
Pst injure ABS def man
Lit."(Someone) injured the man."
"The man was injured."

b. Na'e lavea 'a e siana.
Pst be-injured ABS def man
"The man was injured."

Although both (8.22a) and (8.22b) can be translated as "The man was injured", only (8.22a) implies that the man was injured by someone/something. (8.22b) has no such implication. (8.22a) is not qualified as passive because it necessarily implies the existence of a specific agent. To conclude, the subject-less transitive is not passive.

8.3.3 VOS word order

Another construction that frequently occurs in Tongan and has a passive meaning is the VOS construction. Although the unmarked word order is VSO, Tongan freely allows the sentences with VOS order. It has been argued that VOS sentences are typically interpreted as passive (Churchward 1953). Consider (8.23) below.

(8.23) a. Na'e 'ave 'a Sione 'e he faiako.
Pst take ABS Sione ERG def teacher
"Sione was brought by the teacher."

b. Na'e 'ave 'e he faiako 'a Sione.
Pst take ERG def teacher ABS Sione
"The teacher brought Sione."

(8.23a) is just as grammatical as (8.23b), the corresponding VSO sentence. VOS sentences are often translated as passive sentences. However, this does not necessarily mean that (8.23a) is a syntactically passive construction in Tongan. Churchward (1953) points out that there is a slight difference in meaning between (19a) and (19b): in (19a), it is the object *Sione* that is emphasised while in (19b), it is the subject *he*

faiako. Churchward notes that in English passive will be used in the former case, but Tongan does not have an equivalent means. Rather, the difference lies in emphasis on a particular constituent. What Churchward suggests is, then, VOS order is a means of indicating that the emphasis is on O.

On the other hand, Lynch (1972) proposes that VOS construction is syntactically passive. Note that Lynch considers that case marking in Tongan is accusative: *'a* is NOM-case marker and *'i/ki* ACC-case marker. Thus, the NP marked by *'a* is the (derived) subject and the NP marked by *'e* is an OBL-marked agent argument in (8.23a). According to this approach, (8.23a) is analysed as (8.24) below.

(8.24) Na'e 'ave-Ø 'a Sione 'e he faiako.
Pst take-pass NOM Sione Agt def teacher
"Sione was brought by the teacher."

However, *'ave* never occurs in what Lynch calls accusative construction, as illustrated by (8.25) below.

(8.25) *Na'e 'ave 'a e faiako kia Sione.
Pst take NOM def teacher ACC Sione
"The teacher brought Sione."

Lynch thus proposes that some verbs in Tongan may only occur in intransitive passive but not in active transitive. This argument is problematic in the following respects: a) empirical evidence shows that Tongan is an ergative language; b) there are far too many verbs that belong to this class; and c) VSO is the unmarked order, occurring much more frequently than VOS. Thus, Lynch's original proposal should be rejected. Alternatively, one may conjecture the following derivation, still assuming that VOS is a passive construction.

(8.26) a. Na'e 'ave 'e he faiako 'a Sione. (original active sentence)
b. Na'e 'ave-Ø 'a Sione. (passivisation)
c. Na'e 'ave-Ø 'a Sione 'e he faiako. (addition of the agent phrase)

A crucial assumption here is that the subject-less transitive in Tongan is a syntactic passive construction. However, we have refuted this possibility in §8.2.2 above. First, the fact that the overt argument is ABS-marked contradicts the definition (8.4) above. In addition, the subject-less transitive is not a lexical passive either. Both the possessive pronoun test and the control test show that the sole argument of the subject-less transitive is not S. The control test shows that ABS-marked argument of VOS construction does not qualify as S: it cannot occur as PRO. See (8.27) below.

(8.27) *'Oku loto 'a Sione [ke 'ofa'i PRO 'e Mele]
Prs want ABS Sione to love Agt Mele
"Sione wants to be loved by Mele"

In summary, empirical evidence shows that (8.23a) is not intransitive, and thus the passive analysis does not hold. It is more likely that VOS order results from scrambling. We may argue that scrambling in Tongan is a means to indicate the emphasis on a certain argument. In fact, there is no other semantic difference such as affectedness between VSO and VOS sentences. As Churchward (1953) suggests, passive is used for the same semantic purpose in many languages that have passive constructions. Similar observations are often found in the literature. For example, Estival and Myhill (1988) notes that syntactic passive in English is more common with A which represents new information. In other words, VOS construction is not a syntactic passive, but because the emphasis is on O, VOS sentences in Tongan are interpreted as passive by non-native speakers.

8.3.4 Passive morphemes?

Thus far, we have argued that neither the subject-less transitive nor VOS construction satisfies the criteria of syntactic passive defined in (8.4) above. We have also seen that intransitive verbs that have a passive meaning, such as *lavea*, are originally intransitive, and not derived. We have concluded in the preceding discussion that the lexical passive is not formed syntactically. The basis for our conclusion is that those lexical passive verbs do not have corresponding transitive verbs. In effect, we rejected the possibility of a zero-morpheme functioning as a passive morpheme. It should be noted, however, that there are a couple of morphemes in Tongan that typically appear on the intransitive verbs that have a passive meaning. These are *ma-* and variants of *-Cia*. In this subsection, we will study these two morphemes to see whether either of them qualifies as a syntactic passive morpheme.

8.3.4.1 *Ma*-prefix

Compare (a) sentences with (b) sentences in (8.28) and (8.29) below. The (a) sentences are the subject-less transitive while (b) sentences are intransitive with a passive interpretation.

(8.28) a. Na'e hua'i 'a e vai.
Pst throw-out ABS def water
"(Somebody) threw out the water."

b. Na'e mahua 'a e vai.
Pst spill ABS def water
"The water spilt." or "The water was spilt."

(8.29) a. Na'e foa'i 'a e ipu.
Pst broken ABS def cup
"(Somebody) broke the cup."

b. Na'e mafoa 'a e ipu.
Pst be-broken ABS def cup
"The cup broke." or "The cup was broken."

As mentioned above, *-'i* is a transitive morpheme that affixes to an intransitive verb (including the middle verbs) to derive a transitive verb. As for *ma-*, Churchward (1953: 259) observes that *ma-* forms "an intransitive verb, meaning to be in a state resulting from the action specified". He also argues that *ma-* verbs are on a par with the lexical passive verbs; their passive meaning is not a consequence of syntactic passivisation. Note also that the sole argument bears ABS. This also suggests that *ma-* does not cause a syntactic passivisation.

The *Tongan Dictionary* (Churchward, 1959) includes 142 pairs consisting of a *ma-* verb and the corresponding transitive verb. The composition of the 142 pairs is summarised in (8.30) below.

(8.30) *ma-* verbs

ma +vt	vi (passive)	29 (23)
ma +vt	avi (passive)	53 (53)
ma + vi	vi (passive)	12 (5)
ma + vi	avi (passive)	12 (7)
ma + avi	vi (passive)	3 (1)
ma + avi	avi (passive)	2 (1)
ma + n	vi (passive)	2 (1)
ma + n	avi (passive)	4 (2)
ma + root	vi (passive)	14 (11)
ma + root	avi (passive)	11 (9)
		142 (113)

Note that in all cases, the result of the *ma-* affixation is either an intransitive verb or an

adjective (*avi*).[25] Of the 142 verbs, 113 (80%) have a passive meaning. A relevant pattern is the one in which an intransitive verb with passive meaning is derived from a transitive verb; 16% (23 entries) of the total belong to this class. Including the instances in which the outcome is an adjective, there are 76 instances of *ma-* affixation to a transitive verb deriving an intransitive verb/adjective, which makes up to 54% of the total. In other words, *ma-* could be considered a passive morpheme, deriving an intransitive verb from a transitive verb, in more than half of the total occurrence of *ma*-verbs. However, it should be noted that 42% of these *ma-* verbs/adjectives derive not from a transitive verb, but from a noun, adjective (*avi*), intransitive verb, or root morpheme. This fact prevents us from simply concluding that *ma-* functions as a syntactic passive morpheme. Moreover, we find some cases where *ma-* is attached to an intransitive verb to produce another intransitive verb that crucially does not have a passive meaning: e.g., *puhi* ("to blow, spout") vs. *mapuhi* ("to spout or squirt with force") and *puna* ("to fly, leap") vs. *mapuna* ("to spout or squirt upwards"). We should also note the fact that 20% of the derived *ma-* verbs do not have a passive meaning. In his study of passives in Tongan, Lynch (1972: 15) argues that *ma*-verbs are passive verbs; they obligatorily take the passive zero-morpheme. However, more importantly, Lynch notices that *ma-* affixation is not productive in Tongan. This observation is significant because if *ma-* is a syntactic passive morpheme, *ma-* affixation should be a productive process. Thus, it is unlikely that *ma*-verbs are derived by a syntactic operation of passivisation. Rather, their passive meaning, when they have passive

[25] *Avi* is a term that Churchward (1953) used to indicate a lexical item that is usually used as a modifier of a noun but is also used as a predicate. Churchward distinguishes *avi* from the "pure" adjectives that can only be used as a modifier. When used as a predicate, the structure is identical with that of an intransitive verb. Hence the name *a(djectival)vi.*

meaning at all, is specified in the lexicon.

The prefix *ma-* also exists in Niuean with similar properties: a) most of them derived from a syntactically transitive verb; b) *ma*-verbs denote a physical change of state on the patient; c) *ma*-affixation does not apply exclusively to transitive verbs, making them intransitive[26]; and d) the process is not productive (Levin and Massam 1986: 240). Levin and Massam (1986) also notes that *ma*-verbs are different from the corresponding transitive verbs in that they imply completion of the action and lack of agency. Tongan *ma*-verbs demonstrate a similar semantic property, when they do have a passive meaning. Compare, for example, two sentences in (8.31) below.

(8.31) a. Na'e mahua 'a e vai.
Pst be-spilt ABS def water
"The water was spilt."

b. Na'e hua'i 'a e vai.
Pst spill ABS def water
"The water was spilt (by somebody)."

While *hua'i* in (8.31b) necessarily implies that someone spilt the water (intentionally), *mahua* in (8.31a) usually does not imply the existence of agent; in fact, *mahua* implies that the water was spilt by accident. Thus, unless you know who spilt the water, you would not utter (8.31b) upon finding a puddle of water on the floor.

This property in turn suggests that *ma*-verbs are more like adjectives, referring to the resulted state of the subject. As the chart (8.30) shows, 58% of the derived *ma-* words are adjectives. Considering that the intransitive verbs with a passive meaning differ

[26] Levin and Massam (1986) define passivisation as changing a case-assigning verb into a non-case assigner.

from adjectives only in that they cannot be used as a modifier of a noun,[27] we may regard such intransitive verbs as semi-adjectives, forming a particular subgroup of *ma-* words together with the derived adjectives. This class includes 123 members, which is 87% of the total. This figure leads us to hypothesise that the major function of *ma-* is to derive a stative verb/adjective. The major function of *ma-* is to derive an adjectival predicate and often with a transitive verb, the derived adjective refers to the resultative state caused by the action indicated by the verb: e.g., *hua* ("to throw out (water)) + *ma-* = *mahua* ("to be in the state after the throwing-out has taken place" i.e., "to be spilt"). Due to this property, many of the *ma-* predicates have a passive meaning. Passive interpretation of *ma-* predicates is only semantic. In other words, it is an instance of lexical passive. The fact that some of the *ma-* predicates are derived from a root morpheme and not a full lexical item also supports this view.

8.3.4.2 *-Cia* verbs

According to Churchward's (1953) classification, the class of "intransitive verbs that may appear to be passive" also includes verbs ending in *-a*, *-fia*, *-hia*, *-kina*, *-mia*, *-ngia*, *-sia*, or *-ia*. These suffixes are all variants of *-Cia*, the so-called Polynesian passive morpheme. Churchward (1953: 242) notes that *-Cia* verbs in Tongan divide into three subclasses according to their meaning: a) durative, b) passive, and c) courtesy speech. These verbs are typically intransitive and the root may be a transitive verb, adjective, or noun. When occurring with one argument, this argument appears in

[27] For example, one cannot say (i) below.
(i) Ko e ipu mafoa eni.
Pred def cup be-broken this
"This is a broken cup."

ABS. This suggests that *-Cia* affixation is not a syntactic passive. Moreover, as noted by Chung (1978), *-Cia* affixation to transitive verbs is not a productive process. Thus, empirical evidence argue against the hypothesis that *-Cia* is a syntactic passive morpheme in Tongan. What is relevant is the second use of *-Cia* verbs, which are derived from transitive verbs. Could it be a lexical passive? In the *Tongan Dictionary* (Churchward 1959), we find 94 *-Cia* verbs as headings. Consider (8.32) below.[28] As (8.32) shows, 71% of them have passive meaning[29]. However, to our surprise and disappointment, intransitive verbs that have a passive meaning and are derived from a transitive verb makes up only 3% of the total. What is more, we find some instances in which the derived word is a transitive verb. In other words, *-Cia* does not necessarily de-transitivise a verb. On the contrary, in some cases, it actually transitivises an intransitive verb. This fact obviously testifies against the possibility of *-Cia* being a lexical passive morpheme.

[28] Included in the chart are "passive transitive verbs". This label might sound rather contradictory if "passive" strictly refers to the syntactic passive. The label indicates that *-Cia* verbs of this type are interpreted passively, yet the agent may be present. However, as noted by Churchward (1953:242), transitive *-Cia* verbs are often used without a subject. Chung (1978: 274) notes that when transitive, a *Cia*-verb requires a non-human or inanimate subject. However, as a transitive *-Cia* verb also allows generic human subject as illustrated by (i) below.

(i) 'Oku manakoa 'a e hiva ko eni 'e he kakai Tonga.
Prs to-be-liked ABS def sond pred this ERG def people Tonga
"This song is popular among the Tongan people."
Lit. "This song is liked by the Tongan people."

[29] Note, however, that some of the verbs originally have a passive meaning: e.g., *malu* ("to be sheltered") vs. *malungia* ("to be shaded, overshadowed).

(8.32) *-Cia* verbs

avi + -Cia	vi (passive)	14 (13)
vt + -Cia	vi (passive)	7(3)
vi + -Cia	vi (passive)	11 (6)
vi + -Cia	vt (passive)	9 (4)
avi + -Cia	vi (passive)	13 (9)
avi + -Cia	avi (passive)	4 (3)
n + -Cia	vi (passive)	9 (5)
n + -Cia	avi (passive)	5 (4)
root + -Cia	vi (passive)	17 (16)
root + -Cia	avi (passive)	1 (1)
root + -Cia	vt (passive)	4 (3)
		94 (67)

In summary, *-Cia* induces neither syntactic passivisation nor lexical passivisation.

If *-Cia* is not a passive morpheme, then, why is it that so many of the *-Cia* verbs have passive meaning? It seems that the Tongan *-Cia* morpheme bears a feature [+affected]. In fact, 87% of the *-Cia* verbs included in the dictionary differ from their stem in terms of the feature [+affected]. Compare, for example, the pairs of words in (8.33) below.

(8.33) a. *maluuluu* (avi) moist, soft – *maluuluungia* (avi) moistened, softened
b.*'ataa'ataa* (avi) to be free, not busy – *'ataa'ataaina* (vi) to be freed, cleared
c. *'uha* (vi) to rain – *'uheina* (vi) to be caught in the rain
d. *'anuhi* (vi) to spit – *'anuhia* (vt) to mess up by spitting on

The affected entity is the subject if it is an intransitive verb or adjective, and the object if it is a transitive verb. Thus, it seems that Tongan *-Cia* is a morpheme that indicates a semantic feature [+affected] of its argument, rather than a syntactic feature [+passive]. Since affectedness is necessarily associated with the passive voice, *-Cia* verbs are interpreted as passive when translated into another language. However, this passive meaning arises due to the semantic property [+affected] and not because of syntactic passivisation.

To summarise the discussion in this section, we have confirmed that neither the prefix *-ma* nor the suffix *-Cia* in Tongan is qualified as a syntactic passive morpheme as defined by (8.4) above. First, the sole argument of these verbs bears ABS. Second, affixation of *ma-/-Cia* is neither productive nor limited to transitive verbs. In addition, although affixation of *ma-* could be considered a lexical passive in some cases, that of *-Cia* never involves theta-absorption.

8.4 Summary

The preceding discussion has shown that a syntactic passive does not exist in Tongan. We defined syntactic passive as follows: a) affixation of a passive morpheme to a transitive verb in the syntax; b) the external theta-role is assigned to the passive morpheme; and c) the overt argument checks its case feature in [Spec, Agrs]. In Tongan, there are five constructions that are often interpreted as passive when translated in English: a) lexical passive, b) subject-less transitive, c) VOS construction, d) *ma-* verbs and e) *-Cia* verbs. The latter two are particularly of interest, for they involve an affix that could possibly be a passive morpheme.

First, it has been shown that intransitive verbs with passive meaning do not involve a syntactic operation of passivisation: such verbs do not have a corresponding transitive verb. Thus, the passive meaning of these intransitive verbs is specified in the lexicon, and is not a consequence of syntactic passivisation. Secondly, the possessive pronoun test and control test demonstrate that the subject-less transitive as well as the VOS

construction are syntactically transitive. We argue that sentences of these types are often regarded as passive in the literature largely due to the fact that these constructions are used when the focus is on O rather than A. A relevant phenomenon is that passive voice is often used to indicate the emphasis on O in languages in which a passive construction is available. Lacking syntactic passive constructions, Tongan uses other means, namely, the subject-less transitive and VOS order, to express the emphasis on O. We propose that this function of the subject-less transitive and VOS construction in Tongan gives rise to the passive interpretation of these two constructions. In other words, the passive interpretation of these two constructions is due to pragmatic rather than syntactic reasons.

As to the affixes *-Cia* and *ma-*, empirical data suggest that neither of them is a syntactic passive morpheme. The main reason for this conclusion is that neither *-Cia* nor *ma-* affixation is productive. In particular, affixation to a transitive verb, deriving an intransitive verb with passive meaning is extremely limited. This fact in combination with other factors led us to conclude that these are not to be regarded as syntactic passive morphemes. The passive meaning that some *-Cia* and *ma-* verbs have is also determined in the lexicon, not by virtue of syntax. The prefix *ma-* in most cases derives an intransitive stative verb that denotes that the subject is in a state as a result of some event. For example, *ma* + *hua* ("to spill") means, "be in a state as a result of spilling", hence "spilt". It should be noted that *ma*-verbs cannot imply agency: the state it denotes is generally considered a consequence of an accidental, rather than intentional, event. This property argues for the analysis of *ma*-verbs as an instance of lexical passive as defined above. As for *-Cia*, we propose that it carries the

feature [+affected]. While *ma-* affixation more or less consistently results in an intransitive stative verb, *-Cia* affixation does not systematically produce a certain type of lexical item; it may be an intransitive verb, an adjective, or even a transitive verb. Obviously, the major function of *-Cia* affixation is not to change one type of a predicate into another. This fact prevents us from classifying *-Cia* as a lexical passive morpheme. Furthermore, affixation to a transitive verb to derive an intransitive verb is far from productive. However, a great majority of *-Cia* predicates have passive meaning. We propose that it is due to the fact that passive voice is often necessarily associated with the feature [+affected]. Consequently, we conclude that Tongan *-Cia* is not a passive morpheme but a morpheme bearing the feature [+affected]. In short, affixation of both *ma-* and *-Cia* is a lexical operation.

To conclude, our discussion has confirmed that Tongan does not have a syntactic passive. Instead, Tongan makes use of other means in cases where other languages use a syntactic passive: to indicate the emphasis on O, to indicate affectedness of the patient argument. The subject-less transitive and the VOS construction are used for the former, whereas for the latter, lexical passives are used. While the syntactic passivisation alters the grammatical relation of arguments of a transitive verb, putting the internal argument in the derived subject position, Tongan deals with the situation by using two independent sets of lexical items, one transitive and the other, intransitive. Since Tongan has alternative constructions whose function is equivalent of that of the syntactic passive, a passive construction is not necessary and therefore does not exist. Our conclusion supports the claim that a syntactic passive cannot coexist with an ergative case system, but a lexical passive can.

Chapter 9
Antipassive and Middle Constructions

In addition to the transitive and intransitive, ergative languages of the Polynesian group commonly have another type of construction, which is called middle. The middle construction stands somewhere in between the transitive and the intransitive. It involves two arguments, but crucially is syntactically intransitive. The subject appears in ABS, not ERG. The logical object appears in some oblique case (henceforth, OBL). This pattern of case marking strikingly resembles that of the so-called antipassive. Namely, the subject appears in ABS and the object, in OBL. However, it has never been proposed that the Polynesian middle is an instance of the antipassive.[1] The antipassive, on the other hand, is commonly found among ergative languages. In many cases, the antipassive is an indispensable part of the syntax of languages that show syntactic ergativity. It essentially changes the underlying A into a derived S, whereby enabling the argument in question to undergo syntactic operations that apply exclusively to ABS-arguments (i.e., S and O) such as relativisation and coordination. As discussed in Chapter 5, Tongan exhibits syntactic ergativity. Thus, we have a reason to speculate that an antipassive construction might also exist in Tongan. One hypothesis will then be that what has been called middle is actually equivalent to what is called antipassive in other languages. The fact that a middle verb sometimes has a corresponding transitive verb seems to support this hypothesis.

In this chapter, we will consider this possibility: is the Tongan middle really an antipassive construction? In §9.1, we will outline the characteristics of the middle construction in Tongan. In §9.2, we will review various analyses of the antipassive, and then put forth a definition of antipassive. Our definition crucially concerns the case marking on the arguments and the antipassive morphology on the verb. We will then discuss in §9.3 a) whether the Tongan middle satisfies these criteria and b) whether the Tongan middle is an instance of the antipassive. We will argue that the Tongan middle is not an instance of the antipassive for the following reasons. First, morphologically, it is the transitive verb that is more complex, affixed by the transitive suffix *-'i*. Thus, it is less likely that a middle verb is derived from an underlying transitive. Syntactically, restrictions imposed by the syntactic ergativity are overcome in Tongan by means of the resumptive pronoun strategy. Pragmatically, the Tongan middle differs from the antipassive in two respects. First, it is unmarked compared with the corresponding transitive in terms of text frequency. This suggests that the corresponding transitive rather than the middle is a derived construction, for a derived construction tends to be more marked in terms of text frequency. Second, while the antipassive is often related to an object with the new information focus, the middle object is not different from the transitive object in that respect. Finally, with regard to semantics, there is a significant difference between the middle and the transitive in that the action described by the latter is understood to be more intense or complete. Generally, such a semantic difference is not found between the antipassive and the underlying transitive.

[1] In fact, Chung (1978) argues against the possibility of the middle being antipassive.

Note that we will use the terms "subject" and "object" instead of S, A, and O to refer to the arguments of the middle construction. If we use the latter set of terminology, the middle subject is referred to as S. However, this label fails to distinguish the subject of a middle construction from that of an intransitive construction. Although these two arguments bear the same case (ABS), they are essentially different in that the former is not the sole argument of the verb. On the other hand, the object of a middle verb is an argument of the verb, yet it differs from O because it is not an internal argument of the verb, and thereby appears in OBL, not ABS. For this reason, we will refer to the ABS-marked argument of a middle construction as the middle subject, and the OBL-marked argument as the middle object. Note also that we cannot use terms such as "underlying A" and "underlying O" to refer to the arguments of a middle construction until we are sure that the middle is actually derived from the transitive. Meanwhile, we will continue to use S, A and O to refer to the intransitive subject, the transitive subject and the transitive object, respectively.

9.1 Middle verbs

9.1.1 Case marking

Tongan verbs are classified into three subgroups: transitive, intransitive and middle. A transitive verb takes two arguments: an external argument that is marked as ERG and an internal argument marked as ABS. An intransitive verb takes only one argument, which appears in ABS. A middle verb is associated with two arguments, but it assigns

only one theta-role.[2] The logical subject (i.e., agent/experiencer) appears in ABS and the logical object (i.e., patient/goal) appears in OBL. In this respect, the middle construction is intransitive. Compare three sentences in (9.1) below. (9.1a) is an example of the transitive construction. (9.1b) is that of the intransitive and (9.1c), the middle. The middle object appears as a PP headed by either *'i* ("in") or *ki* ("to").

(9.1) a. Na'e kai 'e Sione 'a e ika.
Pst eat ERG Sione ABS def fish
"Sione ate the fish."

b. Na'e 'alu 'a Sione.
Pst sleep ABS Sione
"Sione went."

c. Na'e tokoni 'a Sione ki he faiako.
Pst help ABS Sione to def teacher
"Sione helped the teacher."
Lit. "Sione helped to the teacher."

9.1.2 Syntactic characteristics

While the middle is similar to the intransitive in terms of case marking, it crucially involves two arguments. In addition, the form of the middle construction bears a striking resemblance to the accusative (i.e., transitive) construction of the Polynesian languages with accusative case marking such as Maori. For this reason, Lynch (1972) argues that the middle construction is the transitive construction in Tongan, and that (9.1a) represents the passive construction. However, this proposal is disputable for various reasons discussed in Chapter 8. We therefore consider that the ergative construction is transitive, while the middle is intransitive. The middle object differs

[2] The reader should be reminded that "theta-role" here refers specifically to the external/internal theta-role in the sense of Williams (1980), and not a particular thematic (semantic) role such as Agent, Patient, etc. A middle verb assigns a theta-role to the oblique argument in the latter sense, but not in the former sense.

from O (i.e., the ABS-marked NP of the ergative construction) although they both represent the logical object of the verb. For example, they behave differently with regard to relativisation: a resumptive pronoun is obligatory in the position vacated by the middle object whereas it is disallowed in the position from which O has moved out. See (9.2) below.

(9.2) a. Ko fee 'a e tamasi'i$_i$ [na'e taa'i 'e he faiako t_i]?
Pred where ABS def boy Pst hit ERG def teacher
"Where is the boy (whom) the teacher hit?"

b. *Ko fee 'a e tamasi'i$_i$ [na'e tokoni 'e he faiako t_i]?
Pred where ABS def boy Pst help ERG def teacher
"Where is the boy (whom) the teacher helped?"

c. Ko fee 'a e tamasi'i$_i$ [na'e tokoni 'e he faiako ki ai$_i$]?
Pred where ABS def boy Pst help ERG def teacher to there
Lit. "Where is the boy (whom) the teacher helped to him?"

Note also that the resumptive pronoun in (9.2c) is not a personal pronoun: *ai* is a demonstrative pronoun, translated in English as "there". It is only used with a preposition, *ki* ("to"), *'i* ("in"), or *mei* ("from")[3], and therefore, it cannot occur as O, as illustrated by (9.3) below.

(9.3) Na'e 'ave ia/*ai 'e Sione.
Pst take 3.s./there ERG Sione
"Sione took him."

(9.3) shows that a pronominal O must be realised as a personal pronoun, and not as the demonstrative *ai*.

It should be noted that in an independent clause, a personal pronoun may occur as a

[3] As for the locative pronouns, there are four lexical items in Tongan: *heni* "here (close to the speaker)", *hena* "there (close to the hearer)", and *hee* "over there (away from both the speaker and the hearer)". These three are *deictic*, while *ai* is not. *Ai* is used referentially: it refers to a place/location that has been mentioned in the discourse. Accordingly, *ai* can refer to not only a place but also a person while the other three can only refer to a place.

middle object. See (9.4) below.

(9.4) 'E tokoni 'a Sione kiate koe.
Fut help ABS Sione to-person 2.s.
"Sione will help you."

However, here again the middle object behaves differently from O: unlike O, the pronominal middle object cannot occur immediately after the verb. Compare the two sentences in (9.5) below.

(9.5) a. 'E 'ave koe 'e Sione.
Fut take 2.s. ERG Sione
"Sione will take you."

b. *'E tokoni koe 'a Sione.
Fut help 2.s. ABS Sione
"Sione will help you."

Given the fact that the middle object is subject to some syntactic rules that are different from those which govern O, we may conclude that the former bears a grammatical relation distinct from that of the latter. Specifically, the middle object does not count as O. Consequently, the middle verb is intransitive, assigning only one theta-role, which we assume to be the external theta-role.[4]

9.1.3 Semantic characteristics

Middle verbs are often verbs of perception, emotion, etc.: e.g, *sio* ("to see"), *fanongo* ("to hear, listen"), *sai'ia* ("to like"), *'ofa* ("to love"), *fehia* ("to hate"), and *tokanga*

[4] It should be noted that Chung (1978) proposes that the Tongan middle construction is transitive rather than intransitive, arguing that the middle subject has some syntactic properties similar to those of the transitive subject. Chung claims that while relativisation of the intransitive subject must leave a trace, both A and the middle subject may be relativised by either deletion (trace) or by pronominalisation (a resumptive pronoun). However, as Seiter (1980) points out, and Chung (1978) herself admits, this claim is rather dubious because the deletion strategy is by far more frequently used for the middle subject, while the pronominalisation strategy is much more frequently used for A. As far as my own research is concerned, the deletion strategy is never used for A, as shown in Chapter 5. Thus, we reject Chung's view that the Tongan middle is transitive.

("to pay attention"). An intriguing fact is that the middle verbs sometimes have a corresponding transitive verb. See (9.6) below. Note that the corresponding transitive verb necessarily contains the transitive suffix - *'i*.

(9.6) a. Na'e tokoni 'a Sione ki he faiako.
Pst help ABS Sione to def teacher
"Sione helped the teacher."

b. Na'e tokoni'i 'e Sione 'a e faiako.
Pst help ERG Sione ABS def teacher
"Sione helped the teacher."

Some other examples are *tokanga* ("to pay attention") vs. *tokanga'i*, *'ofa* ("to love") vs. *'ofa'i*, and *sio* ("to see") vs. *sio'i*. In addition to case marking, there is a significant semantic difference between the middle and the corresponding transitive. The action described by the latter is interpreted as more intense in various ways. See the following examples.

(9.7) a. Na'e sio 'a Sione ki he ta'ahine.
Pst see ABS Sione to def girl
"Sione saw the girl."

b. Na'e sio'i 'e Sione 'a e ta'ahine.
Pst see-trans ERG Sione ABS def girl
"Sione stared at the girl."

(9.8) a. 'Oku 'ofa 'a Sione 'ia Mele.
Pst love ABS Sione in-person Mele
"Sione loves Mele."

b. 'Oku 'ofa'i 'e Sione 'a Mele.
Pst love-trans ERG Sione ABS Mele
"Sione loves Mele."

Sio'i means not simply looking but staring. *'ofa'i* is only used to refer to a relationship between lovers, and not the one between a mother and a child. In other cases, transitive verbs often imply the consequence or achievement of the act. For example, *tokoni'i* ("to help") implies that the act of helping actually proved to be beneficial to

the one being helped; *fana'i* ("to shoot") implies that the bullet hits the target whereas the corresponding middle *fana* only means that the agent shoots at something but the bullet does not necessarily hit it. Thus, one may say that the difference between the middle construction and the transitive construction is that the latter implies that the action is more intense or complete.[5]

9.1.4 Similarity between the middle and the antipassive

Some of the characteristics mentioned above are similar to those of the antipassive. First, the case marking pattern is exactly what we find with the antipassive: the subject in ABS and the object in OBL. Secondly, just like an antipassive verb can be paired with a corresponding (or rather, underlying) transitive, some middle verbs have transitive counterparts. However, it is not clear at this point whether the middle is derived from the corresponding transitive. It should be noted also that crucially, not all middle verbs have a matching transitive verb, nor do all transitive verbs have a corresponding middle verb. These are the facts that suggest that the Tongan middle could be related to the antipassive. In the following section, we will consider the characteristics of the antipassive from various aspects.

[5] As noted by Chung (1978) and Seiter (1978), in some cases, the object of a transitive verb is affected while that of a middle verb is not: e.g., *fana* ("to shoot at") vs. *fana'i* (to shoot). In this view, the difference can be attributed to the transitive suffix -*'i*. As discussed in Chapter 8, -*Cia* suffix in Tongan is associated with the feature [+affected]. If we regard the transitive suffix -*'i* as a variant of -*Cia*, this kind of semantic difference between the middle and the transitive can be explained.

9.2 Antipassive

9.2.1 Syntactic property

It is generally assumed that an antipassive construction is derived from an underlying transitive construction.[6] In terms of morphology, the antipassive construction differs from the corresponding transitive in the following respects: a) the verb is affixed by the antipassive morpheme, b) the underlying A appears in ABS, and c) the underlying O appears as an oblique argument. In the Relational Grammar, antipassive is regarded as demotion of the direct object (cf. Dixon 1994). It contrasts with passive, which involves demotion of the subject and promotion of the direct object. Thus, syntactically, a major function of antipassive is to change the underlying A into a surface S.

Ignoring the semantic aspect, a major role of antipassive is to overcome the restrictions imposed by syntactic ergativity. Recall that in syntactically ergative languages, some syntactic operations such as relativisation and coordination apply exclusively to ABS-arguments. For example, in Dyirbal, A cannot form a part of a coordinate construction. See (9.9) below.

[6] Kalmár (1979), however, proposes that the antipassive is not a derived construction but another type of transitive construction, which is independent of the ergative transitive. In this view, the antipassive is regarded as an accusative construction with O bearing a special case.

(9.9) Dyirbal (Dixon 1994:162-163)

a. Ɲuma$_i$ yabu$_j$-ŋgu bura-n $e_{i/j*}$ banaga-nyu.
father mother-ERG see-NFut return-NFut
"Mother saw father and (he) returned."

b. Ɲuma$_i$ banaga-nyu e_i bural-ŋa-nyu yabu-gu
father return-NFut see-APASS-NFut mother-DAT
"Father returned and (he) saw mother."

As illustrated by (9.9a), only O can be coreferential with the gap. In order for A to be coreferential with S, a transitive clause has to be antipassivised first so that the underlying A appears as a surface S. Thus, in (9.9b), the underlying transitive construciton *yabu (ŋuma-ŋgu) bura-n* "father saw mother" has been antipassivised so that the subject appears in ABS and the object in OBL. Here, the antipassive is a necessary feeding operation for coordination. In other words, antipassive is purely a syntactic device, causing no effect on semantics. In fact, Blake (1979) proposes that in Australian languages the antipassive construction is used primarily for this syntactic reason. Therefore, antipassive is not found in those languages that do not show syntactic ergativity such as Warlbiri (Hale 1968). The lack of antipassive in these languages seems to suggest that there is some relation between the antipassive and the syntactic ergativity.

9.2.2 Pragmatic property

Meanwhile, it is often argued that antipassive causes some special pragmatic effect as well. Specifically, the antipassive is used when the object is less topical (Kalmár 1979, Givón 1984, Dixon 1972 among others). "Topic" here means old information, which is either previously mentioned or assumed in the discourse. In Inuit, the antipassive construction is used when the direct object represents new information, while the

(ergative) transitive is used when the direct object represents old information (Kalmár 1979). Dixon (1972) argues that in Dyirbal the antipassive functions as de-topicalisation of the object. In Nez Perce, the direct object of the antipassive is indefinite, non-referential, or plural (Rude 1982), and less topical compared with the subject (Rude 1988). Cooreman (1982, 1983) observes similar facts about Chamorro: the antipassive object is less continuous and less important in discourse. Furthermore, the antipassive construction is obligatorily used with indefinite or generic objects (Cooreman 1988). Also in Mam, the antipassive is used when the direct object is not known or generic (England 1988).[7]

In short, it has been shown in the literature that the antipassive is used when the direct object is less topical in discourse. With regard to Australian languages, Blake (1979) also observes that the antipassive has a pragmatic function of indicating high topicality of A when it is used in independent clauses. It should be noted that Blake argues against the view that the antipassive is a device for facilitating the topicalisation of A rather than O. What is worth noting is Blake's observation that the antipassive is used for a syntactic reason in dependent clauses, but for a pragmatic reason in independent clauses.

9.2.3 Semantic property

With regard to semantics, Bittner and Hale (1996a) note that the antipassive causes some semantic effects as follows. In Inuit, the antipassive introduces the atelic aspect: the antipassive is interpreted as present or present progressive while the transitive is

[7] In other words, this type of antipassive is essentially unergative.

interpreted as past. The antipassive also freezes the scope of the object. In Pitta-Pitta, the antipassive introduces the irrealis mood.[8] Cooreman (1988) argues that the antipassive object is less directly affected by the event described by the verb.

On a different note, in Inuit, the antipassive morpheme may also attach to the so-called unaccusative verbs (Bittner and Hale 1996a). When antipassivised, an unaccusative verb is interpreted as inchoative. See (9.10) below.

(9.10) Inuit (Bittner and Hale 1996a:37)

a. Miiqqat piqqip -p -u -t.
children healthy-IND-[-transitive]-3.pl.
"The children are healthy."

b. Miiqqat piqqis -si -pp -u -t.
children healthy-APASS-IND-[-transitive]-3.pl.
"The children are getting well."

Here the antipassive is derived for a semantic reason rather than a syntactic one. Besides, the fact that an intransitive verb can be antipassivised raises a question to the analysis that regards antipassive as a syntactic operation that changes a transitive verb into an intransitive one. Antipassivisation of unaccusative verbs does not affect case marking: the internal argument appears in ABS regardless.[9] Thus, an intransitive verb is antipassivised for a semantic reason.

9.2.4 Definition

To generalise, the antipassive is used under two circumstances. In one case, the

[8] It should be noted, however, that Pitta-Pitta is an accusative language. Pitta-Pitta is an example of languages in which the antipassive coexists with an accusative case marking.
[9] Bittner and Hale (1996a) argue that the antipassive morpheme may attach to verbs that have an internal argument, whether transitive or intransitive. Note also that in Inuit unaccusative verbs can also be passivised.

antipassive is used for a syntactic reason to overcome the restrictions of syntactic ergativity. In the other case, it is used for a pragmatic reason: it indicates that object is less topical, i.e., the object is new information. As Blake (1979) proposes, the antipassive is used for a syntactic reason in dependent clauses and for a semantic reason in independent clauses. Kalmár (1979: 124) notes with regard to the Eskimo languages that the transitive occurs more frequently than the antipassive, and that the antipassive is used mostly in the elicited translation of English sentences in which the direct object is indefinite. The former supports the view that the antipassive is a derived construction. The latter indicates that the antipassive is used with indefinite object. According to Kalmár's (1979) data, in Eskimo, an article does not accompany an argument. Therefore, subjects are understood as either definite or indefinite depending on the context. On the other hand, definiteness of the object can be specified by the type of the construction. In the unmarked construction, i.e., the ergative transitive, the direct object is interpreted as definite. In contrast, it is interpreted as indefinite in the antipassive construction. Kalmár's observation also suggests that the antipassive is rarely used in independent clauses. Thus, we shall consider that the major function of antipassive is syntactic: to change the underlying A into a surface S.

In summary, we consider that antipassive is essentially a syntactic concept and characterised by the following three structural features.

(9.11) Antipassive

a) the antipassive morphology on the verb;
b) the underlying A appears in ABS;
c) the underlying O appears in OBL.

Analogous to the agent argument of the passive, the oblique argument is often optional in the antipassive (Dixon 1994). As noted above, this optional nature of the antipassive object is reflected in many languages as low topicality of the object. In other words, it is possible that pragmatic characteristics of the antipassive mentioned above result from this optional nature of the oblique argument. Thus, we propose that pragmatics is not a crucial factor that gives rise to antipassive. Rather, it is a consequence of the syntactic change induced by the process of antipassivisation. In the following section, we will consider the Tongan middle construction in terms of the definition (9.11).

9.3 Analysis of the Tongan middle

Bearing the definition (9.11) in mind, let us take a closer look at the Tongan middle. Our view is that the major function of antipassive is to satisfy some syntactic necessity. This assumption predicts that antipassive is mostly used in a dependent clause. On the other hand, we also recognise that when used in an independent clause, antipassive is associated with an object that represents the new information. Below, we will consider the Tongan middle with regard to these two aspects.

9.3.1 Principal criteria

9.3.1.1 Morphology

As defined in (9.11) above, an antipassive construction contains the following three morphological indicators: a) the antipassive morpheme, b) ABS-case marking on the

subject, and c) OBL-case marking on the object. The Tongan middle satisfies the latter two. The agent argument is marked by the ABS-case marker, *'a* and the patient argument is preceded by a preposition. As for the antipassive morpheme, there is no particular morpheme that commonly appears on middle verbs in Tongan. Thus, if there is an antipassive morpheme, it has to be a zero morpheme, -Ø. This hypothesis, however, faces a challenge as follows. Comparing a middle verb and its corresponding transitive, it is always the corresponding transitive that is affixed by a particular morpheme. As illustrated in (9.12), transitive verbs corresponding to middle verbs commonly contain a suffix, *-'i*, which we regard as the transitive morpheme.

(9.12)

Middle	Transitive
sio	sio *'i*
tokoni	tokoni *'i*
'ofa	'ofa *'i*
fanogo	fanogo *'i*

The contrast between the two indicates that middle verbs are not the derived ones. Rather, it seems that these transitive verbs are derived from the corresponding middle verbs. Even if we assumed that a middle verb is derived from a stem (by affixing the antipassive morpheme -Ø), from which the corresponding transitive verb is also derived (by affixing the passive morpheme *-'i*), the argument that a middle verb is derived from a transitive verb does not hold.[10] This fact strongly argues against the

[10] There is another possible analysis. Namely, the antipassive is derived by removing the transitive morphology from the transitive construction. This is the case of Nez Perce (Rude 1988). Compare the transitive (i) with the (derived) antipassive (ii). Note that Nez Perce has a three-way case marking: S in NOM, A in ERG

(i) háama-nm pée'wiye wewúkiye-ne.
man-ERG 3ERG-shot elk –DO
"The man shot an elk."

(ii) háama hi'wiye wewúkiye.
man 3NOM-shot elk
"The man shot an elk."

However, there is a crucial difference between Nez Perce and Tongan. In Nez Perce, the morpheme that

hypothesis that the middle construction is antipassive.

9.3.1.2 Grammatical relations

The second condition of antipassive is demotion of the direct object to an oblique argument. Consequently, the middle object is expected to be unable to undergo those syntactic rules that apply exclusively to O. In Tongan, such rules include the resumptive pronoun rule and *pea* coordination. If these rules cannot apply to the middle object, it confirms that the argument in question bears a grammatical relation different from that of O.

First, consider the resumptive pronoun rule. As shown in Chapter 5, the resumptive pronoun rule requires a resumptive pronoun in a position from which A has been moved out by *wh*-movement. Thus, a resumptive pronoun cannot occur in a position from which O has moved by *wh*-movement. See (9.13) below.

(9.13) a. Ko e tamasi'i$_i$ [na'e 'ave 'e Mele t_i ki he fale mahaki].
Pred def boy Pst take ERG Mele to def house sick
"This is the boy (whom) Mele took to the hospital."

b. *Ko e tamasi'i$_i$ [na'e 'ave ia$_i$ 'e Mele ki he fale mahaki].
Pred def boy Pst take 3.s. ERG Mele to def house sick
"This is the boy (whom) Mele took him to the hospital."

In contrast, a resumptive pronoun *ai* is obligatory in the position from which an oblique argument has been moved out by *wh*-movement. See (9.14) below.

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marks transitivity of the verb is a subject clitic cross-referenced on the verb. Thus, in the antipassive (ii), the transitive marker (i.e., an ERG subject clitic) on the verb is not simply removed but replaced by a NOM subject clitic. The morphological difference is a consequence of de-transitivisation of the verb, rather than the cause. On the other hand, *-'i* in Tongan is a morpheme that derives a [+transitive] verb from a [- transitive] verb. Thus, the situation is different. Therefore, the hypothesis that the middle is derived by removing the transitive morphology from the transitive cannot hold.

(9.14) a. *Ko e [teepile eni]$_i$ [na'e hili 'e Sione 'a e tohi ('i) t_i].
Pred def table this Pst put ERG Sione ABS def book in
"This is the table (which) Sione put the book."

b. Ko e [teepile eni]$_i$ [na'e hili 'e Sione 'a e tohi ('i) ai$_i$].
Pred def table this Pst put ERG Sione ABS def book in there
"This is the table (which) Sione put the book in there."

Note that the resumptive pronoun occurring in this position is *ai*, and not the personal pronoun *ia*. In other words, oblique arguments are subject to a resumptive pronoun rule that is different from the one that governs O. The middle object is treated on a par with oblique arguments in terms of relativisation: the position from which the middle object has been moved out by *wh*-movement is required to have a resumptive pronoun *ai*, as illustrated by (9.15) below.

(9.15) a. *Ko e tamasi'i$_i$ [na'e tokoni 'e Mele (ki) t_i].
Pred def boy Pst help ERG Mele to
"This is the boy (whom) Mele helped."

b. Ko e tamasi'i$_i$ [na'e tokoni 'e Mele ki ai$_i$].
Pred def boy Pst help ERG Mele to there

The contrast between (9.15) and (9.13) and the analogy between (9.15) and (9.14) demonstrate that relativisation of the middle object abides by the same rule that governs oblique arguments. Thus, as far as relativisation is concerned, the middle object is treated differently from O.

Another rule that applies to O but not to oblique arguments is *pea*-coordination. *Pea* allows coreference between S and O arguments, as illustrated by (9.16) below.

(9.16) a. Na'e 'alu 'a Hina$_i$ pea taa'i 'e Mele e_i.
Pst go ABS Hina and hit ERG Mele
"Hina went and Mele hit (her)."

b. *Na'e taa'i 'e Mele$_i$ 'a Hina$_j$ pea 'alu $e_{i*/j}$.
Pst hit ERG Mele ABS Hina and go
"Mele hit Hina and (Hina/*Mele) went."

In contrast, an oblique argument cannot occur either as a gap or an antecedent.

(9.17) a. *Na'e fiefia 'a Hina$_i$ pea 'ave 'e Mele 'a e tohi ki e_i.
Pst happy ABS Hina and take ERG Mele ABS def letter to
"Hina was happy and Mele brought the letter to (her)."

b. *Na'e 'ave 'e Mele$_i$ 'a e tohi kia Hina$_j$ pea fiefia $e_{i/j}$.
Pst take ERG Mele ABS def letter to-person Hina and happy
"Mele brought the letter to Hina and (*Hina/*Mele) was happy."

The middle object patterns with oblique arguments rather than O: it cannot participate in *pea*-coordination. See (9.18) below.

(9.18) a. *Na'e tangi 'a Mele pea tokoni 'a Hina t_i.
Pst cry ABS Mele and help ABS
"Mele cried and Hina helped (her)."

b. Na'e tokoni 'a Mele$_i$ kia Hina$_j$ pea tangi $t_{i/*j}$.
Pst help ABS Mele to-person Hina and cry
"Mele helped Hina and (Mele/*Hina) cried."

(9.18a) shows that the middle object cannot occur as a gap that is coreferential with S of the preceding clause. (9.18b) shows that coreference is not allowed between the null argument in the second clause and the middle object of the first clause. In short, *pea*-coordination treats the middle object as distinct from O.

On the other hand, Chung (1978) proposes that middle object in Tongan bear the same grammatical relation as O, arguing that the rule of Quantifier Float (QF) applies to the former as well as the latter. QF in Tongan concerns the quantifier *kotoa* ("all"). *Kotoa* usually appears in the position immediately following the head noun it modifies, as

illustrated by (9.19) below.

(9.19) Na'e manavahee 'a e kakai tangata kotoa.
Pst fear[11] ABS def people man all
"All the men were afraid."
(Chung 1978:189)

The QF rule moves *kotoa* to the position immediately following the predicate, deriving (9.20) below from (9.19).

(9.20) Na'e manavahee kotoa 'a e kakai tangata.
Pst fear all ABS def people man
"The men were all afraid."
(Chung 1978:189)

QF also applies to O as illustrated by (9.21) below.

(9.21) a. Na'a mau takai'i 'a e 'otu motu kotoa 'o e Pasifiki.
Pst 1.excl.pl. tour ABS def pl. island all of def Pacific
"We toured all the islands of the Pacific."

b. Na'a mau takai'i kotoa 'a e 'otu motu 'o e Pasifiki.
Pst 1.excl.pl. tour all ABS def pl. island of def Pacific
(Chung 1978:192)

Chung's data show that QF also applies to middle objects.

(9.22) a. Na'a ku 'a'ahi kotoa ki he fanga tamaiki 'i falemahaki.
Pst 1.s. visit all to def pl. children in hospital
"I visited all the children in the hospital."

b. Na'a ku 'a'ahi ki he fanga tamaiki kotoa 'i falemahaki.
Pst 1.s. visit to def pl. children all in hospital
(Chung 1978: 192)

However, QF cannot apply to oblique arguments such as an indirect object. See (9.23) below.

(9.23) a. 'Oku mahino ki he tamaiki kotoa 'a e lea faka-Siapani.
Prs clear to def children all ABS def language Japanese
"All the children understand Japanese."

b. *'Oku mahino kotoa ki he tamaiki 'a e lea faka-Siapani.
Prs clear all to def children ABS def language Japanese
"The children all understand Japanese."
(Chung 1978: 193-4)

(9.23b), in which *kotoa* appears immediately after the predicate, is considered ungrammatical. Based on these data, Chung proposes that the middle object should be regarded as equivalent to O rather than oblique arguments.

However, Chung's argument is not as valid as is claimed, for QF is also permissible with the locative NP's. See (9.24) below.

(9.24) a. Na'a ku tangutu kotoa 'i he sea 'i he loki.
Pst 1.s. sit all in def chair in def room
"I sat on all the chair in the room."

b. Na'a ku tangutu 'i he sea kotoa 'i he loki.
Pst 1.s. sit in def chair all in def room
(Chung 1978:193)

In (9.24a), QF has applied to an oblique argument, *he sea*. Here QF does not differentiate O from oblique NP's. Thus, sentences like (9.22a) do not necessarily argue for Chung's proposal that in terms of grammatical relations, middle objects are equivalent to O and different from oblique arguments. On the contrary, with regard to QF, middle objects and oblique arguments behave similarly. Consider (9.25) below. in (9.25) both the subject and the object are plural. Thus, theoretically, *kotoa* could modify either the subject or the object. However, *kotoa* occurring immediately after the predicate is necessarily taken as modifying the subject.

[11] In Chung's original data it is glossed as "leave". This appears to be a mistake.

(9.25) a. Na'e tokoni kotoa 'a e tamaiki ako ki he kau faiako.
Pst help all ABS def children school to def pl. teacher
"The students all helped the teachers."
*"The students helped all the teachers."

b. Na'e tokoni 'a e tamaiki ako ki he kau faiako kotoa.
Pst help ABS def children school to def pl. teacher all
*"The students all helped the teachers."
"The students helped all the teachers."

The same effect is obtained with oblique NP's such as locative. See (9.26) below.

(9.26) a. Na'e tangutu kotoa 'a e tamaiki 'i he sea 'i he loki.
Pst sit all ABS def children in def chair in def room
"The children all sat on the chair in the room."
*"The children sat on all the chair in the room."

b. Na'e tangutu 'a e tamaiki 'i he sea kotoa 'i he loki.
Pst sit ABS def children in def chair all in def room
"The children sat on all the chair in the room."
*"The children all sat on the chair in the room."

In contrast, in a transitive construction, the floating quantifier *kotoa* may modify either the subject (A) or the direct object (O). Hence (9.27a) is ambiguous, while (9.27b) is unambiguous.

(9.27) a. Na'e kai kotoa 'e he tamaiki 'a e fanga ika.
Pst eat all ERG def children ABS def pl. fish
"The children all ate the fish."
"The children ate all the fish."

b. Na'e kai 'e he tamaiki 'a e fanga ika kotoa.
Pst eat ERG def children ABS def pl. fish all
*"The children all ate the fish."
"The children ate all the fish."

These examples demonstrate that QF may apply to middle objects as well as oblique arguments if the subject is singular in number, while it can freely apply to O without such a restriction. In other words, contrary to Chung's claim, middle objects are treated in a way similar to how oblique NP's are treated. To summarise, the above data suggest that the middle object bears a grammatical relation that is distinct from

that of O.

The third condition to be taken into consideration is that antipassivisation changes A into S. The middle subject is S, while the subject of a transitive verb is A. This difference can be illustrated by the following three diagnostics: relativisation, *pea*-coordination, and *lava*-construction. In Tongan, these syntactic operations distinguish S from A. The middle subject behaves in a manner similar to S, and not A, with regard to all of the above syntactic rules. For example, take the resumptive pronoun rule. As shown by (9.28) below, a resumptive pronoun cannot occur in a position from which the middle subject has moved out, indicating that the middle subject is S.[12]

(9.28) a. Ko e tamasi'i$_i$ [na'e tokoni t_i ki he faiako].
Pred def boy Pst help to def teacher
"This is the boy (who) helped the teacher."

b. *Ko e tamasi'i$_i$ [na'a ne$_i$ tokoni ki he faiako].
Pred def boy Pst 3.s. help to def teacher
"This is the boy (who) he helped the teacher."

Another diagnostic is *pea*-coordination. As mentioned earlier, only ABS-argument (i.e., S and O) can participate in *pea*-coordination. Thus,

(9.29) * Na'e ha'u 'a Mele$_i$ pea taa'i e_i 'a Hina.
Pst come ABS Mele and hit ABS Hina
"Mele came and hit Hina."

The middle subject, on the other hand, can be part of *pea*-coordination, as illustrated by (9.30) below.

[12] It should be mentioned, however, Chung (1978: 225) argues that the middle subject is equivalent to A rather than to S because both the middle subject and A may be relativised either by pronominalisation or by deletion. According to Chung, (9.28b) is as grammatical as (9.28a). However, as Seiter (1980) points out and Chung herself admits, relativisation of A most of the time requires a resumptive pronoun, while that of the middle subject hardly does. In fact, according to my informants, a resumptive pronoun is obligatory for A. My informants do not allow a relative clause that contains a trace as A. Relative clauses containing a resumptive pronoun as the middle subject are also ruled out.

(9.30) Na'e ha'u 'a Mele$_i$ pea tokoni e_i ki he faiako.
Pst come ABS Mele and help to def teacher
"Mele came and helped the teacher."

The contrast between (9.29) and (9.30) demonstrates that the middle subject is similar to S. Finally, with regard to *lava*-construction, the middle subject is treated in the same fashion as S rather than A. The verb *lava* ("to be able") exhibits a peculiar property: when used with a conjunction *'o*, the case of the subject of *lava* is determined by the transitivity of the verb following *'o*. See (9.31) below. If the second verb is intransitive, the subject of *lava* is marked by the ABS-case marker. In contrast, it is marked by the ERG-case marker if the second verb is transitive.

(9.31) a. 'Oku lava 'a/*'e Sione 'o ha'u.
Prs be-able ABS/ERG Sione and come
"Sione can come."
b. 'Oku lava *'a/'e Sione 'o langa 'a e fale.
Prs be-able ABS/ERG Sione and build ABS def house
"Sione can build a house."

When the second verb is a middle verb, it is the ABS-case marker that precedes the subject of *lava*. Sentences like (9.32) below suggest that the middle subject is equivalent to S, and not A.

(9.32) 'Oku lava 'a/*'e Sione 'o tokoni ki he faiako.
Prs be-able ABS/ERG Sione and help to def teacher
"Sione can help the teacher."

The above tests have shown a) that the middle subject is S and b) that the middle object is an oblique argument. If we assume that a middle construction is derived from a transitive construction, these facts can be understood to demonstrate the changes resulting from antipassivisation: A into S, and O into an oblique arguments. If that is the case, the Tongan middle satisfies two of the criteria of antipassive as given in

(9.11). However, it would be premature to conclude from these results that the Tongan middle is analogous to what is called antipassive in other languages. For one thing, as mentioned earlier in this chapter, morphological evidence argues against the antipassive analysis: it is not likely that a middle verb is derived from a transitive verb. Rather, it seems that the transitive verb is derived from a middle verb by affixing *-'i*. This morphological fact argues against the antipassive analysis of the Tongan middle. Secondly, granted that the middle is an instance of the antipassive (with a zero morpheme attached), we are yet to clarify whether the Tongan middle has the characteristics that are usually associated with antipassive. As mentioned above, we assume that antipassive arises when there is some syntactic necessity: specifically, when ERG-arguments cannot undergo certain syntactic operation such as relativisation and coordination due to syntactic ergativity. In such cases, it is necessary for A to be changed into S in order to undergo a relevant syntactic operation. As discussed in Chapter 5, Tongan also shows syntactic ergativity. In the following two subsections, we will discuss whether the middle construction plays a crucial role in dealing with the constraints of syntactic ergativity. We will also consider whether the Tongan middle is associated with a particular pragmatic effect that is characteristic of the antipassive: to introduce indefinite or generic objects.

9.3.2 Syntactic motivation

Antipassive usually exists in languages that show syntactic ergativity. Take Australian languages: antipassive constructions are found in syntactically ergative languages such as Dyirbal and Yidin^{y}, but not in Warlbiri, which does not show syntactic ergativity. In Mam, antipassive is obligatory in focus, negative, interrogative and relative clauses

(England 1988). In these cases, the antipassive has a significant syntactic function. Tongan also shows syntactic ergativity with regard to relativisation and coordination. However, the solution is not antipassive. ERG-arguments (A) may undergo relativisation as well as coordination without the structure being antipassivised. For example, consider (9.33) below.

(9.33) a. *Ko e siana$_i$ [na'e langa t_i 'a e fale].
Pred def man Pst build ABS def house
"This is the man (who) build the house."

b. Ko e siana$_i$ [na'a ne$_i$ langa 'a e fale].
Pred def man Pst 3.s. build ABS def house
"This is the man (who) he build the house."

Relativisation of A in the ordinary manner results in ungrammaticality, as illustrated by (9.33a). However, Tongan has a resumptive pronoun rule that applies to relativisation of A. As long as the relative clause contains a resumptive pronoun, the construction is grammatical, as illustrated by (9.33b). Moreover, as mentioned above, not all transitive verbs have a corresponding middle verb: for example, *langa* ("to build") does not have an equivalent middle verb. Consequently, the resumptive pronoun strategy is used as a solution for the restriction imposed by syntactic ergativity.

How about the verbs that do have a corresponding middle verb? Consider (9.34) below.

(9.34) a. Na'e tokoni'i 'e he siana 'a Sione.
Pst help-trans ERG def man ABS Sione
"The man helped Sione."

(9.34) b. Ko e siana$_i$ [na'e tokoni t_i kia Sione].
Pred def man Pst help to-person Sione
"It is the man (who) helped Sione."

c. Ko e siana$_i$ [na'a ne$_i$ tokoni'i 'a Sione].
Pred def man Pst 3.s. help-trans ABS Sione
"It is the man (who) he helped Sione."

(9.34a) is a transitive construction. Hypothetically, there are two ways of relativising A of this construction. One is to use the antipassive construction, changing A into S. The derived S may undergo the standard process of relativisation, yielding (9.34b). The other way is to use the resumptive pronoun strategy. This will derive (9.34c). Both (9.34b) and (9.34c) are grammatical as an independent clause. However, it is only (9.34c) that considered to be derived from (9.34a). It is important to note that (9.34b) and (9.34c) carry different meanings. The latter implies an additional meaning: the man not only acted with an intention to help *Sione*, but his action proved to be helpful to *Sione*. In contrast, (9.34b) only means that the man acted with an intention to help *Sione*, but does not imply the consequence of his act. Thus, it is incorrect to assume that (9.34b) is derived from (9.34a). Rather, (9.34b) is derived from a middle construction by relativising S. The fact that application of antipassivisation before relativisation results in some semantic change argues against the antipassive analysis of the middle.[13] For the purpose of overcoming the restrictions of syntactic ergativity, Tongan relies on the resumptive pronoun strategy. Furthermore, it should be noted that the middle is used much more frequently in an independent clause than in a dependent clause. This fact also denies the hypothesis that the major function of the middle construction is to overcome the restrictions imposed by the syntactic ergativity.

9.3.3 Pragmatic consideration

In many languages antipassive is associated with a certain pragmatic effect. Givón (1984) generalises that antipassive is used when the degree of referentiality, topicality, or discourse importance of the object is low. For example, in Inuktitut, the antipassive object is interpreted as indefinite while that of a transitive construction is interpreted as definite (Kalmár 1980). In Nez Perce, the antipassive object is typically indefinite, non-referential or plural (Rude 1982). Similarly, in Chamorro, the antipassive is obligatory when the object is indefinite or generic (Cooreman 1988). In summary, antipassive is used to introduce the object that is the new information, often indefinite or generic.

However, as Blake (1979) points out, this property of antipassive is more prominent when antipassive is used in independent clauses. In dependent clauses, antipassive is used primarily for the syntactic reason described above. Kalmár (1979) makes a similar observation regarding Eskimo. He notes that the antipassive construction is principally used in elicited translation of English sentences, but that the ergative transitive construction is by far more frequently used in discourse. Kalmár (1979) thus proposes that what is called antipassive in Eskimo is another type of transitive construction: it is used when the direct object is new information, and it is not derived from the transitive construction. This proposal, however, is dubious because antipassive verbs agree only with the subject, showing the intransitive pattern. It is more sensible to regard the construction as intransitive rather than transitive. Eskimo does not have any morphological device such as articles to mark arguments for

[13] Chung (1978) rejects the antipassive analysis based on a similar observation.

definiteness; thus, subject NP's, whether S or A, can be interpreted as either definite or indefinite. It is probable that the difference in definiteness between the transitive object and the antipassive object is marginal. However, when asked to distinguish a pair of sentences, one with a definite object and the other with an indefinite object, Eskimo speakers make much of this slight difference.[14] Kalmár's observation that the antipassive is rarely used in discourse suggests that under the normal circumstance definiteness of arguments is a trivial issue. Nevertheless, in a rare occasion where one is required to specify that the object is indefinite, the antipassive is used.

Does the Tongan middle have a similar pragmatic effect? Empirical evidence suggests that what determines whether the middle or the transitive is used in a certain context is lexical semantics rather than pragmatics. As discussed above (§9.1.3), a middle verb differs from the corresponding transitive in that the latter implies intensity or consequence of the event described. However, with regard to the topicality and referentiality of the object, the middle does not differ from the transitive. Take definiteness of the object, for example. Tongan is similar to Eskimo in that definiteness of arguments is not marked in morphology. Although Tongan has both definite and indefinite articles, the definite articles do not necessarily indicate that the argument is [+definite]. In Tongan, the definite article is the unmarked option and can be interpreted as either definite or indefinite. Definiteness is indicated by the

[14] Eskimo languages (e.g., Inuit and Inuktitut) also have passive constructions. As passive is said to be used when the old information is the patient argument rather than the agent argument, it would be interesting to see whether the passive-transitive difference is used to specify definiteness of the subject in a similar manner. However, we will leave this question open to future research.

definitive accent, which is placed on the final syllable of the NP.[15] Thus, in (9.35a) the object can be understood as either definite or indefinite without the definitive accent. When it is necessary to indicate that an argument is indefinite, the indefinite article *ha* is used. However, it should be noted that the indefinite article is used to mean "some, any" rather than the existential "a", and that its usage is limited to interrogative and negative constructions. Thus, (9.35b) is considered odd.

(9.35) a. Na'e sio 'a Sione ki he ta'ahine.
Pst see ABS Sione to def girl
"Sione saw a/the girl."

b. ?Na'e sio 'a Sione ki ha ta'ahine.
Pst see ABS Sione to indef girl
"Sione saw a girl."

The usage of the indefinite article is exemplified by (9.36) below.

(9.36) a. 'Oku 'i ai ha maa?
Prs in there indef bread
"Is there some bread?"

b. Na'e 'ikai ke sio 'a Sione ki ha taha.
Pst neg that see ABS Sione to indef one
"Sione didn't see anyone."

In any case, the middle plays no role in marking definiteness of an argument. As for emphasis, when the emphasis is on the direct object, VOS construction is used instead of the regular VSO (cf. Chapter 8).

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[15] To be accurate, the accent is on the final syllable of the final constituent that modifies the argument. Thus, if it is a NP, the accent is on the final syllable of the noun. If the noun is followed by an AP, then the accent will be on the final syllable of the adjective. If a relative clause follows the noun, the accent is on the final syllable of the final constituent of the relative clause. See below.

(i) e ta'ahine talavoú
def girl pretty
"the pretty girl"

(ii) e ta'ahine na'e 'alu ki Fisí
def girl Pst go to Fiji
"the girl who went to Fiji"

(9.37) a. Na'e 'ave 'e Sione 'a Mele ki he falemahaki.
Pst take ERG Sione ABS Mele to def hospital
"Sione took Mele to the hospital."

b. Na'e 'ave 'a Mele 'e Sione ki he falemahaki.
Pst take ABS Mele ERG Sione to def hospital
"Mele was taken to the hospital."

There is also *ko*-cleft, which is used to put an emphasis on an argument, whether it is a subject, an object or an oblique argument. See (9.38) below.

(9.38) a. Ko Sione$_i$ na'e tokoni t_i ki he faiako.
Pred Sione Pst help to def teacher
"It is Sione who helped the teacher."

b. Ko e faiako$_i$ na'e tokoni 'a Sione ki ai$_i$.
Pred def teacher Pst help ABS Sione to there
"It is the teacher whom Sione helped."

To conclude, the use of the middle in Tongan is not related to any pragmatic factors.

9.4 Summary

In this chapter, we discussed the question of whether the antipassive exists in Tongan. We started by confirming the three facts: a) Tongan is a syntactically ergative language; b) the antipassive often exists in syntactically ergative languages; and c) Tongan has a construction called middle, whose structure resembles that of the antipassive. First we put forth a definition of the antipassive as follows. In an antipassive construction, a) an antipassive morpheme is affixed to the verb, b) the underlying A appears as S marked in ABS, and c) the underlying O appears as an oblique argument. The Tongan middle satisfies the latter two. As for the antipassive morpheme, middle verbs in Tongan do not have any morpheme in common that can be

regarded as the antipassive morpheme. Although one may argue that the antipassive morpheme in Tongan is a zero morpheme, we rejected this hypothesis because the corresponding transitive verb is morphologically more complex than the middle, suggesting that the transitive is the derived one, not the middle.

In addition, we also noted some problems that argue against the antipassive analysis of the Tongan middle. First, and most importantly, not all transitive verbs have a corresponding middle verb. In other words, the process deriving a middle construction from a transitive construction is not productive. Secondly, we have observed that the Tongan middle does not have the characteristics that are generally associated with antipassive. Generally, the antipassive is used in a language that exhibits syntactic ergativity to enable ERG-arguments to undergo certain syntactic operations such as relativisation and coordination. In such cases, the antipassive does not differ in any sense from the transitive in meaning. The relation is similar to the one between the passive and the transitive. If any, the difference is pragmatic: the antipassive object is often said to represent the new information.

Our conclusion is that the middle construction shows neither of these effects. With regard to syntactic ergativity, Tongan uses the resumptive pronoun strategy to overcome the restriction. Therefore, it is not necessary to change the transitive into the middle in order for A to undergo relativisation or coordination. On the contrary, changing the construction type will yield a sentence of a different meaning. A transitive verb corresponding to a middle verb often carries some additional meaning: the action described is understood to be more intense or complete. Our data show that

the middle differs from the transitive not only syntactically, but also semantically. This fact also argues against the view which regards the Tongan middle as an antipassive. With regard to the pragmatic aspect, the middle is not different from the transitive in terms of topicality of the (direct) object. The middle object is not necessarily the new information, indefinite or generic. In brief, the difference between the middle and the transitive is neither syntactic nor pragmatic, but purely semantic. This argues against the hypothesis that the middle is on a par with the antipassive.

To conclude, we have shown that the Tongan middle is not an instance of antipassive for the reasons mentioned above. In many cases a middle verb does not have a corresponding transitive. This makes it unlikely that the middle is derived from the transitive. Even if we assumed that it were, the process is far from productive. Therefore, we conclude that the Tongan middle cannot be regarded as equivalent to the antipassive. Our observation reveals that neither passive nor antipassive exists in Tongan. We have shown that syntactic ergativity and antipassive do not necessarily coexist. This suggests that antipassive is not the only solution that ergative languages take in order to overcome the restrictions imposed by syntactic ergativity.

Chapter 10
Control of PRO

We have studied various syntactic phenomena that are related to ergativity in Tongan. It has been shown that ergativity plays a significant role not only in terms of morphology but also with regard to syntax. Our hypothesis that ERG is a structural case that is intrinsic to Agrs and is assigned to an NP in [Spec, Agrs] by means of feature checking has gained support from a substantial amount of evidence. However, the reason why we assume that the feature [ERG] is intrinsic to Agrs rather than to T has not been clarified. This assumption becomes particularly meaningful when we consider the phenomenon of control in Tongan and other ergative languages. It is generally assumed that PRO bears Null case. Null is a structural case intrinsic to the minimal Infl of infinitival clauses. This analysis in combination with the active Agr hypothesis incorrectly predicts that PRO can appear only as A in ergative languages. In an ergative system, Agrs is inert in intransitive constructions. Consequently, PRO (S) would fail to check off its case feature in intransitive constructions and so the derivation would crash. However, empirical evidence shows that PRO occurs both as A and S in Tongan as well as other ergative languages. In order to account for this fact, some modification is necessary. Thus, we propose that the feature [Null] is checked in [Spec, TP] instead of [Spec, Agrs]. Since T exists in intransitive constructions as well as transitive constructions, PRO, whether it is S or A, will

successfully check its case feature. In the current approach, [ERG] and [Null] are intrinsic to Agrs and [–tense] T, respectively. Why do we not assume that [ERG] is intrinsic to [+tense] T instead of Agrs? If we assume that [ERG] is intrinsic to [+tense] T, we would have to assume also that [ERG] is checked in [Spec, TP]. As a result, ERG would be available in intransitive constructions as well and this would undermine the idea of active Agr. The question of which Agr is active in a certain system would become irrelevant.

In this chapter, we will study some data concerning the control phenomenon in Tongan. §10.1 introduces the standard account of control, namely the Null case hypothesis proposed by Chomsky and Lasnik (1993). Some problems with the Null case approach will be noted: a) PRO in ergative languages, b) coexistence of PRO and overt NP's in apparently the same position, and c) PRO that seems to bear case other than Null. Bearing these problems in mind, we will put forth our alternative analysis in §10.2. Specifically, we will argue that a) PRO checks its case feature in [Spec, TP] by [–tense] T and that b) Tongan *ke*-clauses are on a par with what Raposo (1987) calls inflected infinitives, containing both [–tense] T and Agrs. The latter accounts for the puzzling fact that *ke*-clauses can have both PRO and overt NP's in the subject position; in *ke*-clauses, [–tense] T and Agrs license PRO and overt NP's, respectively. §10.3 is a study of Tongan data. Our data confirm that in Tongan PRO may occur both as A and S, but not O, as is generally assumed to be the case of PRO. It will be also shown that the empty object occurring in *ke*-clauses is not PRO but *pro*. This conclusion is based on the observation that the empty O necessarily has disjoint reference and an overt pronoun in the same position is interpreted as coreferential with

an argument of the matrix clause. The latter would not be permitted by the Avoid Pronoun Principle (Chomsky 1981) if the empty O were PRO. Finally, in §10.4, we will attempt to account for various problematic instances of control: in particular, coexistence of PRO and overt NP's found in Malagasy, Icelandic, and Modern Greek. We will also consider an alternative analysis proposed by Watanabe (1993a,b) and discuss why the current approach is preferable. The other major problem is PRO bearing case other than Null such as those found in Icelandic (Sigurđsson 1991) and Russian (Franks and Hornstein 1992). Although some questions have to be left open, overall it will be shown that the current analysis provides a simple and coherent account of control as part of universal grammar.

10.1 Control theory

The so-called control theory in the generative grammar was first proposed by Chomsky (1981). See (10.1) below. The empty category in the infinitival clause in (10.1) is obligatorily coreferential with the matrix subject *John*.

(10.1) John$_i$ wants [e_i to go].

Since this element can be neither a trace nor *pro*, it is assumed to be another type of empty category and labelled as PRO. The empty category PRO can be bound by an antecedent, as illustrated by (10.1) above. We refer to the relation between the antecedent and PRO as control: in (10.1), PRO is controlled by the matrix subject. The matrix object can also control PRO, as illustrated by (10.2) below.

(10.2) John persuaded Bill$_i$ [PRO$_i$ to come to the party].

It should be noted that in the above examples PRO is obligatorily controlled. On the other hand, there are some cases in which PRO need not be controlled. See (10.3) below.

(10.3) It is important [PRO to attend the meeting].

In (10.3), there is no antecedent for PRO. In such a case, PRO typically has arbitrary reference: it is interpreted as arbitrary *one* or generic *people*. PRO without a controller is specifically called PRO_{arb}. Note also that occurrence of PRO is restricted to the subject position of infinitival clauses. PRO is excluded from the object position of an infinitival clause or the subject position of a finite clause. See (10.4) below.

(10.4) a. *$John_i$ wants [Mary to like PRO_i].

b. *$John_i$ wants [that PRO_i goes].

Chomsky (1981) observed that PRO appears to be both [+anaphor] and [+pronominal] in terms of the binding principle.[1] For instance, in (10.1) and (10.2) above, PRO is necessarily coindexed with a matrix argument, i.e., it must be bound by an antecedent. On the other hand, in (10.3), PRO does not have any antecedent and have arbitrary reference. In this case, PRO is free, like a pronominal. However, if PRO is both [+anaphor] and [+pronominal], it must be both bound and unbound in its governing category, which is a contradiction. As a way out of this puzzling situation, Chomsky (1981) proposed that PRO must be ungoverned because the binding theory is relevant only if there is a governing category. This also explains why PRO cannot occur in the object position and the subject position of a finite clause. This claim, the PRO

[1] Binding Principles (Chomsky 1981:188)
(A) An anaphor is bound in its governing category.
(B) A pronominal is free in its governing category.
(C) An R-expression is free.

theorem, however, was challenged by a number of other theorists (cf. Manzini 1983, Hornstein and Lightfoot 1987, Sigurđsson 1991, Franks and Hornstein 1992 among others). Some linguists even question the existence of the empty category PRO itself. For example, Huang (1984, 1989) and Borer (1989) argue that PRO is merely a special instance of *pro*. The intention of this argument is to integrate the control theory into some more general component of the universal grammar. Similarly, O'Neil (1995) and Hornstein (1999) propose that PRO is an instance of NP-trace.[2]

10.1.1 The Null case hypothesis

The standard theory, on which the current study is based, maintains the view that the above examples involve an independent class of empty category PRO. However, PRO is considered in terms of case and not in terms of government. Note that the theory of control must account for the following properties of PRO: a) PRO can occur only in the subject position of infinitival clauses and b) PRO and NOM-marked arguments are in complementary distribution. We assume, following Chomsky and Lasnik (1993), that PRO bears Null case. Null case is a structural case and its feature is intrinsic to Infl of infinitival clauses. Bobaljik (1993) paraphrases this in terms of the feature checking theory (Chomsky 1991, 1993) i.e. the feature [Null] is checked in [Spec, Agrs] of infinitival clauses. Agrs of infinitives is defective in that it fails to check [NOM/ERG] but instead checks [Null]. The Null case hypothesis also accounts for the distribution of PRO. First, PRO can occur only in the subject position of infinitival clauses because only Infl of infinitival clauses can check the feature [Null]. Second,

[2] To be precise, Hornstein (1999) argues that PRO of obligatory control is identical to NP-trace while that of non-obligatory control is equivalent to *pro*.

NOM-marked arguments are excluded from the same position as the feature [NOM] cannot be checked there. Reasonably well accepted as it is, the Null case hypothesis is not free from problems. First, in the active Agr approach, this analysis incorrectly predicts that PRO cannot occur as S in ergative languages because Agrs is inert in intransitive constructions. Second, there is evidence that in some cases PRO bears NOM rather than Null (Sigurđsson 1991, Franks and Hornstein 1992). Third, in some languages PRO and NOM-marked arguments can appear in the same position (Sigurđsson 1991, Watanabe 1993a, b). We will discuss each of these problems below.

10.1.2 Semantic approach

It should be noted that many linguists have argued that control is fundamentally constrained by semantics rather than syntax. For example, Sag and Pollard (1991) argue that control verbs can be classified into three kinds, COMMITMENT-type (e.g., promise, try, intend, etc.), INFLUENCE-type (e.g., persuade, order, etc.), and ORIENTATION-type (want, need, hate, etc.) and show that the identity of the controller is predictable from the semantic type of the matrix verb, always corresponding to the commitor, influenced participant, or experiencer. In his study of the Tagalog control constructions, Kroeger (1993:76) postulates the following two universal semantic constraints on control: a) the complement must express a volitional action and b) the controllee must be the Actor of that action. These control constraints predict that the controllee cannot be a direct object.

Kroeger (1993) argues that there are two different kinds of control relation in Tagalog: one involving a semantic identification of the controller with the controllee and the

other involving a syntactic unification of the two.[3] Kroeger's assumption is that control is universally semantically constrained, but is also subject to some language-specific syntactic constraints. In Tagalog, control verbs take an action-type complement, in which the Actor variable (i.e. the controllee) is bound by the semantically determined argument of the matrix verb. Thus, the argument structure of "John persuaded Mary to eat Brussels sprouts" is as follows.

(10.5) persuade <John, $Mary_i$, eat <PRO_i, Brussels sprouts>

There is, however, an exception: some ORIENTATION-type verbs allow the controllee to be a non-Actor subject (i.e., the NOM-marked argument).[4] In this type of control construction, the controller must also be the subject. Kroeger (1993) assumes that the verbs of this type take an event-type complement rather than an action-type complement and argues that these counterexamples are due to the following language-specific syntactic constraint: the controller and the controllee must agree in case (i.e. NOM) and grammatical relation (i.e. subject). Thus, the phrase structure of a sentence "Maria insisted on being given money by John" is as follows.

(10.6) insist Maria Ø give *ec* money John
Pred SUBJ Comp PRED SUBJ OBJ ACTOR
└──────────┘

Here, control is essentially constrained by syntax. Kroeger (1993) argues that because this is a syntactic control, the semantic constraints does not have any effect. Hence, the embedded verb can be not only in volitive mood, but also in non-volitive mood. It should be noted that the ORIENTATION-type verbs may also appear in the normal control construction, in which the controllee is the Actor. Note that these verbs may

[3] Bresnan (1982) calls the former anaphoric control and the latter, functional control.
[4] Note that in Tagalog the subject does not always coincide with the NOM-marked argument. For this reason, it is sometimes claimed that the NOM-marker, *-ang* is a topic marker rather than the subject marker. However, Kroeger argues that the NOM-marker *-ang* marks the grammatical subject.

also appear in the normal (semantic) control constructions. When they appear in the normal control constructions, these constructions are subject to the above-mentioned semantic constraints. Based on this observation, Kroeger (1993) concludes that there are two kinds of control and that the Tagalog ORIENTATION-type verbs allow both.

The semantic account of control sketched above explains the fact that the controllee cannot be an object. Kroeger (1993) suggests that the only syntactic constraint on control that is universal is that the controllee must be terms (i.e. the direct arguments of a verb) and all the rest is language-specifically determined. Acknowledging that this type of semantic account consistently accounts for various control facts, in the following discussion, we will seek a syntactic account of control. One strong motivation for the syntactic approach is that the null argument (i.e. the controllee) cannot appear in the embedded subject position of a tensed clause even if the complement expresses a volitional action. In other words, we would like to know why the sentence "John promised that PRO will come" cannot have the semantic representation (10.7) below.

(10.7) a. $John_i$ promised that PRO_i would come.

b. promise <$John_i$, come <PRO_i>>

One explanation is to assume that *to*-infinitives are action-type complements and *that*-clauses are event-type complements and that the English control verbs can only take action-type complements. However, this begs a question: what makes *to*-infinitives action-type and *that*-clauses event-type? One noticeable difference is that the former seems to lack tense, which we assume is responsible for licensing PRO.

Thus, we will take a syntactic approach to the control constructions. We will seek

syntactic licensing conditions on the controllee. In doing so, we will assume that following Chomsky and Lasnik (1993), the key factor is case: namely, the controllee (i.e. PRO) must bear Null case and the feature of Null case cannot be checked in finite clauses. In contrast to Kroeger's approach, which assumes that control is fundamentally a semantic phenomenon, but is also subject to some language-specific syntactic constraints, we will consider control essentially a syntactic phenomenon, which is sometimes subject to some idiosyncratic semantic constraints.[5]

10.1.3 PRO in ergative languages

The Null case hypothesis stipulates that PRO checks its case feature [Null] by T. This explains the distribution of PRO in accusative languages. Both A and S check their case feature in [Spec, Agrs]. Therefore, PRO can be either A or S, but not O, as the latter cannot move to [Spec, Agrs]. However, with regard to ergative languages, the Null case analysis predicts incorrectly that PRO can occur only as A. According to the active Agr hypothesis discussed in Chapter 4, it is assumed that only Agro can be active in intransitive constructions in ergative languages. Consequently, S checks its case feature in [Spec, Agro] and not [Spec, Agrs]. Since Agrs is inert, PRO (S) would fail to check its case feature and the derivation would crash. However, this prediction is wrong. For example, in Tongan PRO can be S as well as A. See (10.8) below.

(10.8) a. 'Oku loto 'a Sione [ke PRO 'alu].
Prs want ABS Sione to go
"Sione wants to go."

[5] For example, we will see below how semantics affects the distribution of PRO when the matrix verb belongs to the COMMITMENT-type.

(10.8) b. ʻOku loto ʻa Sione [ke PRO kai ʻa e ika].
Prs want ABS Sione to eat ABS def fish
"Sione wants to eat the fish."

c. *ʻOku loto ʻa Sione [ke ʻofaʻi ʻe Mele PRO].
Prs want ABS Sione to love ERG Mele
"Sione wants Mele to love (him)."

Moreover, as illustrated by (10.8c), PRO cannot occur as O.

This subject-oriented property of control is observed in various so-called ergative languages. Anderson (1976), for example, notes that only the subject NP in the lower clause is deleted by the operation of Equi-NP deletion.[6] Dixon (1979, 1994) argues that since the subject oriented property of control phenomenon is universal, it should not be regarded as a sign of accusativity of a particular language. Dixon points out that imperatives cross-linguistically have a second person pronoun as (stated or understood) S or A. This is because the addressee is assumed to be the performer of the instruction. Dixon extends this argument to the verbs such as "order" and "tell". These verbs are regarded as "indirect imperatives" and therefore imply that the Goal argument is the performer of the instruction referred to by the embedded verb. According to Dixon, another class of verbs that cross-linguistically involve control includes "begin", "finish", "can", "must", and "try". These verbs, when occurring as matrix verbs, share the subject of the embedded clause.[7] Bittner and Hale (1996b) also observe the fact that control treats S and A as equivalents, excluding O. Bittner and

[6] Anderson (1976) argues that the notion "subject" covers S and A in ergative languages, as opposed to the views that there are no grammatical relations such as "subject" or "object" in ergative languages, or that S and O are "subjects" in an ergative language (Hale 1970, Keenan 1976b, Marantz 1984). He cites some examples from Basque to support his argument. However, it is not quite appropriate because Basque, which shows an ergative case marking, is known to be syntactically accusative (Comrie 1989, Dixon 1994).

[7] As to the latter class of control verbs, Dixon (1979) does not provide any argument concerning why these verbs also treat S and A as equivalents, rather than S and O.

Hale argue that syntactic ergativity is respected in phenomena that involve A-bar positions. Control, on the other hand, involves A-positions, namely, the subject position. Hence, ergativity does not play a role.[8]

The Null case hypothesis outlined above cannot explain this subject-oriented nature of PRO. In order for S to check its case feature [Null], we need to stipulate either a) that Agrs can be activated in an intransitive construction if it contains PRO or b) that [Null] can be checked in both Agrs and Agro so that PRO (A) checks its case feature in [Spec, Agrs] and PRO (S) in [Spec, Agro]. We cannot assume the former, as it would undermine the fundamental assumption of the active Agr approach. The latter alternative is also highly problematic because it also necessarily assumes that [Null] is intrinsic not only to T but also to V. Furthermore, if V can check off [Null], another question arises: namely, what prevents PRO from occurring as O?

Facing these problems, we have proposed an alternative case assignment mechanism in Chapter 4 (§4.4). We assume that case features are intrinsic to Agr's and not to T and V: Agrs has [T-case] and Agro, [V-case]. T-case is equivalent to NOM/ERG and V-case is a general label for ACC/ABS. On the other hand, T and V have an associated case feature just like NP's. It is also assumed that the case feature of an NP is unspecified. As for Null case, we argue that the feature [Null] is intrinsic to [–tense] T and PRO has an associated case feature specified for [Null]. In short, we assume the

[8] Bittner and Hale (1996b) propose a model based on their notions "raising" and "transparent" ergative languages and argue that syntactic ergativity is found in "raising" ergative languages, in which O ends up occupying a higher position than A in the tree structure, due to the raising. The position in the tree structure determines which argument overrides the other in A-bar dependent syntactic operations. See Bittner and Hale (1996b) for details.

following features.

(10.9) Case features

Agr	[T-case]
Agr	[V-case]
[–tense] T	[Null]

Associated case features

T	[T-case]
V	[V-case]
NP	[case]
PRO	[Null]

Another crucial assumption is that associate case features must be checked and deleted. We assume that associated case features of T and V are checked when they adjoin to Agrs and Agro, respectively. Associate case features of an NP are checked in a Spec-head configuration with Agr. Specifically, an NP in [Spec, Agro] will receive ABS and one in [Spec, Agrs], ERG, as a result of checking its case feature. Due to the active Agr hypothesis, S moves up to [Spec, Agro] and checks its case feature there. How about PRO? We cannot assume that PRO checks its case feature in [Spec, Agrs] for the reasons mentioned above. Thus, we propose an alternative analysis: PRO checks its case feature in [Spec, TP]. Note that in our analysis [Null] is intrinsic to [–tense] T. Thus, PRO can check its case feature in a Spec-head configuration with T, without involving Agr. Note also that crucially, TP exists in both intransitive and transitive constructions. In this view, prohibition of PRO being generated as O can be explained as follows. In a transitive construction, O cannot move into [Spec, TP] skipping [Spec, Agro], due to the Shortest Move constraint (Chomsky 1991, 1993). On the other hand, A must move to [Spec, Agrs] via [Spec, TP] for the same reason. Thus, [Spec, TP] is already occupied by a trace of A and no longer available for O to move into. As a result, PRO (O) cannot check its [Null] case feature and the

derivation crashes.

10.1.4 Case-marked PRO

Apart from the problem concerning ergative case marking, some weakness of the Null case hypothesis has been pointed out in the literature. It has been shown that there are some instances in which PRO arguably bears a structural case other than Null. For example, Sigurđsson (1991) argues that PRO bears NOM in sentences like (10.10) below.

(10.10) Icelandic (Sigurđsson 1991:337)

Strákana langaði til [að PRO komast allir í veisluna].
the boys(ACC) wanted for to get all(NOM.pl.m) to the party
"The boys all wanted to get to the party."

In (10.10), the agreement on the quantifier shows that the subject with which it agrees has the phi-features [plural, masculine] and the case feature [NOM]. It cannot be the matrix subject, *strákana* that triggers the agreement because it bears ACC. Consequently, we assume that the case of PRO in (10.10) is NOM, presumably by checking its case feature in [Spec, Agrs] of the embedded clause. As NOM is arguably a structural case, this goes against the Null case hypothesis, which assumes that T of infinitives has [Null], but not [NOM].

Another counterexample is found in Russian. Franks and Hornstein (1992) argue that in Russian, PRO must be governed in some cases. In Russian, secondary predicates, *odin* ("alone") and *sam* ("oneself"), are required to agree with the NP they are modifying. When *odin/sam* modifies PRO, it sometimes shows NOM agreement and otherwise DAT agreement. See (10.11) below.

(10.11) Russian (Franks and Hornstein 1992:6-7)

a. Nadja ljubit PRO gotovit' sama.
(NOM) likes to-cook herself (NOM)
"Nadja likes to cook herself."

b. Ljuda priexala PRO pokupat' maslo sama.
(NOM) came to-buy butter herself(NOM)
"Ljuda came to buy the butter herself."

c. PRO pojti tuda odnomu rasstroilo by menja.
to-go there alone(DAT) upset MODAL I (ACC)
"It would upset me to go there alone."

d. Ivan dumaet čto PRO pouti domoj odnomu va□no.
(NOM) thinks that to-go home alone(DAT) important
"Ivan thinks that it is important to go home alone."

Franks and Hornstein (1992) argue that PRO can trigger NOM agreement only if it is governed by the antecedent, as illustrated by (10.11a,b). On the other hand, if PRO is not governed, then *odin/sam* will show DAT agreement. In (10.8c), there is no antecedent that can control PRO. In (10.11d), government by the matrix subject is blocked by the complementiser *čto*. In other words, DAT agreement can be considered as default. What is problematic about this agreement is that *odin* and *sam* agree with PRO in case. According to the Null case hypothesis, the case feature of PRO is [Null] and nothing else. Therefore, *odin* and *sam*, if they agree with PRO in case, are expected to appear in Null form (whatever that form turns out to be). Contrary to this prediction, in (10.11a, b) PRO induces NOM agreement.[9, 10]

[9] Incidentally, this observation is similar to that of Sigurđsson (1991) regarding the Icelandic PRO. As illustrated by (10.10), PRO in Icelandic also seems to bear NOM case feature.

[10] Note that Franks and Hornstein (1992) do not claim that the governed PRO's in Russian are also case-marked. Instead, they stipulate that Russian PRO's can be "case-active", that is, they can transmit case, but crucially not case-marked. Presumably, PRO transmits NOM case from the matrix subject to the embedded *odin/sam*. It seems that Franks and Hornstein rely on this stipulation for the sake of retaining the assumption that PRO is case-less. This "case-active" assumption, however, becomes irrelevant if one is to take the Null case hypothesis. Since PRO is assigned Null case, it *is* case-marked and therefore, cannot involve another case. Either way, their Russian data raise a significant problem.

10.1.5 Coexistence of PRO and overt NP's

Another challenge for the Null case approach is instances where an overt NP is allowed to appear in the subject position of infinitives, i.e., the position which is assumed to be reserved exclusively for PRO. Such a phenomenon is found in Malagasy (Keenan 1976a, Randriamasimanana 1986, 1998), Icelandic (Sigurđsson 1991), and Balkan languages such as Modern Greek and Romanian (Watanabe 1993a,b).

Malagasy is a Malayo-Polynesian language with an accusative case marking system. Malagasy has three types of subordinate clauses introduced by *ny*, zero-complementiser, and *fa*, respectively. Both *ny*-clauses and zero-clauses allow only PRO to appear in the subject position.[11] However, PRO as well as overt NP's can appear in *fa*-clauses. See (10.12) below.

(10.12) Malagasy[12]

a. N-ilaza i Paoly [fa h-andeha PRO].
Pst-say NOM Paul fa Fut-come
"Paul said that (he) would come."

b. N-ilaza i Paoly [fa h-andeha i Jaona].
Pst-say NOM Paul fa Fut-come NOM John
"Paul said that John would come."

Although Malagasy freely allows the deletion of understood arguments, the empty

[11] *Ny*-clauses involve control by subject and *zero*-clauses, control by object (Randriamasimanana 1986). However, it should be noted that complementisers *ny* and *fa* can optionally be dropped and consequently, *zero*-clauses apparently can be used in all environments. We distinguish such clauses without an overt complementiser from those containing *zero* complementiser. The former arises when the complementiser *ny/fa* is not overtly realised. Clauses without an overt complementiser demonstrate properties similar to those of *ny*-clauses when occurring in control-by-subject construction. Similarly, they behave like *fa*-clauses and not like *zero*-clauses when occurring in an environment in which *fa*-clauses are used. Therefore, we consider that zero-clauses are used exclusively in control-by-object constructions.

[12] All the examples are provided by Charles Randriamasimanana (p.c.) unless indicated otherwise.

subject of sentences like (10.12a) cannot be an instance of such a deletion. For one thing, if it were a case of argument deletion, any argument regardless of its type would be able to appear as an empty element. However, this is not the case. As (10.13) below illustrates, the embedded O cannot be the empty element; a result naturally expected if one is to assume this type of construction to be an instance of control.

(10.13) Malagasy (Keenan 1976a: 277)

M-ihevitra Rabe$_i$ [fa m-itady azy$_i$/*PRO Rasoa].
Prs-think Rabe fa Prs-look-for him Rasoa
"Rabe thinks that Rasoa is looking for *(him)."

Secondly, Keenan (1976a) notes that the embedded clause may have an overt pronoun as subject and that in such a case, the pronominal subject has a disjoint reference from the matrix subject. The latter observation is important in two respects. First, it suggests that the empty element in the embedded subject position is not the deleted argument. Since the deletion of arguments is optional, a pronoun should also be allowed in the same position and it should be coreferential with the matrix subject. Second, the fact that a pronoun of disjoint reference can appear in the embedded subject position indicates that NOM can be checked there. This in turn suggests that PRO in (10.13a) is in a position in which NOM is checked.

Balkan languages such as Modern Greek and Romanian use subjunctive clauses in constructions in which Romance and Germanic languages use infinitives. For example, in Modern Greek, the verb "want" takes a subjunctive complement introduced by an element *na*. *Na*-complements, being subjunctive, may contain overt subjects as well as *pro*. See (10.14) below.

(10.14) Modern Greek (Terzi 1992 cited by Watanabe 1993a: 285)

O Yannis theli na doulevo mazi sou.
John wants subj-prt work-1s with you
"John wants me to work with you."

In (10.14), the embedded *na*-clause contains *pro* in the subject position as the agreement on the embedded verb *doulevo* indicates. What raises problem is that *na*-complements also allow PRO in the subject position.

(10.15) Modern Greek (Terzi 1992 cited by Watanabe 1993a: 286)

Pion$_i$ nervriazi to e_i na pleni to aftokinito tou t_i?
whom upsets the subj-prt washes the car his
"Who$_i$ does washing his$_i$ car upset?"

Watanabe (1993a) assumes, following Terzi (1992), that the empty subject of the *na*-clause in (10.15) is PRO, and not *pro*, because the weak crossover effect is not observed in (10.15). As noted by Higginbotham (1980), PRO escapes the weak crossover violation. It should be mentioned that with the indicative *oti*-clause, the sentence is ruled out due to the weak crossover violation because indicatives can only have *pro* but not PRO as the subject. This is problematic because subjunctives, being finite by definition, should not permit PRO as their subjects. T of subjunctives is assumed to check NOM (in accusative languages). This means that it bears NOM case feature and not Null case feature. Consequently, PRO should not be licensed, as its Null case feature will never be able to be checked off.[13]

These data show that in certain constructions, PRO and overt NP's are allowed to appear in the same position. If we are to assume the Null case hypothesis, we need to account for these apparently contradictory examples. We will return to this point

shortly.

10.2 Tongan *ke*-clauses

As discussed in Chapter 7, Tongan *ke*-clauses demonstrate some properties of infinitives: a) they do not contain a tense marker and b) they frequently contain a null subject, which could not be either *pro* or trace. As for the latter, we assume that this null element is PRO. See (10.16) below.

(10.16) a. ʻOku loto ʻa Sione [ke ʻalu PRO].
Prs want ABS Sione to go
"Sione wants to go."

b. *ʻOku loto *pro* [ke ʻalu ʻa Sione].
Prs want to go ABS Sione

c. ʻOku ou$_i$ loto [ke kai PRO$_i$ ʻa e ika].
Prs 1.s.want to eat ABS def fish
"I want to eat the fish."

As illustrated by (10.16b), *loto* cannot have an expletive subject. This denies the possibility of the empty element in (10.16a) being a NP-trace. On the other hand, (10.16c) shows that the empty element in the *ke*-clause cannot be *pro*: as discussed in Chapter 3, the use of *pro* is restricted to third person singular in Tongan. Consequently, the empty element in (10.16c) cannot be coreferential with the matrix subject, which is first person singular, if it were *pro*.[14]

[13] Watanabe (1993a,b)'s proposal and its implications will be discussed in §10.4 below.

[14] As Gillian Ramchand and Lisa Travis (p.c.) point out, this restriction on coreference does not necessarily argue for the existence of PRO. In Chapter 5, we argued that the empty category in the *pea*-construction is a special kind of *pro* (i.e., co-*pro*) that does not have to be [3.s.]. One may wonder why the empty category in (10.16c) cannot also be interpreted as an instance of co-*pro*. However, the empty category in (10.16c) is different from the co-*pro* in the following respects. First, we argued that a co-*pro*

On the other hand, as mentioned earlier, *ke*-clauses may also contain an overt subject. See (10.17) below.

(10.17) a. 'Oku loto 'a Sione [ke 'alu 'a Mele].
Prs want ABS Sione to go ABS Mele
"Sione wants Mele to go."

b. Na'e feinga 'a Mele [ke tapuni'i 'e Pita 'a e matapaa].
Pst try ABS Mele to close ERG Pita ABS def window
"Mele tried for Pita to close the door."

Sentences in (10.17) are problematic in that the overt subject NP appears in the presumably infinitival *ke*-clauses. According to the Null case hypothesis, T of *ke*-clauses can only assign Null case. Consequently, sentences in (10.17) should be ruled out. Nonetheless, they are perfectly grammatical. This suggests that *ke*-infinitives can also assign ERG.[15, 16]

Given the two contradictory properties of *ke*-clauses, we propose that *ke*-clauses are on a par with what Raposo (1987) calls inflected infinitives in European Portuguese

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must be licensed by means of the feature identification, including the case feature. This constraint should rule out (10.16c) because a co-*pro* with the feature [ERG] cannot be coreferential with a matrix argument that has the feature [ABS]. Secondly, as shown in Chapter 5, a co-*pro* can freely be replaced with an overt pronoun. However, as we will see shortly, the empty category in (10.16a, c) cannot be replaced with an overt pronoun. Thus, the empty category in (10.16a, c) is different from co-*pro*. Although it is still possible to assume that the empty pronoun is another kind of *pro*, which appears only in the subject position of *ke*-clauses and does not have to be third person singular, this characterisation is incidentally the same as that of PRO: its distribution is restricted to the subject position of apparently non-finite clauses. Therefore, instead of assuming it to be another type of *pro*, we will call it PRO in the following discussion.

[15] Niuean, another language that belongs to the Tongic subgroup, also has *ke*-clauses, which exhibit similar properties (Levin and Massam 1986).

[16] One may wonder whether PRO actually bears a structural case other than Null, in a way similar to Icelandic NOM-marked PRO: specifically, PRO (S) bears ABS and PRO (A), ERG. However, this speculation is not borne out. PRO is not permitted in the object position although supposedly it is able to check its case feature in [Spec, Agro].

(i) 'Oku loto 'a Sione [ke 'ofa'i 'e Mele PRO].
Prs want ABS Sione to love ERG Mele
"Sione wants Mele to love (him)."

(see Chapter 7, §7.4.4). Adapting Raposo's proposal, we assume that *ke*-clauses contain not only [–tense] T but also Agrs. We propose that [–tense] T is a kind of tense anaphora, which is phonologically realised in Tongan as *ke*. With regard to case, we assume that [–tense] T bears a case feature [Null] and Agrs, [T-case] (i.e., ERG/NOM).[17] In this view, PRO can check its case feature in [Spec, TP] and so can an overt NP in [Spec, Agrs].

A question may arise with regard to case feature checking. When an overt NP checks its case feature by Agrs, the case feature of T will be left unchecked. Similarly, when a *ke*-clause contains a PRO subject, then the case feature of Agrs will necessarily remain unchecked. What about these unchecked case features? Here our assumption that associated case features must be checked off becomes significant. We assume that a derivation crashes if an associated case feature is left unchecked. Let us paraphrase it as follows: a derivation converges as long as all the associated case features are checked off. This in turn means that intrinsic case features need not be checked. Suppose that the function of the case features of Agrs, Agro and [–tense] T is to check off associated case features. These features are there to license other elements so that the derivation would not crash. This obviously is a divergence from the standard account. Nevertheless, this modification does not violate the fundamental assumption of the minimalist approach proposed by Chomsky (1991, 1993): movement of an element is driven by a self-serving purpose (Greed). In the following study of control phenomenon in Tongan, we will assume the case checking mechanism described

[17] Note that Raposo's (1987) proposal is based on the GB approach. Thus, it is proposed that in the absence of [+tense] T, Agr in inflected infinitives inherits case-assigning ability from the matrix Infl.

above.

10.3 Control in Tongan

In this section we will study the data concerning control constructions in Tongan. As mentioned in the previous sections, we assume that the phenomenon of control necessarily involves an empty category PRO. It is also assumed that PRO characteristically bears Null case. As to the feature checking of Null case, we assume that it is checked by [–tense] T in [Spec, TP]. We also assume that *ke*-clauses are inflected infinitives, containing both [–tense] T and Agrs.

There are roughly four types of control constructions in Tongan: control by subject, obligatory control by object, obligatory control by OBL-argument, and non-obligatory control (i.e., PRO_{arb}). We will first look at constructions involving control by full NP's (§10.3.1). Our data show that PRO occurs as A as well as S, but never as O. We will also discuss what gives rise to the subject-oriented nature of PRO. In §10.3.2, we will consider the data concerning control by pronominal arguments. It will be shown that the Tongan control constructions respect ergativity as long as the controller is a pronominal argument: PRO can occur as A but not as S or O.

10.3.1 Control by full NP's

Let us start with obligatory control by the subject. These include verbs like *loto* ("want"), *feinga* ("try") and *manatu'i* ("remember"). The first two take an ABS-

marked subject and a *ke*-clause complement. *Manatu'i*-type verbs take an ERG-marked subject and either a NP, tensed clause, or *ke*-clause as a complement. First, consider *loto*-type verbs. As illustrated by (10.18) below, *ke*-clauses may contain either PRO or an overt NP as a subject. Note also that PRO can occur as either S or A

(10.18) a. 'Oku loto 'a Sione [ke 'alu PRO].
Prs want ABS Sione to go
"Sione wants to go."

b. 'Oku loto 'a Sione [ke 'alu 'a Mele].
Prs want ABS Sione ke go ABS Mele
"Sione wants Mele to go."

c. 'Oku loto 'a Sione [ke fakatau PRO 'a e me'alele].[18]
Prs want ABS Sione to buy ABS def car
"Sione wants to buy the car."

d. 'Oku loto 'a Sione [ke fakatau 'e Mele 'a e me'alele].
Prs want ABS Sione to buy ERG Mele ABS def car
"Sione wants Mele to buy the car."

Mantu'i-type verbs show a similar property: PRO can occur both as S and A. See (10.19) below.[19]

(10.19) a. Na'e manatu'i 'e Sione [ke 'alu PRO ki kolo].
Pst remember ERG Sione to go to town
"Sione remembered to go to town."

b. Na'e manatu'i 'e Sione [ke tapuni'i PRO 'a e matapaa].
Pst remember ERG Sione to close ABS def door
"Sione remembered to close the door."

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[18] (10.18c) above can also mean "Sione$_i$ wants him$_j$ to buy the car", with the empty element referring to someone whose reference is established in the context. We assume that this interpretation is available only if the empty element is *pro*, just like the overt NP *Mele* in (10.18d). We assume that the empty element is PRO and not *pro* in (10.18a) and (10.18c) because replacement of the empty element with an overt pronoun will yield ungrammaticality. If an overt pronoun occurs in the embedded subject position of these sentences, that pronoun cannot be coreferential with the matrix subject.

[19] Note that the matrix clause does not contain an argument marked in ABS. This suggests that ABS has been assigned to the sentential complement *ke*-clause (cf. Levin and Massam 1986). Alternatively, we may assume that there is a null expletive in the matrix object position, which in turn is coindexed with the sentential argument. We assume the latter, as it is generally held that sentential arguments are not case-marked.

However, *manatu'i*-type verbs do not allow an overt NP to appear in the subject position of *ke*-clauses.

(10.20) *Na'e manatu'i 'e Sione [ke tapuni'i 'e Mele 'a e matapaa].
Pst remember ERG Sione ke close ERG Mele ABS def door
Intended meaning: Sione remembered for Mele to close the door."

The fact that sentences like (10.20) are ungrammatical argues against the possibility that the empty subject in the embedded clause is *pro*. If it were *pro*, then, (10. 20) would be grammatical. This analysis receives further support from the following data. (10.21) shows that an overt pronoun is not allowed in the embedded *ke*-clause either.

(10.21) *Na'e manatu'i 'e Sione$_i$ [ke ne$_i$ tapuni'i 'a e matapaa].
Pst remember ERG Sione ke 3.s. close ABS def door
"Sione reminded him(self) to close the door."

(10.21) is ruled out even if coreference is intended between the clitic pronoun *ne* with the matrix subject *Sione*. These data provide strong evidence for the existence of PRO in these constructions.

Why do *manatu'i*-type verbs disallow overt subjects in *ke*-clauses? Does this mean that *ke*-clause complements of *manatu'i*-type verbs are not inflected infinitives but pure infinitives that do not contain Agrs? The answer is no because an overt NP cannot occur not only A but also S in the *ke*-clause complements of *manatu'i*-type verbs. See (10.22) below.

(10.22) *Na'e manatu'i 'e Sione [ke 'alu 'a Mele].
Pst remember ERG Sione to go ABS Mele
"Sione reminded Mele to go."

In order to rule out (10.22), we have to assume that *ke*-clauses lack Agro as well. However, this is an incorrect speculation because *ke*-clauses can contain an ABS-marked object, as illustrated by (10.19b) above. Thus, an overt NP is banned in the

subject position of *ke*-clauses in these constructions not because it fails to check its case. There must be some other reason. Note that the use of *ke*-clause is restricted to the meaning "remember to do". Therefore, (10.19b) cannot mean "Sione remembered closing the door". The complement must bfe a tensed clause in order to mean "remember doing", as illustrated by (10.23) below.

(10.23) 'Oku manatu'i 'e Sione$_i$ [na'a ne$_i$ tapuni'i 'a e matapaa].
Prs remember ERG Sione Pst 3.s. close ABS def window
"Sione remembers that he (himself) closed the door."

In other words, *manatu'i* when used with a *ke*-clause complement implies an order/duty. It can only mean "remember to do" and never "remember doing". Therefore, the performer of this duty is necessarily the experiencer of the remembering. Consequently, *ke*-clause complements of *manatu'i*-type verbs necessarily contain PRO that is obligatorily controlled by the matrix subject. Thus, we conclude that sentences like (10.23) are ungrammatical due to the semantic reason, and not because an overt NP fails to check its case feature within the *ke*-clause.

Subject to a similar restriction are *kole*-type verbs. Verbs like *kole* ("to request") and *tala* ("to tell") are three-place predicates taking an ERG-marked subject, OBL-marked indirect object and a *ke*-clause complement. *Ke*-clause complements of *kole*-type verbs also obligatorily contain PRO in the subject position. See (10.24) below.

(10.24) a. Na'e kole 'e Sione kia Mele [ke 'alu PRO ki kolo].
Pst request ERG Sione to Mele to go to town
"Sione asked Mele to go to town."

b. Na'e kole 'e Sione kia Mele [ke tapuni'i PRO 'a e matapaa].
Pst request ERG Sione to Mele to close ABS def door
"Sione asked Mele to close the door."

(10.24) c.*Na'e kole 'e Sione kia Mele [ke tapuni'i 'e Pita 'a e matapaa].
Pst request ERG Sione to Mele to close ERG Pita ABS def door
"Sione asked Mele for Pita to close the door."

The empty subject is not replaceable with an overt pronoun.

(10.25) *Na'e kole 'e Sione kia Mele$_i$ [ke ne$_i$ tapuni'i 'a e matapaa].
Pst request ERG Sione to Mele to 3.s. close ABS def door
"Sione asked Mele for her to close the door."

We assume that *kole*-type verbs are also subject to a semantic constraint. Following Dixon (1979), let us consider that verbs like "tell" and "ask" are indirect imperatives. For this reason, the subject of the embedded verb (i.e., the instruction) is necessarily the addressee, the Goal argument. Consequently, the subject of *ke*-clause complements of *kole*-type verbs can only be PRO that is obligatorily controlled by the indirect object of the matrix clause.

There is also a phenomenon of control by object. Verbs like *ako'i* ("to teach") and *fakangofua'i* ("to allow") take an ERG-marked subject, an ABS-marked object, and a *ke*-clause that necessarily contains PRO, which is controlled by the matrix object. See (10.26) below.

(10.26) a. Na'e ako'i 'e Sione 'a Mele [ke kakau PRO].
Pst teach ERG Sione ABS Mele ke swim
"Sione taught Mele to swim."

b. Na'e fakangofua'i 'e Sione 'a Mele [ke 'ave PRO 'ene ta'ahine].
Pst allow ERG Sione ABS Mele ke take poss.3.s. girl
"Sione allowed Mele to take her daughter."

Whether a *ke*-clause can have an overt NP in the subject position is determined by the semantic nature of the matrix verb. For example, *fakangofua'i* ("to allow") could take a *ke*-clause with an overt NP in the subject position, as illustrated by (10.27) below.

(10.27) Na'e fakangofua'i 'e Sione 'a Mele [ke 'alu 'a 'ene ta'ahine ki kolo].
Pst allow ERG Sione ABS Mele ke go ABS poss.3.s. girl to town
"Sione allowed Mele for her daughter to go to town."

To summarise, we have shown a) that the empty element in the subject position of *ke*-clauses is PRO, b) that both PRO and overt NP's may appear in *ke*-clauses, and c) that PRO can occur both as S and A. These findings support our hypothesis that *ke*-clauses are inflected infinitives that can license both PRO and overt NP.

10.3.2 PROarb

As mentioned earlier (Chapter 3), there is a class of intransitive verbs that subcategorise for sentential subjects. These verbs are unaccusatives in that they do not assign an external theta-role. Thus, we assume that there is a null expletive *pro* in the matrix subject position. Verbs of this class cannot take a thematic subject, as illustrated by (10.28) below.

(10.28) a. Kuo pau *pro* [ke 'alu 'a Sione ki kolo].
Perf determined ke go ABS Sione to town
"Sione must go to town."
Lit. "It has been decided that Sione go to town."

b. *Kuo pau 'a Sione.
Perf determined ABS Sione
Intended meaning: "Sione has determined."

Ke-clause complements of unaccusative verbs may contain PRO in the subject position. However, in this case PRO must have an arbitrary interpretation. See (10.29) below.

(10.29) a. Kuo pau *pro* [ke tui PRO ‘a e sote hinehina].
Perf decide ke wear ABS def shirt white
“(One) must wear a white shirt.”
Lit. “It has been decided that (one) wear a white shirt.”

b. ‘Oku tapu *pro* [ke ifi tapaka PRO ‘i heni].
Prs prohibited ke smoke tobacco in here
“Smoking is prohibited here.”
Lit.: It is prohibited that (one) smoke here.”

Since the matrix clause contains no arguments that could serve as a controller, PRO in the *ke*-clause in these examples is necessarily interpreted as arbitrary.

10.3.3 PRO as O

We have shown that A as well as S can be PRO in *ke*-clauses. Our hypothesis that PRO checks its case feature in [Spec, TP] accounts for this fact. Since feature checking of [Null] does not take place in [Spec, Agrs], PRO can be licensed in intransitive constructions despite their lack of Agrs. So far, we have not mentioned whether PRO is allowed to occur as O. An intriguing fact is that the embedded object position may contain an empty element. For example, see (10.30) below.

(10.30) ‘Oku loto ‘a Sione [ke ‘ave ‘e Mele *e*].
Prs want ABS Sione ke take ERG Mele
“Sione wants Mele to take *e*.”

Native speakers find (10.30) incomplete if uttered without a specific context. The sentence is incomplete because the referent of the empty object is not identifiable. Given an appropriate context, the empty object is understood to be coreferential with someone other than *Sione*. Thus, we assume that the empty object is *pro*, and not PRO.

(10.31) ‘Oku loto ‘a Sione$_i$ [ke ‘ave ‘e Mele *pro*$_{i*/j}$].
Prs want ABS Sione ke take ERG Mele
“Sione wants Mele to take him.”

The fact that only the disjoint reference reading is possible indicates that the null object in (10.31) is *pro* rather than PRO.

It would be useful to compare the empty objects in Tongan with those in Chinese. Chinese also permits null objects in embedded clauses. However, Huang (1984) argues that there are two kinds of null arguments in Chinese, *pro* and variables bound by a topic, and that the former may occur only in the subject position. Chinese permits both null subjects and null objects, as illustrated by the following examples.

(10.32) Chinese (Huang 1984: 533)

a. *e* kanjian ta le.
"(He) saw him."

b. ta kanjian *e* le.
"He saw (him)."

They may also occur in embedded clauses. See (10.33) below.

(10.33) Chinese (Huang 1984: 537)[20]

a. Zhangsan$_i$ shuo [$e_{i/j}$ bu renshi Lisi].
Zhangsan say not know Lisi
"Zhangsan said that (he) did not know Lisi."

b. Zhangsan$_i$ shuo [Lisi bu renshi $e_{i*/j}$].
Zhangsan say Lisi not know
"Zhangsan said that Lisi did not know (him)."

However, note that while the null subject may be coreferential with a matrix argument, the null object must have a disjoint reference in an unmarked context. Coreference is permissible only when the matrix subject happens to be the topic.[21] For this reason, Huang (1984) argues that the empty object in Chinese cannot be *pro*. For

[20] Indices are mine.
[21] We define "topic" as what is under discussion, whether previously mentioned or assumed in discourse (cf. Bresnan and Mchombo (1987).

pro, being [+pronominal], should be able to refer to a matrix argument just like the empty subject can.[22] In contrast, an overt pronominal object gives rise to ambiguity: the pronoun may either be coreferential with the matrix subject or have a disjoint reference.

(10.34) Chinese (Huang 1984: 538)

Zhangsan$_i$ shuo Lisi bu renshi ta$_{i/j}$.
Zhangsan say Lisi not know him
"Zhangsan said that Lisi didn't know him."

Thus, Huang (1984) argues that the empty objects in Chinese are variables bound by a topic.

It should be noted also that Huang considers that the null subjects that are coreferential with a matrix argument are instances of *pro* while those which have a disjoint reference are variables like the null objects. Thus, the null subject in (10.32) is regarded not as *pro*, but as a variable bound by a topic. In this view, what we have been calling *pro* in Tongan is also considered a variable bound by a topic. The behaviour of the Tongan *pro* appears to coincide with Huang's characterisation of the Chinese topic variables. However, in Tongan, there is yet another constraint, i.e. an empty argument must be third person singular. In other words, what we call *pro* in Tongan is actually a variable bound by a topic and this variable is subject to another constraint, i.e. the antecedent must be third person singular. In the following discussion, we will refer to what we have been calling *pro* as a topic variable.

[22] Note also that Huang assumes that the null subject coreferential with a matrix argument is *pro*, not PRO. Huang (1984: 552) postulates the following two constraints to account for the coreference possibilities between the empty subject and a matrix argument: a) a pronoun must be free in its governing category (Disjoin Reference) and b) coindex an empty pronominal with the closest nominal element (Generalised Control Rule).

Note also that there is a significant difference between the null subject and the null object in *ke*-clauses. Strictly speaking, the null subject of a *ke*-clause can be a topic variable as well as PRO. Thus, we have two possible structures for *'Oku loto 'a Sione ke 'alu.*

(10.35) a. 'Oku loto 'a Sione [ke PRO 'alu].
Prs want ABS Sione to go
"Sione wants to go."

b. 'Oku loto 'a Sione$_i$ [ke $e_{i*/j}$ 'alu].
Prs want ABS Sione to 3.s. go
"Sione wants him/her to go."

Note, however, that coreference is not permissible in (10.35b): the topic variable in *ke*-clause is obligatorily disjoint in reference. It should be noted also that (10.35b) requires an appropriate context that provides a discourse antecedent for the topic variable. It might be surprising that the variable cannot be bound by the matrix subject under any circumstances. Coreference between the topic variable and the matrix subject would be possible only if the matrix subject happens to be the topic. However, this scenario is not possible in Tongan for the following reason. It seems that in Tongan the use of a topic variable is much preferred to that of a pronoun to refer to the topic. Therefore, if the matrix subject is the topic, it should be a variable as well. The fact that the matrix subject is not a variable in turn suggests that it is not the topic. Hence, the coreference is impossible.

Another intriguing fact is that an overt pronoun, when it occurs in the embedded clause, must have disjoint reference just like the topic variable. See (10.36) below.

(10.36) 'Oku loto 'a Sione$_i$ [ke ne$_{i*/j}$ 'alu].
Prs want ABS Sione to 3.s. go
"Sione wants him/her to go."

This is unexpected, because given the Binding Principle B, a pronoun should be able to refer to anything outside its governing category. Incidentally, this restriction on coreference is predicted by the Avoid Pronoun Principle (Chomsky 1981): namely, coreferential pronouns are excluded from the positions where PRO can occur. Thus, an overt pronoun is necessarily disjoint in reference from the matrix subject.[23]

In contrast, a pronominal object in *ke*-clauses is required to be coreferential with the matrix subject. As illustrated by (10.31), a null object in *ke*-clauses is obligatorily disjoint in reference from the matrix subject. However, an overt pronoun in the relevant position is most naturally interpreted as coreferential with the matrix subject in an unmarked context. See (10.37) below.

(10.37) 'Oku loto 'a Sione$_i$ [ke 'ave ia$_{i/j*}$ 'e Mele].
Prs want ABS Sione ke take 3.s. ERG Mele
"Sione wants Mele to take him."

The third person pronoun *ia* in the *ke*-clause is naturally interpreted as coreferential with the matrix subject when (10.37) is an independent utterance. This contradicts Huang's prediction: since a pronoun can either be coreferential with a matrix argument or refer to something outside the sentence, a sentence with a pronominal object must be ambiguous. However, in Tongan, the presence of a pronominal object does not give rise to ambiguity. On the contrary, the sentence is strictly unambiguous, with the pronoun being obligatorily coreferential with a matrix argument. What is

[23] This kind of functional explanation has an inherent weakness since there are many cases of languages having things they do not strictly need. It should also be noted that it is difficult to state a global economy condition such as the Avoid Pronoun Principle in the minimalist framework, since the numerations of the two constructions being compared are crucially different. However, as we will see shortly, restrictions on coreference between the pronouns in *ke*-clauses and a matrix argument in Tongan seem to be best explained by the Avoid Pronoun Principle.

noteworthy is that an overt pronoun prefers the coreference reading. In contrast with the topic variable, which is used exclusively to refer to a discourse topic and thereby cannot refer to a sentence-internal antecedent, the overt pronoun *ia* generally has its referent inside the same sentence. Interestingly, disjoint reference is possible if the referent is the topic. This patterns with the Chinese empty object, which must be disjoint in reference from the matrix subject unless the latter happens to be the topic. Examples of control by object seem to support this hypothesis. See (10.38) below. Note that the embedded subject must always be PRO, which is controlled by the matrix object.

(10.38) a. Na'e fakangofua'i 'e Sione$_i$ 'a Mele$_j$ [ke PRO$_j$ sivi $e_{i*/j*/k}$].
Pst allow ERG Sione ABS Mele ke examine
"Sione allows Mele to examine (him/her)."

b. Na'e fakangofua'i 'e Sione$_i$ 'a Mele$_j$ [ke PRO sivi ia$_{i/j*/k}$].
Pst allow ERG Sione ABS Mele ke examine 3.s.
"Sione allows Mele to examine him/her."

The topic variable in (10.38a) obligatorily has a disjoint reference interpretation. It cannot be coreferential with either the matrix subject *Sione* or the matrix object *Mele*. This restriction on coreference in turn indicates that the null object in (10.38a) is not PRO. As for the overt pronoun *ia*, it is interpreted as coreferential with the matrix subject *Sione* unless some particular context is provided. In summary, there is a crucial difference between the Chinese and Tongan pronominal objects: pronominal objects in Chinese may refer to anything outside their governing category, while those in Tongan must have a sentence-internal antecedent if there is one available. This rule can be violated only if the pronominal objects refers to the discourse topic.

Our Tongan data show that the empty object is a topic variable, not PRO. In the

current approach, the fact that PRO cannot occur as O is predictable for the following reasons. As mentioned earlier, PRO must check its case in [Spec, TP]. In a transitive construction, O cannot move to this position because it contains a trace of A. A (i.e., the NP base-generated in [Spec, VP]) has to move to [Spec, TP] on its way to [Spec, Agrs] where it has its case feature checked.[24] Consequently, PRO fails to check off its case feature and thereby the derivation would crash.

10.3.4 Control by pronominal arguments

We studied various instances of control in which the controller is a full NP. We have seen that *ke*-clauses may contain null elements, both PRO and a topic variable. In determining whether a null element is PRO or a topic variable, we noted the following properties that distinguish the two: a) the topic variable in Tongan must have an antecedent that is third person singular in its feature specification; b) an overt pronoun may occur in place of the topic variable, but not in lieu of PRO; and c) the topic variable obligatorily has disjoint reference, whereas PRO must be coreferential with a matrix argument.[25] This observation led us to conclude that the general restriction on control that PRO must be subject applies in Tongan as well. We have also come across some peculiar nature of the third person singular pronouns. In an unmarked context, sentences with a topic variable in the embedded object position have the disjoint reference reading, while those with an overt pronoun require the coreference reading. This is because the topic variable must be bound by the discourse topic. It should be noted also that coreference is not possible for pronouns in the embedded subject

[24] In this sense, it is self-evident that the null object in (10.32a) cannot be PRO. A single clause cannot contain more than one PRO: since only one of them can check its case feature, other PRO(s) would fail to check their case feature. Hence, ungrammaticality is inevitable.

position. In what follows, we will study the aforementioned peculiar properties of the Tongan pronouns in relation to the control phenomenon.

The data studied below present three puzzles. First, it appears that PRO can be controlled by a pronominal argument only if it is A, but not if it is S. Considering that PRO cannot occur as O, this in turn suggests that as far as the pronominal controllers are concerned, control phenomenon in Tonga also exhibits a certain degree of ergativity: control by pronominal arguments is permissible with A but not with S or O. The second puzzle concerns the coreference possibility of the third person pronouns. We find two consistent differences between clitic pronouns and independent pronouns. First, a topic variable in the embedded subject position must have disjoint reference while both coreference and disjoint reference are possible for a topic variable in the embedded object position. Although the native speakers consider sentences with an empty element in the embedded subject position ambiguous, we assume that this ambiguity is because of the superficial resemblance between the two constructions given in (10.39) below.

(10.39) a. ʻOku loto ʻa Sione [ke PRO ʻalu].
Prs want ABS Sione ke go
"Sione wants to go."

b. ʻOku loto ʻa Sione [ke *e* ʻalu].
Prs want ABS Sione ke go
"Sione wants (him) to go."

The empty subject may be either PRO or *a topic variable*. If it is PRO, coreference is required. If it is *a topic variable*, it must have disjoint reference. In (10.39a), the matrix subject is coreferential with the empty subject of the embedded clause. In

[25] An exception is PROarb in the case of the one-place predicates such as *pau* and *tapu*.

contrast, the empty subject of the *ke*-clause in (10.39b) has disjoint reference. Thus, we assume that (10.39b) is not ambiguous: the topic variable cannot be coreferential with the matrix subject. It should also be noted that the variable reading (10.39b) is not available unless an appropriate context is provided. Secondly, as for overt pronouns, the subject clitic *ne* necessarily has disjoint reference, while the independent pronoun *ia* is required to be coreferential with the matrix subject. There seems to be a correlation between these peculiar constraints on coreference and the availability of PRO in the relevant positions. In the subject position in which PRO may occur, the appearance of an overt pronoun is prohibited if coreference is implied. In other words, PRO cannot be replaced by an overt pronoun. Therefore, any occurrence of an overt pronoun in the subject position must have disjoint reference. On the other hand, the object position cannot contain PRO. Therefore, theoretically, it is possible for an overt element to be coreferential with any argument, including the matrix arguments. Nevertheless, coreference with a matrix argument is the preferred option for *ia*. We will propose that the distribution of *ia* is governed by an elsewhere condition: the topic variable is used to refer to the discourse topic, while an overt pronoun is used otherwise.

10.3.4.1 Control of S

A curious fact is that control of S by a pronominal argument is forbidden. The embedded S cannot be PRO if the NP with which it is coreferential is a pronoun. Instead, an overt pronoun must appear in *ke*-clauses even under coreference. See (10.40) below.

(10.40) a. 'Oku ou loto [ke *(u) 'alu].
Prs 1.s. want ke 1.s. go
"I want to go."

(10.40) b. 'Oku ou manatu'i [ke *(u) 'alu ki he 'uafu].
Prs 1.s. remember ke 1.s. go to def wharf
"I remember to go to the wharf."

c. Na'e kole mai 'e Sione kiate au [ke *(u) 'alu ki ai].
Pst request toward-me ERG Sione to-person 1.s. ke 1.s. go to there
"Sione asked me to go there."

Sentences in (10.40) are illicit if the first person singular pronoun *u* is omitted. In other words, the control construction of the form (10.41) below is not permissible.[26]

(10.41) *'Oku ou loto [ke 'alu PRO].
Prs 1.s. want ke go

To generalise, a matrix argument that is [+pronominal] cannot control S of the embedded clause.

As far as the third person singular pronoun *ne* is concerned, there is yet another principle to be considered. As shown above, the third person singular subject pronouns cannot be coreferential with the matrix argument. Hence, the matrix subject *Sione* and *ne* in (10.42a) below must be disjoint in reference. On the other hand, the aforementioned principle rules out (10.42b).

[26] Of course, the embedded subject may be empty, as illustrated by (i) below, provided that coreference is not implied. This possibility again requires an appropriate context, in which the topic variable can identify its features with those of a discourse antecedent.

(i) 'Oku ou loto [ke *e* 'alu].
Prs 1.s. want ke go
"I want (him/her) to go."

(10.42) a. ‘Oku loto ‘a Sione$_i$ [ke ne$_{*i/j}$ ‘alu].
Prs want ABS Sione ke 3.s. go
“Sione$_i$ wants him$_{*i/j}$ to go.”

b. *‘Oku ne loto [ke ‘alu PRO].
Prs 3.s. want ke go
“He wants to go.”

The question is, then, what if both the matrix and embedded clauses contain *ne*. Consider (10.43) below.

(10.43) a. ‘Oku ne$_i$ loto [ke ne$_{i/*j}$ ‘alu].
Prs 3.s. want ke 3.s. go
“He$_i$ wants him$_{i/*j}$ to go.”

b. ‘Oku ne$_i$ loto [ke $e_{*i/j}$ ‘alu].
Prs 3.s. want ke go
“He$_i$ wants him$_{*i/j}$ to go.”

(10.43a) shows that *ne* in the embedded clause must be coreferential with the pronominal subject of the matrix clause. Note that disjoint reference is not permissible. In contrast, if the embedded subject pronoun is a topic variable, the constraint on interpretation is the opposite: the matrix subject pronoun *ne* and the topic variable must be disjoint in reference, as illustrated by (10.43b). This striking contrast between (10.43a) and (10. 43b) confirms the following hypothesis. First, pronominal arguments fail to control S of the embedded clause. As a result, the embedded subject must be realised as an overt pronoun if coreference is implied. This constraint rules out the disjoint reference reading in (10.43a). On the other hand, (10.43b) indicates that the topic variable does not qualify as a coreferential subject. This restriction can be explained as follows. Recall our observation that a topic variable in the embedded object position is generally disjoint in reference, while the overt pronoun *ia* is coreferential with the matrix subject. Put differently, the overt pronoun *ia* requires a sentence-internal antecedent whereas the topic variable seems to

avoid the sentence-internal antecedent in an unmarked context. Coreference is prohibited in (10.43b) because the empty subject is a topic variable, which must be bound by the discourse topic. Bearing this hypothesis in mind, see (10.44) below.

(10.44) a. ‘Oku loto ‘a Sione [ke ‘alu ‘a Pita].
Prs want ABS Sione ke go ABS Pita
“Sione wants Pita to go.”

b. = *‘Oku ne$_i$ loto [ke ne$_j$ ‘alu].

c. = ‘Oku ne$_i$ loto [ke e_j ‘alu].

d. = ‘Oku loto ‘a Sione$_i$ [ke ne$_j$ ‘alu].

(10.44a) can be paraphrased as (10.44c) but not as (10.44b). (10.44b) is ruled out because coreference is obligatory when the coreferential arguments are both pronominal. In contrast, the pronominal subject of the embedded clause in (10.44d) is interpreted as disjoint in reference because the matrix subject is a full NP.

To summarise, there are three points to note: a) a pronominal argument cannot control the embedded PRO (S); b) if the matrix subject is pronominal, the coreferential embedded subject cannot be PRO but must be realised overtly as an overt pronoun; and c) the topic variable cannot refer to the matrix subject.

10.3.4.2 Control of A

In contrast, A behaves differently from S in the constructions with a pronominal antecedent. PRO can occur as A in *ke*-clauses even if the controller is a pronoun. See (10.45) below.

(10.45) a. 'Oku ou loto [ke (*u) fakatau 'a e me'a lele].
Prs 1.s. want ke 1.s. buy ABS def car
"I want to buy a car."

b. Na'a ku manatu'i [ke (*u) tapuni'i 'a e matapaa].
Pst 1.s. remember ke 1.s. close ABS def door
"I remembered to close the door."

c. Na'e kole 'e Sione kiate au [ke (*u) tamate'i 'a e maama].
Pst request ERG Sione to-person 1.s. ke 1.s. kill ABS def light
"Sione asked me to turn off the light."

The occurrence of the first person singular pronoun *u* in the embedded clause leads to ungrammaticality. We therefore assume that the sentences in (10.46) are legitimate in Tongan, with PRO (A) controlled by a pronominal argument.

(10.46) a. 'Oku ou loto [ke fakatau PRO 'a e me'alele].
Prs 1.s. want to buy ABS def car
"I want to buy a car."

b. Na'a ku manatu'i [ke tapuni'i PRO 'a e matapaa].
Pst 1.s. remember to close ABS def door
"I remembered to close the door."

c. Na'e kole 'e Sione kiate au [ke tamate'i PRO 'a e maama].
Pst request ERG Sione to-person 1.s. to kill ABS def light
"Sione asked me to turn off the light."

Examples such as (10.47) below provide evidence for the PRO analysis. In (10.47), the third person dual pronoun *na* cannot be coreferential with the matrix subject. The sentence is grammatical only if the two pronouns are interpreted as disjoint in reference.

(10.47) 'Oku na_i loto [ke $na_{*i/j}$ fakatau 'a e me'alele].
Prs 3.d. want to 3.d. buy ABS def car
"They want them to buy a car."

(10.47) shows that a coreferent overt pronoun is not permitted in the position in which PRO can occur.

Applied to the third person singular pronoun *ne*, this principle predicts that an occurrence of *ne* in the embedded clause necessarily implies disjoint reference. This hypothesis is borne out, as illustrated by (10.48).

(10.48) a. 'Oku ne$_i$ loto [ke ne$_{*i/j}$ fakatau 'a e me'alele].
Prs 3.s. want ke 3.s. buy ABS def car
"He wants him to buy a car."

b. 'Oku ne loto [ke fakatau PRO 'a e me'alele].
Prs 3.s. want ke buy ABS def car
"He wants to buy a car."

c. 'Oku ne$_i$ loto [ke *e*$_{*i/j}$ fakatau 'a e me'alele].
Prs 3.s. want ke buy ABS def car
"He wants him to buy a car."

Note that the embedded subject *ne* in (10.48a) could be replaced with a topic variable, given an appropriate context. In that case, coreference between the topic variable and the matrix subject is disallowed, as illustrated by (10.48c). The empty subject of the embedded clause must be PRO if it is coreferential with a matrix argument, as a topic variable cannot be bound by a matrix argument.

The data cited above clearly indicate that the embedded clause contains PRO in the subject position. In other words, it is shown that pronominal arguments can serve as a controller if the controllee is A. This is a puzzling property of the Tongan control phenomenon. Pronominal arguments can control A but not S. Where coreference is implied between a pronominal argument and the embedded S, the latter must be realised as an overt pronoun.

10.3.4.3 Coreference between O and a pronominal argument

The generalisation that control of O is banned also holds of the structures whose

matrix subject is a pronominal argument. See (10.49) below.

(10.49) a. 'Oku ou loto [ke 'ave *(au) 'e Mele].
Prs 1.s. want ke take 1.s. ERG Mele
"I want Mele to take me."
b. Na'a ku fakangofua'i 'a Sione [ke 'ave *(au) PRO].
Prs 1.s. allow ABS Sione ke take 1.s.
"I allowed Sione to take me."

The first person singular pronoun *au* cannot be omitted: otherwise, the sentences would be ungrammatical. A similar condition applies with regard to the sentences in (10.50) below. The pronominal matrix subject requires a coreferential overt pronoun in the embedded object position. The empty object in the embedded clause renders the sentence illicit if coreference is intended. These data confirm that PRO cannot occur in the embedded object position.

(10.50) a. 'Oku ne_i loto [ke 'ave $ia_{i/*j}$ 'e Mele].
Prs 3.s. want ke take 3.s. ERG Mele
"He_i wants Mele to take him_i."

b. 'Oku ne_i loto [ke 'ave $e_{*i/j}$ 'e Mele].
Prs 3.s. want ke take ERG Mele
"He_i wants Mele to take him_j."

Thus, our data have revealed an interesting fact about the control phenomenon in Tongan. Control constructions with a full NP matrix subject behave differently from those with a pronominal subject. The former respects the general constraint on control that PRO may occur only in the subject positions: PRO is excluded from the embedded object position. The latter, on the other hand, abides by yet another rule: namely, PRO may occur only as A. Not only O but also S must be realised as an overt pronoun. Put differently, as far as the control by pronominal arguments is concerned, A is distinguished from S and O. Although Tongan does demonstrate the subject-

oriented property of control, its ergative tendency protrudes at the same time. This is a finding worthy of note, as it has been widely accepted that the concept of subject cross-linguistically overrides ergativity in the control phenomenon. Our data demonstrate a remarkable case, in which ergativity has its effect over the subject-oriented nature of control phenomenon.[27] However, it is not clear why this is so. We will leave this question open to future research.

10.4 Problems

The Tongan data studied in the previous section confirm the general assumption that occurrence of PRO is restricted to the subject position. This subject-oriented nature of PRO is explained by our proposal in combination with the Null case hypothesis: PRO must check its case feature by [–tense] T in [Spec, TP]. Thus, PRO can occur as S as well as A in ergative languages, since case checking of PRO does not involve Agrs. On the other hand, PRO cannot be O because it would not be able to move to [Spec, TP] and as a result, fail to check its case feature. This is so because [Spec, TP] is already occupied by (a trace of) A: A has to stop at [Spec, TP] on its way to [Spec, Agrs], in which its case feature is checked off.

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[27] Craig (1976:105) reports another interesting case. In Jacaltec, it is only S-arguments that can be PRO. Consider (i) below. It seems that Jacaltec respects both the subject-oriented nature (hence *PRO (O)) as well as ergativity (hence *PRO(A)).

(i) a. xc-ach to sajchon.
ASP-ABS2 go to play
"You went to play."
b. xc-ach to hin-aw-ila.
ASP-ABS2 go ABS1-ERG2-see
"You went to see me."

However, we are aware of two problems: a) PRO and overt NP's are allowed to occur in the same position and b) PRO cannot be S if the controller is a pronominal argument. The first problem can be accounted for by our hypothesis that *ke*-clauses are inflected infinitives in the sense of Raposo (1987). Since they contain both [–tense] T and Agrs, PRO as well as overt NP's are able to check off their case feature in *ke*-clauses: specifically, PRO in [Spec, TP] and overt NP's in either [Spec, Agro] or [Spec, Agrs]. As mentioned earlier, a similar phenomenon is found in some accusative languages, e.g., Icelandic (Sigurðsson 1991) and Modern Greek (Watanabe 1993). As for the second problem, an explanation is yet to be sought. However, we leave this issue open to future research. In addition to the problem of coexistence of PRO and overt NP's, there is another question of NOM-marked PRO. In the data regarding the quantifier agreement in the Icelandic infinitives and the agreement on the secondary predicates in the Russian infinitives, PRO seems to trigger the NOM agreement. This seemingly suggests that PRO in such instances bears NOM instead of Null case. In this section, we will reconsider the data and attempt to provide a coherent account for the aforementioned problems.

10.4.1 Coexistence of PRO and overt NP's

In this subsection, we will study the data concerning Icelandic, Malagasy and Modern Greek. These languages have a type of clause that allows both PRO and overt NP's in the subject position. We will also consider Watanabe's (1993a) proposal with regard to the controversial phenomenon found in Modern Greek.

10.4.1.1 Icelandic *að*-clauses

Icelandic *að*-clauses, like Tongan *ke*-clauses, can have lexical subjects as well as PRO. See (10.51) below.

(10.51) Icelandic (Sigurđsson 1991: 340)

a. María segir að þú lesir alltaf bókina.
Mary says that you read always the book

b. María lofaði að PRO lesa alltaf bókina.
Mary promised to read (inf) always the book
"Mary promised always to read the book."

Sigurđsson argues that Infl in the *að*-clause of (10.51a) is Infl/+Agr and that of (10.51b) is Infl/–Agr. It is assumed that Infl/–Agr is not a proper governor and therefore lexical arguments cannot be licensed in the infinitive *að*-clauses. Note that the notion of (proper) government is crucial to Sigurđsson's account. Presence of a proper governor determines whether a lexical subject is permitted in an *að*-clause. In terms of the Null case approach, this amounts to saying that Infl/+Agr checks NOM but Infl/–Agr checks Null. Interestingly, Sigurđsson's hypothesis is in accordance with our observation: case feature checking of NOM is dependent on the presence of Agr(s) while that of Null is related to T.

10.4.1.2 Malagasy *fa*-clauses

In Malagasy, subordinate clauses introduced by *fa* apparently allow PRO as well as overt NP's to appear in the subject position. If the embedded subject is coreferential with the matrix subject, *fa*-clauses contain a null subject. See (10.52) below.

(10.52) Malagasy

N-ilaza i Paoly [fa h-andeha PRO].
Pst-say NOM Paul fa Fut-come
"Paul said that (he) would come."

Keenan (1976a) notes that a pronoun can also appear in the embedded subject position. However, in such a case, the pronoun is interpreted as disjoint in reference.[28] With coreference implied, *fa*-clauses must have PRO in the subject position. What is particularly puzzling about Malagasy *fa*-clauses is that these clauses seem to be finite. The verb shows inflection for tense in *fa*-clauses. Note that in (10.52), the verb in the *fa*-clause is inflected for future tense. In sum, Malagasy *fa*-clauses allow PRO even though they contain [+tense] T. The problem is that according to the Null case hypothesis, [+tense] T does not have the feature [Null]. On the other hand, empirical evidence demonstrates that the empty subject in *fa*-clauses is PRO and cannot be *pro*. First, this empty subject is not replaceable with an overt pronoun. If an overt pronoun appears in this position, coreference is not possible. If it were *pro*, it should be freely replaced with a corresponding overt pronoun. Secondly, *fa*-clauses do not permit an empty object despite the fact that generally *pro* can appear as O in Malagasy. The Malagasy *fa*-clauses and the Tongan *ke*-clauses are very much alike except for one significant difference is that the verb shows overt inflection for tense in the former. We therefore need to explain why PRO is allowed in the characteristically finite *fa*-clauses, assuming that PRO bears Null case and that Null case is checked by [–tense] T.

10.4.1.3 Modern Greek *na*-clauses

Another instance of the coexistence of PRO and lexical subjects is found in Balkan languages, e.g., Modern Greek and Romanian. Watanabe (1993a,b) cites some data showing that the Balkan subjunctives allow PRO as well as lexical subjects. Subjunctives are by definition finite: the verb inflects as in indicative clauses. Consider (10.53) below. The verb appears in an identical form in the finite *oti*-clause and the subjunctive *na*-clause.[29]

(10.53) Modern Greek (Terzi 1992 cited by Watanabe 1993a:285)

a. O Yiannis kseri [oti doulevo mazi sou].
John knows that work-1.s. with you

b. O Yiannis theli [na doulevo mazi sou].
John wants subj-prt work-1.s. with you

On the other hand, we have sentences like (10.54) below.

(10.54) Modern Greek (Terzi 1992 cited by Watanabe 1993a: 286)

Pion$_i$ nevriazi to PRO$_i$ na pleni to aftokinito tou$_i$ t_i?
whom upsets the subj-prt washes the car his
"Who$_i$ does washing his$_i$ car upset?"

The empty subject in the *na*-clause is understood to be PRO because (10.54) escapes the weak crossover effect. As Higginbotham (1980) points out, this is a special property of PRO. In short, the data show that *na*-clauses albeit their status as finite clauses allow PRO subjects. This is a situation similar to what is called subjunctives in Icelandic and Malagasy.

[28] Note that the Tongan *ke*-clauses exhibit the similar effect. An overt pronominal subject of the *ke*-clause cannot be coreferential with the matrix subject.
[29] Terzi (1992) analyses *oti* as a complementiser and *na* as a particle. Hence, it is assumed that *na*-clauses do not contain a complementiser.

10.4.1.4 Feature checking in C(omp)

Watanabe (1993a,b) notes yet another significant fact about the Modern Greek *na*-clauses. Namely, *na*-clauses are limited in terms of tense possibilities compared with indicatives: tense of *na*-clauses cannot be interpreted as past. According to Iatridou (1981), *na*-clauses with a PRO subject cannot have past tense. In addition, Terzi (1992) shows that restriction on tense possibilities is found also with *na*-clauses with *pro* subjects. Based on this observation, Watanabe argues that subjunctives are somehow deficient in comparison with indicatives in terms of tense, and relates this fact to the proposal of Stowell (1982) that PRO is associated with either future (unrealised) tense or present (simultaneous) tense. In short, Watanabe (1993a) argues that the relative defectiveness of *na*-clauses with regard to tense is the key factor that licenses PRO in *na*-clauses. As for lexical NP's, Terzi (1992) proposes that NOM-marked subjects can appear only if there is overt material in C(omp): specifically, either *oti* or *na*. It should be noted that crucially, infinitives have no overt element in C. To summarise, the condition on Comp ensures that lexical subjects are allowed in *na*-clauses. On the other hand, the defectiveness in tense possibilities allows PRO to appear in *na*-clauses.[30]

The above observation leads to the following hypothesis. Watanabe (1993a,b) proposes that the case feature(s) of T is determined by the richness of its semantic content and postulates four types of T illustrated by (10.55) below.

(10.55) Association of T with case

Richest T	indicatives	- NOM
	subjunctives	- NOM/(Null)
	infinitives	- Null
Impoverished	ECM	- No case

T with the richest content is that of indicatives and is associated with NOM. The most impoverished is that of ECM clauses, which is not associated with any case. (As a result, the subject NP must move out of the embedded clause to receive case from the matrix verb). T of infinitives is recognisably poorer and is associated with Null. As we have seen, subjunctives are ranked somewhere in between indicatives and infinitives. T of subjunctives seems to be richer than that of infinitives, yet not as rich as that of indicatives. Hence, for certain subjunctives like those of the Balkan languages, T has two case features, NOM and Null.

Secondly, Watanabe (1993a,b) observes that there is a correlation between the case of the embedded subject and the form of complementiser. For example, in English, NOM appears if the complementiser is *that*; *for* is required with ACC-marked subjects; and Null is licensed if there is no complementiser. The Modern Greek data seem to support this hypothesis. Terzi (1992) argues that overt material in C licenses NOM-marked subjects in the subordinate clauses. Watanabe postulates that certain feature [F] is created through case-checking process in Agrs and that Agrs has to move to C to check off this feature [F] by a element in C. According to this approach, coexistence of PRO and lexical NP's can be explained as follows. Let us assume that checking of Null case creates [F1] in Agrs while that of NOM creates [F2]. Suppose that *na-*

[30] It should be noted that not all *na*-clauses allow PRO subjects. PRO is allowed in *na*-clauses only if the verb selects that option.

clauses that allow PRO contain a Comp element, say C1 with the feature [F1]. Similarly, those with a lexical subject have a Comp element with the [F2] feature, C2. In other words, there are potentially two C elements that are available for *na*-clauses. If a certain *na*-clause selects C1, PRO can occur in that particular clause. If C2 is selected, only lexical subjects can occur in the subject position. The choice of C element varies depending on the verbs. The novelty of this hypothesis is that it assumes that T may have two case features and thus both NOM and Null can be checked in a same clause type. However, only one of them is accessible in a particular structure, as the choice of C in turn determines which case is available in a given structure.

10.4.1.5 Inflected infinitive approach

Granted that Watanabe's (1993a,b) proposal explains the controversial phenomenon found in the Balkan languages, it also raises some additional complication to the standard feature checking theory. First, allowing T to have two case features is not ideal, although these two features are distinguished at a later stage of derivation, specifically in C by a C element. However, is it really necessary to stipulate a) that a feature is created as a result of case checking in Agrs and b) that another feature checking takes place in C? Possible though it is, one cannot deny that this analysis makes things more complex.

In contrast, the current analysis can account for the same phenomenon in a much simpler manner. In the current analysis, four clause types given in (10.55) are differentiated in terms of two factors: the feature [±tense] of T and (the presence of)

Agrs. See (10.56) below.

(10.56) Indicative T [+tense] Agrs

Subjunctive T [–tense] Agrs

Infinitive T [–tense] -----

ECM constructions are understood as infinitives: since an overt NP cannot check off its case feature, it moves out of the embedded clause into [Spec, Agro] of the matrix clause. There is no need to stipulate another type of T. As discussed above, Tongan *ke*-clauses have [–tense] T and Agrs while English infinitives lack the latter.[31] It is also assumed that case features [Null] and [NOM/ERG] are associated with [–tense] T and Agrs, respectively. This way, we need not assign two case features to a single element. We also assume, following Stowell (1982), that [–tense] T is an example of tense anaphora that is dependent on the matrix tense and is interpreted as either simultaneous or unrealised in relation to the tense of the matrix clause. We may apply this analysis to the other cases concerned: Greek *na*-clauses, Malagasy *fa*-clauses, and Icelandic *að*-clauses are all similar to Tongan *ke*-clauses, containing [–tense] T and Agrs. Hence, both PRO and overt subjects can be licensed. PRO checks its case feature in [Spec, TP] and an overt NP, in [Spec, Agrs]. Two questions should be addressed: a) whether all of these subjunctive clauses demonstrate similar deficiency in terms of temporal interpretation and b) why verbs inflect for agreement with PRO in Modern Greek *na*-clauses, but not in Icelandic *að*-clauses. We will discuss these problems below.

[31] Note that Bobaljik (1993) assumes that English infinitives also contain Agrs but it is defective, i.e., cannot check [NOM/ERG].

Regarding tense, we have seen that Modern Greek *na*-clauses as well as Tongan *ke*-clauses can only refer to present or future in relation to the matrix tense.[32] However, Icelandic *að*-clauses and Malagasy *fa*-clauses do not conform to our hypothesis. For example, in Icelandic *að*-clauses, when they contain an overt NP subject, the verb inflects for tense. See (10.57) below.

(10.57) Icelandic (Zaenen, Maling and Thráinsson 1985: 451, 462)

a. Jón telur að María hafi kysst Harald í gær.
Jon believes that Mary has kissed Harold yesterday

b. Hvaða ambáttir heldur þú að konunginum verði gefnar?
which slaves think you that the king will-be given

In (10.57a), the tense of *að*-clause is present perfect, and in (10.57b), it is future. Sigurđsson (1991) proposes that there are two kinds of *að*-clauses, infinitive and declarative, and the former lacks Agr. It is assumed that both have [+tense] T. This proposal does not explain why verbs inflect for tense only in the latter. Note that in (10.57a), present perfect is used rather than past. English infinitives use the same strategy to refer to past events. If present perfect is always used in *að*-clauses to refer to past events, then possibly, past tense is not available for *að*-clauses. Our hypothesis that T of *að*-clauses is [–tense] will then be borne out.[33]

More problematic is Malagasy *fa*-clauses. Consider (10.58) below.

[32] With regard to Modern Greek, we need to assume that the referent of the tense anaphora is overtly indicated in the form of tense inflection, whereas in Tongan the tense anaphora keeps its phonological form *ke* regardless of its referent.

[33] Unfortunately, I could not find an example of *að*-clauses containing a verb inflected for past tense. We will have to leave this question open to future research.

(10.58) Malagasy (Randriamasimanana 1986: 551)

a. N-anantena an'i Jeanne [fa n-andidy ny mofo PRO] i Paoly.
Pst-expect ACC Jeanne fa Pst-cut the bread NOM Paul
"Paul expected Jeanne to have cut the bread."

b. N-anantena an'i Jeanne [fa h-andidy ny mofo PRO] i Paoly.
Pst-expect ACC Jeanne fa Fut-cut the bread NOM Paul
"Paul expected Jeanne to cut the bread."

As illustrated by (10.58a), the verb can inflect for past tense in *fa*-clauses. This apparently goes against our hypothesis that *fa*-clauses contain [–tense] T, and that [–tense] T can only be future or present. Curiously, the embedded verb in *fa*-clauses cannot inflect for present tense, as illustrated by (10.59) below.

(10.59) Malagasy (Randriamasimanana 1986: 551)

*N-ananantena an'i Jeanne [fa m-andidy ny mofo PRO] i Paoly.
Pst-expect ACC Jeanne fa Prs-cut the bread NOM Paul

Thus, tense of *fa*-clause is limited to some extent, but not in the way we expect. On the other hand, if T of *fa*-clauses is [+tense], then we cannot explain why PRO is licensed in *fa*-clauses. Thus, we have two options: we should either give up our hypothesis that [–tense] T can be only future and present or reconsider the assumption that the empty subject in *fa*-clauses is PRO. If we take the latter alternative, then what could this empty element be? Earlier, we argued that it could not be *pro* because a) it cannot be replaced by an overt pronoun and b) it cannot appear in the object position. There is, however, another possibility: namely, this empty element is a trace. Note that constructions involving *fa*-clauses resemble the Tongan *totonu/tuku*-construction (cf. Chapter 7). Consider (10.60) below: *fantatra* is a root passive, meaning "to be known".

(10.60) Malagasy (Randriamasimanana 1986: 540)

a. Fantatra [fa h-andidy ny mofo i Jeanne].
known that Fut-cut the bread NOM Jeanne
"It is know that Jeanne will cut the bread."

b. Fantatra i Jeanne$_i$ [fa h-andidy ny mofo e_i].
known NOM Jeanne that Fut-cut the bread

As illustrated by (10.60b), the embedded subject can move out of the embedded clause to the matrix subject position. We assume that (10.60b) is derived from (10.60a) by operator movement and consequently, has the form (10.61) below.

(10.61) Fantatra i Jeanne$_i$ [OP$_i$ [fa h-andidy ny mofo t_i].
known NOM Jeanne that Fut-cut the bread

Note that the NOM-marked argument that is coreferential with the empty element precedes the sentential complement in (10.60b). In contrast, the NOM-marked controller generally follows the sentential complement containing PRO, whereby the construction maintains the order VOS. See (10.62) below.

(10.62) N-itekita [ny h-ividy ny trano PRO$_i$] i Paoly$_i$.
Pst-intend to Fut-buy the house NOM Paul
"Paul intended to buy the house."

In contrast, *fa*-clauses cannot contain an empty subject that is coreferential with the postposed subject, as illustrated by (10.63).

(10.63) Malagasy (Randriamasimanana 1986: 501)

*N-itetika [fa h-ividy ny trano PRO$_i$] i Jeanne$_i$.
Pst-intend that Fut-buy the house NOM Jeanne

Similarly, we assume that (10.58a) is actually derived from (10.64a) by operator movement and has the structure (10.64b).

(10.61) a. N-anantena [fa n-andidy ny mofo i Jeanne] i Paoly.
Pst-expect that Pst-cut the bread NOM Jeanne NOM Paul
"Paul expected that Jeanne had cut the bread."

b. N-anantena an'i Jeanne$_i$ [OP$_i$ [fa n-andidy ny mofo t_i] i Paoly.
Pst-expect ACC Jeanne that Pst-cut the bread NOM Paul
"Paul expected Jeanne to have cut the bread."

In this analysis, the empty element in *fa*-clauses is not replaceable with an overt pronoun because Malagasy does not permit a resumptive pronoun in such a case. As to why it cannot occur as O, we need to study whether O can be relativised in a fashion similar to A and S. Interestingly, O cannot be relativised. In order to relativise O, the construction has to be passivised first. Thus,

(10.65) Malagasy (Keenan 1976a: 265)

a. *ny lamba (izay) m-anasa ny zazavavy
the clothes that Prs-wash the girl
"the clothes that the girl is washing"

b. ny lamba (izay) sasan' ny zazavavy
the clothes that wash-pass-by the girl
"the clothes that are washed by the girl"

This explains why (10.66) is ruled out.

(10.66) *N-anantena ny mofo$_i$ [OP$_i$ [fa n-andidy t_i i Jeanne] i Paoly.
Pst-expect the bread that Pst-cut NOM Jeanne NOM Paul
Lit."Paul expected the bread to Jeanne have cut."

In summary, *fa*-clauses contain [+tense] T and the empty subject is not PRO.[34] Although the question as to why verbs cannot inflect for present tense in *fa*-clauses

[34] An apparent problem is verbs like *m-ilaza* ("to declare"). Consider (i) below.
(i) a. N-ilaza i Paoly [fa h-andeha *e*].
b. *N-ilaza [fa h-andeha i Paoly].
Let us assume that (ib) is ruled out because unlike *fantatra*, *m-ilaza* assigns an external theta-role and thereby cannot have an expletive subject. (ib) in turn rejects the PRO analysis, as illustrated by (ii).
(ii) *N-ilaza [fa h-andeha PRO] i Paoly.
Note also that *m-ilaza* cannot take *ny*-clause, as illustrated by (iii).
(iii)*N-ilaza [ny h-andeha PRO] i Paoly.
These data suggest that *Paoly* in (ia) is base-generated in the subject position and that (ia) is derived by operator movement.

still remains unanswered, let us leave this issue open for future research. What matters here is that we are still able to maintain our hypothesis that [–tense] T can be only present or future.

Let us turn to the second problem: namely, why verbs agree with PRO in Modern Greek *na*-clauses but not in Icelandic *að*-clauses. Sigurðsson (1991) proposes that there are two types of *að*-clauses, infinitive and declarative and that the former lacks Agr. This hypothesis explains why the verb appears in the invariant infinitive form if the subject is PRO, while it agrees with the subject in person and number if the subject is a lexical NP. However, it cannot explain why PRO is licensed in *að*-clauses if it is assumed that both *að*-clauses contain [+tense] T as Sigurðsson (1991) does. Thus, we assume that *að*-clauses contain [–tense] T and Agr(s). We may propose that this inconsistency regarding the verbal inflection is due to the fact that PRO does not have phi-features. As a result, the verb appears in its infinitive form. A similar pattern is found in Portuguese: the verb does not show any agreement in infinitives in which the subject is PRO, but it does agree with an overt subject (Raposo 1987). However, this hypothesis faces difficulty in accounting for the Modern Greek data. Verbs consistently show agreement with the empty subject that is presumably PRO. One way to do away with this problem is to stipulate that PRO has phi-features as well as case feature in Modern Greek but it lacks phi-features in Icelandic and Portuguese.[35]

10.4.2 Case-marked PRO

As discussed above, the inflected infinitive approach seems able to account for the

coexistence of PRO and overt NP's in other languages. A real challenge to the current approach is the phenomenon in which PRO seems to bear NOM (or some other inherent case) instead of Null. In this subsection, we will consider Icelandic and Russian. Sigurđsson (1991) argues that PRO in Icelandic must bear either a quirky case or NOM.[36] In Icelandic, adjectival predicates and passive participles agree in case, number and gender with an NOM-marked argument. Besides, nominative agreement is triggered only by NOM-marked arguments. With DAT-marked NP's, for example, adjectival predicates and passive participles appear in the default form. See (10.67) below.

(10.67) Icelandic (Sigurđsson 1991: 333-334)

a. Strákunum hafði verið kalt.
the boys(DAT) had (dflt) been cold (dflt)

b. *Strákunum höfðu verið köldum
the boys(DAT) had (3.pl.) been cold (DAT.pl.m/f/n)

In (10.67a), both the verb and the adjective appear in the default form. As illustrated in (10.67b), agreement with a DAT subject is prohibited. In contrast, in *að*-clauses with PRO, predicates and participles show nominative agreement. See (10.68) below.

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[35] However, as we will see shortly, this assumption is not free from problems, as quantifiers and passive participles show agreement in number, person and gender with PRO in Icelandic.

[36] As to the quirky case-marked PRO, Sigurđsson cites the following data concerning the agreement on the quantifier *allir*.

(i) Strákanir vonast til [að PRO komast allir í skóla].
the boys (NOM) hope for to NOM get all (NOM) to school

(ii) Strákanir vonast til [að PRO vanta ekki alla í skólann].
the boys (NOM) hope for to ACC lack not all (ACC) in the school

Allir ("all") inflects for case, gender and number. (ii) shows that *allir* appears in the accusative form, indicating PRO bears ACC. The matrix subject cannot be responsible for this agreement because it is marked for NOM. Note that quirky PRO subjects raise another problem. The fact that PRO can bear an inherent case undermines the fundamental assumption that the case feature of PRO is [Null] and not the unspecified [case].

(10.68) Icelandic (Sigurđsson 1991: 337)

a. Strákunum leiddist [að PRO verða kosnir í stjórnina].
the boys(DAT) bored (dflt) to be elected (NOM) to the board
"The boys were annoyed by being elected to the board."

b. *Strákunum leiddist [að PRO verða kosið í stjórnina].
the boys(DAT) bored (dflt) to be elected (dflt) to the board

A passive participle *kosnir* shows the nominative agreement in (10.68a). Note also that the passive participle cannot appear in the default form in *að*-clauses with PRO, as illustrated (10.68b). Sigurđsson (1991) also shows that the quantifier *allir* ("all") agrees with PRO as well as overt NP's in case, gender and number. See (10.69) below.

(10.69) Icelandic (Sigurđsson 1991: 331)

a. Strákanir vonast til [að PRO komast allir í skóla].
the boys(NOM) hope for to get all(NOM) to school
"The boys all hope to get to school."

b. Strákanir vonast til [að PRO vanta ekki alla í skólann].
the boys(NOM) hope for to lack not all(ACC) in school
"The boys all hope not to be absent from school."

Sigurđsson argues that the quantifier *allir* agrees with PRO, which bears NOM in (10.69a) and inherent ACC in (10.69b). Note also that the case of the matrix subject is irrelevant to the agreement on *allir*: in (10.69b), *allir* inflects for ACC although the matrix subject bears NOM.

A similar agreement pattern is found in Russian. Franks and Hornstein (1992) cite the examples in which PRO apparently triggers the nominative agreement on what they call second predicates, *odin* and *sam*. As shown in (10.70), *odin* and *sam* do not show agreement but appear in the default dative form if the subject is PRO.

(10.70) Russian (Franks and Hornstein 1992: 7)

a. PRO pojti tuda odnomu rasstroilo by menja.
to-go there alone (DAT) upset MODAL I (ACC)
"It would upset me to go there alone."

b. Ivan dumaet čto PRO pojti domoj odnomu va□no.
NOM thinks to-go home alone (DAT) important
"Ivan thinks that it is important to go home alone."

However, in some cases, *odin/sam* appears in the nominative form as illustrated in (10.71) below.

(10.71) Russian (Franks and Hornstein 1992: 6)

a. Nadja ljubit PRO gotovit' sama.
NOM likes to-cook herself (NOM)
"Nadja likes to cook herself."

b. Ljuda priexala PRO pukupat' maslo sama.
NOM came to-buy butter herself (NOM)
"Ljuda came to buy the butter herself."

Franks and Hornstein argue that the difference between the examples in (10.70) and those in (10.71) is that PRO is governed in the latter and propose that only governed PRO's can trigger the nominative agreement on the second predicates. In the examples (10.70a,b), PRO is not governed. It is assumed that the complementiser *čto* blocks the government in (10.70b). Nevertheless, Franks and Hornstein do not assume that the governed PRO's bear NOM. Instead, it is proposed that the governed PRO's are "case active" and able to transmit NOM of the matrix subject. How can this phenomenon be explained by the current feature-checking approach? Our fundamental assumption is that PRO bears Null case under any circumstances. Following Franks and Hornstein, let us assume that the DAT agreement is the default form. Let us assume also that the default agreement is triggered by Null case. Assuming that PRO always bears Null case and that an NP (overt or covert) can have only one case, it is

unlikely that the Null case-marked PRO to be case-active. The idea of the governed PRO being case active is supported by the assumption of the GB approach that PRO has no case. In the Null case approach, however, PRO has the [Null] case feature. Consequently, it is implausible for PRO to be case active because it requires PRO to deal with more than one case. Then, how are we to explain the nominative agreement on *odin/sam* in (10.70)? Suppose that the nominative agreement on *odin/sam* is attributable to the property of *odin/sam* rather than that of PRO. Suppose that *odin/sam* has a strong tendency for NOM. If there is a NOM-marked NP in its domain, it agrees with the NOM-marked NP. If not, *odin/sam* appears in the default dative form. *Odin/sam* looks up for a NOM-marked NP to agree with. Suppose further that Null case is transparent to *odin/sam* during this search process. Let us suppose also that no more than one CP boundary may be crossed in the search. Note that in (10.71), there is a NOM-marked NP, i.e., the matrix subject in the relevant domain. In contrast, in (10.70), *odin* fails to find a NOM-marked NP. In (10.70a), there is no NP in the higher node than PRO. In (10.70b), two CP boundaries must be crossed in order to reach the NOM-marked NP. Hence the default dative agreement on *odin*. This is merely another way of describing the phenomenon which Franks and Hornstein call case-active. Nevertheless, this correctly predicts the agreement facts of the second predicates in the Russian infinitives, retaining at the same time the assumption that PRO bears Null case.

Returning to the Icelandic case, the phenomenon is problematic in three respects. First, it seems that PRO in Icelandic is licensed either by receiving structural Null case or inherent case. Our assumption that the case feature of PRO is [Null] is overthrown.

Second, the data cited by Sigurđsson (1991) suggest that PRO that does not bear inherent case bears NOM rather than Null: adjectival predicates and passive participles appears in the default form if PRO with which they agree bears an inherent case, where they appear in the nominative otherwise. We may speculate that the nominative form is another default form that is exclusively used in case the NP with which they agree bears a structural case. In other words, the passive participle in (10.68a) does not agree with PRO, but only appears in its default form. However, in order to justify this hypothesis, we need to find out whether the passive participles appear in ACC form when modifying a NP bearing structural ACC. In fact, passive participles appear in their accusative form when the subject bears structural ACC, as illustrated by (10.72) below. (10.72) is an ECM construction: the embedded subject checks its case feature in [Spec, Agro].

(10.72) Icelandic (Sigurđsson 1991: 355)

Hún taldi [einhverja báta hafa verið keypta].
she believed some boats(ACC) have been bought(ACC)

Still, allowing PRO to bear case other than Null is a substantial divergence from the standard theory. Third, the fact that adjectives, passive participles and quantifiers all agree with PRO in case, number and gender suggests that PRO has phi-features. This contradicts our hypothesis that Icelandic PRO does not have phi-features because the verb do not inflect for agreement. In this sense, Sigurđsson's (1991) may be correct in saying that infinitive *að*-clauses lack Agr. Although PRO itself have phi-features, these features will not be reflected on the verb because feature checking cannot take place in the absence of Agr. However, if we take this option, we will have to assume that there are two kinds of *að*-clauses. To summarise, these data from Icelandic and

Russian pose a serious challenge to the current approach. It will require a thorough investigation into various related phenomena in each of these languages to provide a solution. However, as it is beyond the scope of the current study, we will leave this complex puzzle open to future research.

10.5 Summary

In this section, we studied control phenomenon in Tongan. Following the standard account proposed by Chomsky and Lasnik (1993), we assume that PRO bears structural Null case. In order to account for the fact that PRO can appear only as S and A, we propose a modification of the case feature checking mechanism. Namely, [Null] is checked by [–tense] T in [Spec, TP], and not in [Spec, Agrs]. This will enable PRO (S) to check its case feature in intransitive constructions, which lack Agrs according to the active Agr hypothesis.

Control phenomenon in Tongan shows three peculiar properties. First, PRO appears in the subject position of *ke*-clauses, in which overt NP's are also allowed to occur. This is problematic since it is generally assumed that PRO and overt NP's are in complementary distribution. Infinitives contain [–tense] T, which licenses PRO, while finite clauses contain [+tense] T, which licenses overt NP's. Generally, when a clause lacks [+tense] T, it also lacks Agrs. However, we propose that Tongan *ke*-clauses are similar to inflected infinitives in European Portuguese in that they contain [–tense] T and Agrs (Raposo 1987). According to the current analysis, PRO can check its case

feature in [Spec, TP] and overt NP's can check their case feature in [Spec, Agrs]. This analysis accounts for the coexistence of PRO and overt NP's. It also explains why PRO cannot occur as O. In transitive constructions, A must move to [Spec, TP] on its way to [Spec, Agrs] because it cannot skip two Spec-positions in one move (the Shortest Move constraint). Consequently, [Spec, TP] contains a trace of A and therefore the position is not available for O. Thus, if O is PRO, it will fail to check off its case feature [Null]. Second, our data show that an empty element can appear in the object position of *ke*-clauses. We concluded that this empty object is a topic vabiable and not PRO for the following reasons: a) the empty object cannot be coreferential with an argument of the matrix clause and b) an overt pronoun in the same position must be coreferential with a matrix argument. In contrast, an empty subject in *ke*-clauses must be coreferential with an argument of the matrix clause and an overt pronoun in the subject position of *ke*-clauses must have a disjoint reference. This restriction on coreference conforms to the Avoid Pronoun Principle (Chomsky 1981): an overt pronoun is excluded from the position in which PRO may also occur. The fact that an empty object is not subject to this constraint suggests that PRO is not permitted in this position. Obligatory disjoint reference between the empty object and the matrix subject/object is attributable to the discourse-dependent nature of the topic variable. Third, when the controller is a pronominal argument, only A can be PRO. In other words, with a pronominal controller, distribution of PRO shows an ergative pattern: A can be PRO, but S/O cannot. This is a finding worthy of note. However, we are unable to provide any satisfactory account for this unexpected ergative pattern.

We also discussed some other problems concerning the current analysis of control.

One is coexistence of PRO and overt NP's. A phenomenon similar to Tongan *ke*-clauses is also found in languages like Malagasy, Icelandic and Modern Greek. It has been shown that most of these cases are in accordance with the current analysis: these clauses contain both [–tense] T and Agrs and consequently are able to license PRO as well as overt NP's. With regard to Malagasy *fa*-clauses, noting that T of *fa*-clauses may also be past, we propose that the empty subject in *fa*-clauses is a trace of operator. However, there are some problems that need be solved. In particular, agreement in Icelandic raises a serious challenge. In Icelandic *að*-clauses, the verb does not inflect for agreement. On the other hand, adjectival predicates, passive participles and quantifiers agree with PRO in case, number and gender. Furthermore, the agreement pattern suggests that PRO sometimes bear an inherent case and sometimes NOM. The assumption that PRO can bear inherent case requires more discussion, as it will affect our basic assumptions that the case feature of PRO is [Null]. If we are to assume that the case feature of PRO is simply [case], then PRO would be allowed in clauses with [+tense] T. One way to allow PRO to receive inherent case is to assume that PRO can have two cases, Null and an inherent case. PRO receives an inherent case and subsequently checks off its case feature [Null] in [Spec, TP]. The process is on a par with what Yoon (1996) calls case-stacking. The fact that inherently case-marked PRO triggers agreement for the relevant inherent case also conforms to Yoon's (1996) argument that when a NP bears both an inherent case and a structural case, the inherent case must always be overtly realised. Yet, this is all nothing more than speculation. We will leave these problems open to future research, as pursuit of these issues goes beyond the scope of the current study.

Altogether, we have shown that the current analysis at least provides a satisfactory account of control phenomenon in Tongan. It also explains why distribution of PRO in ergative languages shows an accusative pattern. Our analysis accounts for the fact why PRO can occur as S in ergative languages despite the fact that intransitive constructions in ergative languages lack Agrs, and why occurrence of PRO in the object position is banned.

Chapter 11

Conclusion

We started the current study on ergativity in Tongan by addressing two questions. Why does UG have to have ergative case marking? Why is the accusative pattern relatively more stable compared with the ergative pattern? We have studied the Tongan data in an attempt to provide an answer to these two questions. In this final chapter, we will summarise our findings.

11.1 Proposal

In analysing the Tongan data, we proposed the following hypothesis. First, based on the fact that ergativity is manifested also at the level of syntax, we argue that ERG is a structural case. Second, following Bobaljik (1993), we assume that the difference between ergative case marking and accusative case marking is fundamentally the choice of active Agr. If a language chooses Agrs as the active Agr, it will have an accusative case marking. If Agro is selected, then, the language will show an ergative case marking. In other words, the difference can be reduced to the question of which case is assigned to S. We then propose the following modification of the standard feature-checking theory (Chomsky 1991, 1993). Instead of assuming that case features are intrinsic to T and V, we propose that they are intrinsic to Agr(s). Specifically, Agrs

has the feature [T-case] and Agro, [V-case]. In addition, [Null] is considered to be intrinsic to [–tense] T. [+tense] T and V bears associated case features, [T-case] and [V-case], respectively. These features are checked when T and V adjoin to Agrs and Agro. NP's also have an associated case feature; however, their case features are unspecified [case]. Thus, in principle, a NP may check off its case feature in any Spec-position provided that it is the closest Spec-position in which case feature can be checked. The only exception is PRO, which has an associated case feature specified for [Null]. Assuming that case feature checking takes place in a Spec-head configuration, we propose that [T-case] is checked in [Spec, Agrs], [V-case] in [Spec, Agro], and [Null] in [Spec, TP]. Another essential assumption is that associate case features must be checked off for a derivation to converge. This in turn means that checking of intrinsic case features is not obligatory for convergence of a derivation.

Secondly, we propose that *ke*-clauses in Tongan are equivalent to the inflected infinitives in European Portuguese (Raposo 1987): they contain both [–tense] T and Agrs. Consequently, a NP in [Spec, Agrs] may receive [T-case] and PRO can check off its feature [Null] in [Spec, TP]. As a result, *ke*-clauses can have both PRO and overt NP's in the subject position. Note also that we assume that infinitives lack Agrs but contain TP headed by [–tense] T. Thirdly, with regard to pronouns, we propose that Tongan has a set of clitic pronouns that are generated in [Spec, VP] and are licensed by being assigned an external theta-role in the sense of Williams (1980, 1981). In short, we argue that clitics in Tongan are [+A] and [+C], requiring a theta-role as well as case. This analysis predicts that O cannot be realised as a clitic. Thus, we propose that the split concerning pronouns arises because the rule of cliticisation is

sensitive to theta-role. Finally, we argued that *pro* is permitted on the following two conditions: it is third person singular and b) its features are identifiable with those of a discourse antecedent. We thus propose that an overt pronoun is used in environments in which *pro* cannot occur. Our data have shown that the above hypotheses are borne out.

11.2 Findings

11.2.1 Morphological ergativity

Case marking in Tongan demonstrates an ergative pattern: S and O are marked by the absolutive case marker *'a*, while A is marked by the ergative case marker *'e*, as illustrated by (11.1) below.

(11.1) a. Na'e 'alu 'a Sione ki Tonga.
Pst go ABS Sione to Tonga
"Sione went to Tonga."

b. Na'e 'ave 'e Sione 'a Mele ki Tonga.
Pst take ERG Sione ABS Mele to Tonga
"Sione took Mele to Tonga."

The same pattern is found in subordinate clauses. What is intriguing is that non-finite *ke*-clauses show the same pattern as well. See (11.2) below.

(11.2) a. 'Oku totonu [ke 'alu 'a Sione ki Tonga].
Prs advisable that go ABS Sione to Tonga
"Sione should go to Tonga."

b. 'Oku totonu [ke 'ave 'e Sione 'a Mele ki Tonga].
Prs advisable that take ERG Sione ABS Mele to Tonga
"Sione should take Mele to Tonga."

In short, both ERG and ABS can be checked inside *ke*-clauses unlike English *to*-

infinitives in which only ACC but not NOM can be checked due to the lack to [+tense] T. *Ke*-clauses also permit PRO in the subject position, as illustrated by (11.3) below.

(11.3) a. ʻOku loto ʻa Sione [ke ʻalu PRO ki Tonga].
Prs want ABS Sione to go to Tonga
"Sione wants to go to Tonga."

b. ʻOku loto ʻa Sione [ke ʻave PRO ʻa Mele ki Tonga].
Prs want ABS Sione to take ABS Mele to Tonga
"Sione wants to take Mele to Tonga."

Our hypothesis accounts for these data as follows. First, Tongan chooses Agro as the active Agr and therefore, S checks its case feature in [Spec, Agro]. As a result, S and O receives ABS and A receives ERG through case feature checking in [Spec, Agro] and [Spec, Agrs], respectively. Second, we assume that the feature [ERG] is intrinsic to Agrs, and not T, and that *ke*-clauses contains [–tense] T and Agrs. This correctly predicts that A can receive ERG in [Spec, Agrs] in *ke*-clauses. Third, in the current analysis, this [–tense] T in turn checks off the feature [Null]. Hence, PRO is also permitted in *ke*-clauses, for its case feature [Null] can be checked off in [Spec, Agrs].

One exception is pronominal arguments, which do not follow the ergative pattern. First, they are rarely accompanied by a case marker. Second, pronominal arguments appear adjacent to the verb: pronominal subjects immediately precede the verb and pronominal objects immediately follow the verb. See (11.4) below.

(11.4) a. Na'a ne 'alu ki Tonga.
Pst 3.s. go to Tonga
"He went to Tonga."

b. Na'a ne 'ave 'a Mele ki Tonga.
Pst 3.s. take ABS Mele to Tonga
"He took Mele to Tonga."

c. Na'e 'ave ia 'e Sione ki Tonga.
Pst take 3.s. ERG Sione to Tonga
"Sione took her to Tonga."

As illustrated by (11.4) above, the third person singular pronoun appears in an identical form when it occurs as A and S, but it is realised in a special form if it is O. In other words, pronominal forms show an accusative pattern. We will return to this point in §11.2.3 below.

11.2.2 Syntactic ergativity

We observed that ERG-marked arguments are distinguished from ABS-marked arguments in the following respects: a) a resumptive pronoun is required in a position from which an ERG-marked argument has moved out, but it cannot appear in a position from which an ABS-marked argument has moved out; b) an NP in the matrix subject position of *totonu*-constructions can be coreferential only with an ABS-marked argument; c) an ABS-marked NP cannot be coreferential with an ERG-marked NP in *pea*-coordinate constructions; and d) ERG-marked NP's cannot occur as an antecedent in *'o*-coordinate constructions. Our hypothesis that ERG is checked in [Spec, Agrs] accounts for each of these phenomena.

First, with regard to relativisation, we propose that a trace of *wh*-movement in [Spec, Agrs] must be overtly realised as a resumptive pronoun. This resumptive pronoun

requirement in turn explains the ergative pattern demonstrated by *totonu*-constructions. We assume that *totonu*-constructions such as (11.5) below are derived by operator-movement. As a result, *ke*-clause complements of *totonu* contain a trace.

(11.5) a. 'Oku totonu 'a Sione$_i$ [OP$_i$ [ke 'alu t_i ki Tonga]].
Prs advisable ABS Sione to go to Tonga
"Sione should go to Tonga."

b. *'Oku totonu 'a Sione$_i$ [OP$_i$ [ke 'ave t_i 'e Mele ki Tonga]].
Prs advisable ABS Sione to take ERG Mele to Tonga
"Sione should take Mele to Tonga."

(11.5b) is ruled out due to the resumptive pronoun requirement because the *ke*-clause contains a trace in [Spec, Agrs].

Second, the restriction on *pea*-coordination is explained by postulating that the empty element is a type of *pro* that is licensed by feature identification, including the case feature. Thus, *pro* in [Spec, Agrs] cannot be coreferential with a NP in [Spec, Agro]. As for *'o*-coordination, we propose that the empty element is a null anaphor that need be bound by an element outside the embedded clause and that binding observes relativised minimality (Rizzi 1990). ERG-marked NP's cannot be a binder because they are in [Spec, Agrs] and an ABS-marked NP in [Spec, Agro] always intervenes.

11.2.3 Split: an accusative pattern

There are, however, some phenomena in which arguments are treated on an accusative basis. These include a) pronominal forms, b) *mo*-coordination, and c) distribution of PRO. As mentioned above, pronouns divide into two subgroups. One must appear in the position immediately preceding the verb and only S and A can be realised as a pronoun of this class. The other must appear in the position immediately following the

verb and pronouns of this class can occur only as O. In *mo*-coordinate constructions, O cannot occur either as a gap or as an antecedent. As for PRO, PRO is universally permitted only as S or A, but never as O. We propose that an apparent accusative pattern arises in these instances due to some factors independent of case. Specifically, an accusative pattern of pronominal forms and *mo*-coordination arises because the rules governing these phenomena are sensitive to theta-role rather than case. As for the distribution of PRO, an accusative pattern is ascribed to the feature [Null].

First, we propose that those pronouns occurring in the position left adjacent to the verb are actually clitics attached to T. These clitics are arguments that require both theta-role and case. They are generated in [Spec, VP] and are licensed by being assigned an external theta-role. Consequently, O cannot be realised as a clitic. To support this hypothesis, unaccusatives such as *kamata* ("to begin") cannot have a clitic subject.[1] See (11.6) below.

(11.6) a. Na'e kamata 'a e lea.
Pst begin ABS def speech
"The speech began."

b. *Na'a ne kamata.
Pst 3.s. begin
"It began."

Clitics are also excluded from the matrix subject position of *totonu*-constructions, for this position is not a theta-position.

(11.7) *'Oku ne$_i$ totonu [OP$_i$ [ke 'alu t_i ki Tonga].
Prs 3.s. advisable to go to Tonga
"He should go to Tonga."

On the other hand, those pronouns occurring in the position immediately following the

[1] However, as noted in Chapter 6, sentences like (11.6b) are ruled out also by an independent constraint, namely, that personal pronouns cannot refer to [–human] arguments.

verb must be O for the following reason. These pronouns are independent lexical items and thus can appear with a case marker. Furthermore, when accompanied by a case marker, they can occur as A/S as well as O. See (11.8) below.

(11.8) a. Na'e taa'i 'e he faiako 'a kinautolu.
Pst hit ERG def teacher ABS 3.pl.
"The teacher hit them."

b. Na'e 'alu 'a kinautolu.
Pst go ABS 3.pl.
"They went."

c. Na'e taa'i 'e kinautolu 'a e tamasi'i.
Pst hit ERG 3.pl. ABS def boy
"They hit the boy."

However, only O can appear in the position right-adjacent to the verb, as shown by (11.9) below.

(11.9) a. Na'e taa'i ia 'e he faiako.
Pst hit 3.pl. ERG def teacher
"The teacher hit them."

b. *Na'e 'alu kinautolu.
Pst go 3.pl.
"They went."

c. *Na'e taa'i ia 'a e tamasi'i.
Pst hit 3.pl. ABS def boy
"They hit the boy."

We propose that this is because sentences like (11.8a) are derived by incorporation of a pronoun into the verb in the sense of Baker (1988). Incorporation of a NP in [Spec, VP] into V is impossible. Therefore, A and S cannot appear as a pronoun in this position. In short, an accusative pattern arises due to two factors: a) a clitic must be assigned an external theta-role and b) incorporation of the internal argument is possible but that of the external argument is not permissible. These rules apply at the base structure before any movement takes place. In addition, these pronouns (both

clitic and independent) bear case. Consider (11.10) below.

(11.10) a. Na'a ne_i teke'i 'a $Mele_j$ pea $e_{i*/j}$ too.
Pst 3.s. push ABS Mele and fall
"He pushed Mele and (she/*he) fell."

b. Na'a ne_i tangi pea taa'i e_i 'e Hina.
Pst 3.s. cry and hit ERG Hina
"He cried and Hina hit (him)."

(11.10) shows that *ne* bear ERG in (11.10a) and ABS in (11.10b), for *pea*-coordination is permissible between two arguments of the same case. We propose that a clitic checks its case in [Spec, Agro] if it is S, or by adjoining to Agrs with its host T after cliticisation if it is A. Similarly, the incorporated pronoun checks its case feature when the verb adjoins to Agro.

Second, an accusative pattern of *mo*-coordination is ascribed to the obligatory theta-identification in the sense of Higginbotham (1985). *Mo* requires the external theta-role of the two verbs to be identified. As a result, the two verbs conjoined by *mo* necessarily have a coreferential subject. This rule also applies at the base structure before case feature checking takes place. Thus, the accusative pattern arises not because *mo* connects two arguments of the same case, say, NOM, but because *mo* connects two arguments that have the same theta-role.

Finally, distribution of PRO is accounted for by our proposal that [Null] is checked in [Spec, TP]. This explains why PRO can check its case feature [Null] in intransitive constructions despite the assumption that non-finite clauses lack Agrs in ergative languages. As to why PRO cannot appear in the object position, we may give the following account. In a transitive construction, a NP in [Spec, VP] moves to [Spec,

Agrs] in order to have its case feature checked off. In doing so, it has to stop by at [Spec, TP] because of the Shortest Move condition. As a result, [Spec, TP] is not available for O, which in turn has to first move into [Spec, Agro] for the same reason. Consequently, PRO would fail to check its feature [Null] if it were generated in [V, NP] as O. Hence, PRO cannot occur as O.

11.2.4 Voice

In the current approach, passive and ergative case marking are expected to be mutually exclusive. We assume that following Roberts (1987) and Baker et al. (1989), passive is essentially theta-role assignment to a passive morpheme. The passive morpheme, being an argument, bears a case feature, which we assumed to be checked off by adjoining to Agro when its host V does so. As a result, the remaining argument (i.e., the internal argument) will move to [Spec, Agrs] to check its case feature. This predicts that passive constructions in ergative languages have only one overt NP that bears an internal theta-role and ERG case. However, such a construction is not found in any ergative language. Thus, we propose that what is called passive in ergative languages involves theta-role absorption in the lexicon instead of theta-role assignment in the syntax.

In Tongan, there are five constructions that are said to have a passive meaning: lexical passive, agentless transitive, VOS construction, *ma*-verbs and *-Cia* verbs. We showed that the agentless transitive contains *pro* in the subject position and therefore, is virtually transitive. VOS constructions are derived by scrambling and not by passivisation as defined above. In both cases, the internal argument appears in ABS,

not ERG. This denies the possibility that these constructions involve syntactic passivisation. Similarly, *ma*-verbs and *-Cia* verbs fail to qualify as syntactic passive verbs, for the sole argument appears in ABS. Thus, we argued that affixation of *ma-* and *-Cia* takes place in the lexicon and not in the syntax. The prefix *ma-* derives a stative verb and in most cases refers to a resultative state such as *spilt* and *broken.* Moreover, a state described by a *ma*-verb is interpreted as accidental. The agent is completely suppressed. This supports our hypothesis that affixation of *ma-* is a lexical operation involving theta-role absorption. As for *-Cia*, we propose that the suffix *-Cia* is associated with the feature [+affected]. This feature induces the passive meaning of *-Cia* verbs.

On the other hand, ergative languages often have antipassive as a means to overcome restriction of syntactic ergativity. We propose that antipassive exists for this syntactic necessity. Antipassive turns an underlying A into a derived S and an underlying O into an oblique argument. The middle construction in Tongan resembles the antipassive in other languages in that the subject appears in ABS and the object in oblique, as illustrated by (11.11) below.

(11.11) 'Oku sai'ia 'a Sione 'ia Mele.
Prs like ABS Sione in-person Mele
"Sione likes Mele."

However, we observed that the Tongan middle differs from the antipassive in the following three respects. First, middle verbs are morphologically less complex than the corresponding transitive verbs, which invariably contain the suffix *-'i*. This goes against the general assumption that an antipassive involves affixation of an antipassive morpheme. Second, the process of antipassivisation is not productive: a transitive verb

does not necessarily have a corresponding middle construction. Third, middle verbs differ from the corresponding transitive verbs in terms of semantics: the middle object is less directly affected by the direct object of a transitive verb. For these reasons, we conclude that the middle is not an instance of antipassive. Given that Tongan uses the resumptive pronoun strategy to overcome the restriction of syntactic ergativity, the Tongan data conform to our hypothesis that antipassive arises when there is some syntactic demand for such a construction.

11.3 Conclusion

The findings summarised above answer the two questions addressed in the beginning of this thesis. Why does UG have two types of case marking? And, why is the accusative system relatively more stable than the ergative system? Our answer to the first question is that UG has a parameter that determines the choice of active Agr. The choice is arbitrary. If Agrs is selected, the language will have an accusative case marking. If Agro is chosen, the language will show an ergative case marking. Our analysis assumes that a) case features are intrinsic to Agr's instead of T and V; b) [Null] is intrinsic to [–tense] T; and c) associated case features, [T-case] of T, [V-case] of V, [case] of NP's and [Null] of PRO must be checked off for a derivation to converge. Our proposal provides a simple and coherent account of various syntactic phenomena related to case.

First, the fact that PRO can only be A or S cross-linguistically cannot be predicted by

the standard Null case hypothesis or by the active Agr hypothesis proposed by Bobaljik (1993). If we assume that [Null] is checked in [Spec, Agrs], PRO should not be permitted in intransitive constructions in an ergative language. It would be necessary to postulate either that [Null] is intrinsic to both [–tense] T and V or that PRO activates Agrs. However, both of these hypotheses are problematic. The former allows a single feature to be intrinsic to two elements. The latter allows a NP to determine which Agr to be active, whereby the parametric nature of the active Agr hypothesis will be lost. Besides, if we allow V to have the feature [Null], we would not be able to exclude PRO (O). By assuming that [T-case] (ERG/NOM) and [V-case] (ABS/ACC) are intrinsic to Agrs and Agro, respectively and [Null] to [–tense] T, we establish one-to-one relations between case and structural positions: [T-case] is checked in [Spec, Agrs], [V-case] in [Spec, Agro] and [Null] in [Spec, TP]. This hypothesis is advantageous also in that case feature is checked in the Spec-position of the phrase whose head has an intrinsic case feature. Thus, it is not necessary to stipulate that the case feature of [+tense] T is checked in [Spec, Agrs], but that of [–tense] T in [Spec, TP]. Second, our analysis explains why both PRO and overt NP's are permitted in the subject position of *ke*-clauses. Assuming that *ke*-clauses contain both [–tense] T and Agrs, it is possible for both PRO and overt NP's to check its case feature: PRO in [Spec, TP] and overt NP's in [Spec, Agrs]. This in turn means that we assume that infinitives such as English *to*-infinitives has [–tense] T but lack Agrs.

The second question, regarding the relative stability of the accusative pattern, can be answered in terms of theta-role. We have shown that accusative patterns found in Tongan are due to the fact that the relevant rules are sensitive to theta-role. Three

argument types, S, A and O are divided into two subgroups according to the theta-role they bear.[2] See (11.12) below.

(11.12)

A	NOM	ERG	external theta-role
S	NOM	ABS	external theta-role
O	ACC	ABS	internal theta-role

As illustrated above, the accusative case marking shows a pattern similar to the way the theta-role assignment distinguishes arguments. We assume that syntactic rules are sensitive to either structural position or theta-role. In an accusative language, rules of both types distinguish A and S from O. In contrast, in an ergative language, those rules sensitive to structural positions distinguish A from S and O, while those sensitive to theta-role distinguish O from A and S. In other words, it is not that accusative case marking itself is stable compared to ergative case marking. Rather, the accusative case marking appears to be consistent simply because it shows a configuration similar to the contrast between the external theta-role and the internal theta-role.

To conclude, the current study shows that a) ergative case marking derives from a UG parameter concerning the choice of active Agr and that b) the apparent stability of accusative case marking is ascribed to the fact that it coincides with the pattern exhibited by the contrast between the internal argument and the external argument.

11.4 Open questions

Finally, let us summarise the issues we leave open to future research. First problem

[2] Here we exclude S of unaccusatives, which bear the internal theta-role.

concerns morphological split. We have argued that an accusative pattern arises in ergative languages when a syntactic rule is sensitive to theta-role. Although our hypothesis gives a satisfactory account with regard to Tongan, some cases found in other languages are not as straightforward. In some languages, e.g., Dyirbal, first and second person pronouns show an accusative pattern while third person pronouns show an ergative pattern. A split of this type cannot be explained by simply postulating that the accusative pattern reflects theta-roles. In addition, splits found between the perfective and the imperfective and those concerning the difference between subordinate clauses and main clauses were not included in our discussion. These cases also need be considered to justify our claim that ergative case marking is a syntactic phenomenon caused by a UG parameter.

Second, we observed that an ergative pattern demonstrated in coordinate constructions involving *pea* and *'o* in Tongan could occasionally be violated if the semantics requires such an exception. This fact is quite problematic, for semantics generally does not override syntactic rules. It is necessary to inquire why such an exception is permitted in Tongan. Thirdly, as mentioned in Chapter 7, constructions similar to the Tongan *totonu*-construction are found in several other languages including Haitian Creole (Déprez 1992) and Modern Greek (Rivero 1986). Given that analyses of such construction proposed in the literature cannot account for the Tongan data, it would be worth investigating whether the analysis proposed in the current study is applicable to the so-called copy raising as well.

One of the findings of the current study is that the distribution of PRO shows an

ergative pattern in Tongan when the controller is a pronominal argument: PRO can occur as A, but not as S or O. However, it is not clear what gives rise to this curious phenomenon. It may be attributed to the properties of pronouns. A more detailed investigation is called for. Another challenge to the current approach is some peculiar properties of PRO found in other languages. First, PRO appears to bear case other than Null in Icelandic *að*-clauses and Russian. The current analysis cannot provide a satisfactory explanation of these cases. Moreover, in Icelandic *að*-clauses verbs do not agree with PRO. This is puzzling given that quantifiers and passive participles show agreement with PRO and that *að*-clauses contain Agrs according to our hypothesis. PRO in Icelandic is even more problematic in that it apparently can bear an inherent case as well. This undermines the general assumption that the case feature of PRO is [Null], and not an unspecified [case]. Finally, Malagasy *fa*-clauses also pose a problem. In Chapter 10, we propose that *fa*-clauses are [+tense] and that the empty subject that is generally considered PRO is actually a trace of an empty operator. This operator movement analysis seems to account for the facts that a) *fa*-clauses permit both null element and overt NP's in the subject position and that b) the null element cannot occur in the object position. Nevertheless, it is necessary to look into more data in order to support this hypothesis.

Thus, the hypothesis proposed in the current study faces some problems such as those mentioned above. However, these problems, if they can be solved in the approach proposed in this thesis, will provide further support to the current approach. We conclude the current study leaving these questions open to future research.

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