

SPLIT-ERGATIVITY IN MĀORI

A thesis submitted in partial fulfilment of the
requirements for the Degree
of Master of Arts in Linguistics
in the University of Canterbury
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University of Canterbury

2006

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Abstract

The so-called passive in Māori has been the topic of a long-standing debate in the linguistics literature. Its frequency, especially in past tense narratives, makes this construction an atypical passive. It has been suggested that the passive in Māori is used with perfective (Clark 1973) and dynamic (Bauer 1997) events, and when the clause contains an affected direct object (Chung 1978). This thesis finds that all of these suggestions are correct, but, rather than a passive construction, it is ergative, so that Māori has split-ergativity. As predicted under the Transitivity Hypothesis (Hopper & Thompson 1980), the most transitive clauses in Māori have ergative marking, and less transitive clauses are accusatively marked. Transitivity is understood as a property of an entire clause, involving a number of factors, and the most important features of transitivity in Māori are PARTICIPANTS, AFFECTEDNESS OF O, ASPECT and PUNCTUALITY. Clauses that are low in transitivity are uniformly accusative, in both their morphology and syntax. However, highly transitive clauses, which we expect to follow ergative alignment, have some evidence of syntactic accusativity. This mixed behaviour follows directly from the Inverse Grammatical Relations Hypothesis (Manning 1996). Manning claims syntactic constructions like control, binding and imperative addressee are accusatively aligned in all languages, because they are restricted at argument structure. Languages can only be ergative at the level of grammatical relations, where syntactic processes such as relative clauses, question formation and topicalisation are restricted. It then follows that ergativity is only present in Māori at gr-structure in the most highly transitive clauses. We also look at Māori from a diachronic perspective, and see that it differs from its Eastern Polynesian sisters, which are all accusative. Māori is different because the extension of the imperfective pattern did not spread to all transitive clauses, thus preventing a reanalysis of imperfective clauses as active.

Abbreviations

1,2,3	first, second, third person	IND	indicative mood
		INFIN	infinitive
ABL	ablative case	INTENS	intensifier
ABS	absolute case	INTR	intransitive ending
ACC	accusative case	MASC	masculine
AGT	agent	NEG	negative
AV	active voice	NOM	nominative case
CAUS	causative prefix	OBL	oblique case
CAUSE	cause marker	PART	partitive case
CLS	clause marker	PASS	passive voice
COMP	complement marker	PERS	person marker
DAT	dative case	PL	plural
DEF	definite article	POSS	possessive marker
DIST	distant from speaker	PRON	pronominal copy
DL	dual	Q	question word
DO	direct object	SBJ	subjunctive mood
ERG	ergative case	SING	singular
FEM	feminine	TAM	tense/aspect/mood marker*
GEN	genitive case	TOP	topic marker
IMP	imperative mood	TRANS	transitive
INCL	inclusive	VOC	vocative marker

* Following Bauer (1997) I gloss all tense, aspect and mood markers as TAM. Where it is relevant to the discussion, the particular tense, aspect or mood will be made clear in the text.

1

Introduction

This thesis is an attempt to resolve the long-standing debate in the linguistic literature on the passive in Māori (Churchward 1928, Williams 1928, Hale 1968, Hohepa 1969, Sinclair 1976, Chung 1977 and others). I will propose that Māori is a split-ergative language; what has been called “passive” is, in fact, ergative case marking, and the “active” is the accusative construction. The split in Māori is based on the transitivity of a clause, so that more highly transitive clauses are ergative, and accusativity occurs in less transitive clauses.

It is traditionally assumed that Māori is an accusative language with an active-passive contrast. Under this view, sentences such as (1) represent the basic active type, and sentences such as (2) are a derived passive.

(1) ka inu te tangata i te wai
 TAM drink the man DO the water
 ‘the man drinks the water’

(2) ka inumia e te tangata te wai
 TAM drink.Cia AGT the man the water
 ‘the water is drunk by the man’ (Clark 1976: 67)

It is, however, often noted that the passive in Māori is unusually frequent, especially in past tense narratives (e.g., Clark 1976: 68). The frequency of the passive in Māori, and its odd use, has led some linguists to suggest that Māori is an ergative language (e.g., Sinclair 1976). Under this view, sentences such as (1) represent an antipassive construction, while sentences such as (2) represent the basic active construction.

Both the accusative and the ergative hypotheses can account, to some extent, for the behaviour of this construction, but both analyses are also problematic. Under the accusative hypothesis, Māori has an odd and frequent passive, and under the ergative hypothesis, the basic clause type is the more morphologically complex one. As a solution, I propose that Māori has both ergative and accusative constructions, and is a split-ergative language. Clauses that are called passive under the accusative hypothesis are, in fact, ergative under the split-ergative hypothesis.

Split-ergativity in Māori is based on the transitivity of the clause, as predicted by the Transitivity Hypothesis (Hopper and Thompson 1980). The most transitive clauses are ergative, and less transitive clauses are accusatively marked. “Transitivity” involves a variety of factors, and it is understood as a property of an entire clause. I suggest that the factors that cause high transitivity in Māori are: the number of participants in a clause, the aspect of a clause, the affectedness of the direct object and the dynamism (as opposed to the stativity) of a clause. One or more of these features is always present in an ergative clause.

Clauses that are low in transitivity features are uniformly accusative, both in their morphology and their syntax. In highly transitive clauses, where we predict ergative alignment, Māori has some accusative alignment. I argue that this mixed behaviour follows naturally from the Inverse Grammatical Relations Hypothesis (Manning 1996). According to Manning’s theory of ergativity, some syntactic constructions, like control, binding and imperative addressee, are universally accusative, because they are restricted at argument structure (similar to deep structure). Manning claims that controllees, binders and imperative addressees are restricted to a semantic notion of subject, which is always an alignment of the transitive and intransitive subjects. Ergative alignment is only possible at grammatical relations structure (similar to surface structure), so that syntactic ergativity only ever occurs in constructions like topicalisation, question formation, relative clauses and raising. We will examine these structures in Māori, and see that Māori has ergative alignment only in the most transitive clauses at grammatical relations structure. Although Manning’s theory accounts for the mixed syntactic behaviour in many languages, I will, nevertheless, argue that Māori displays true split-ergativity.

In the remainder of this chapter, I will provide some background to the situation of the Māori language in New Zealand. I will also briefly discuss the different verb classes in Māori and, finally, I will look at some universals of passives. Chapter two discusses previous studies in favour of both the accusative and ergative analyses of Māori. We will see that neither can fully account for the patterns in Māori, and chapter three presents the split-ergative hypothesis. Chapter four puts this proposal into its Polynesian context. I suggest why Māori did not complete an ergative-to-accusative shift, as its Eastern Polynesian sisters have done. In the final chapter, I summarise the findings and make some suggestions for further research.

1.1 Background

Māori is a member of the Eastern Polynesian subgroup of Polynesian languages, and is closely related to Tahitian and Cook Islands Māori (based on subgroupings in Marck 2000). It is estimated that the Māori settled in New Zealand during the thirteenth century (King 2003: 48) and, until European contact began in the late eighteenth century, Māori was the only language spoken in New Zealand. Māori became a minority language in the 1850s, when the European population first outnumbered the Māori population. Not long after this, English became the only language officially spoken in schools (Native Schools Act 1867). Nevertheless, in 1913, 90% of Māori school children still spoke Māori as a first language. In the 1940s, many Māori began to move into the cities. Urbanisation, coupled with the English-only school policy, led to the widespread loss of Māori as an everyday language. An NZCER (New Zealand Council for Educational Research) survey, completed in 1978, claims that only 18-20% of the Māori population (approximately 70,000 people) are fluent speakers of Māori, and that most of those speakers are elderly. Today, Māori is spoken by approximately 9% of the Māori population (nearly 30,000 people), and most native speakers are over the age of 45.¹

In recent years there have been many revitalisation initiatives, most famously the *kōhanga reo* ‘language nest’ movement, and the result is an increase in the number of younger speakers. However, there are no monolingual Māori speakers in New Zealand today. Furthermore, a large number of L2 speakers² has meant that Māori has had a significant amount of interference from English. This has been noted in the pronunciation of Māori (e.g., Maclagan et al. 2004), and the vocabulary (e.g., Harlow 2004). Anecdotally, it has also been noted for various aspects of syntax (Bauer 1997: xx, Harlow 1991: 35-38).

The Māori spoken by older speakers today is, therefore, quite different from that of younger speakers (Bauer 1993: xxii). As mentioned above, the debate on the passive in Māori is long-standing. However, the most substantial contributions were made in the 1970s (including Clark 1973, 1976, Sinclair 1977, Chung 1978).

¹ Health of the Māori Language Survey 2001. 4738 adults over the age of 15 self-reported their speaking ability. 9% of respondents said they spoke “well” or “very well”.
www.tetaurawhiri.govt.nz/english/press_e/finalreport.shtml

² 160,527 New Zealanders, both Māori and Pākehā (non-Māori) claim to speak some amount of Māori.
www.tetaurawhiri.govt.nz/english/services_e/intro_statistics.shtml

References in these studies are mostly taken from nineteenth century narratives and older informants, and, therefore, reflect Māori from its earliest days as a written language. Most of the examples in this thesis are taken from that early literature on the Māori passive, and from Bauer (1993, 1997), where a conscious decision was made to record the (endangered) language of the older generation (see Bauer 1993: xxiii). Therefore, it is possible that younger L1 speakers of Māori do not have a split-ergative system as I describe. This point will be taken up again in chapter five. I will suggest that this could be because Māori has reanalysed imperfective clauses as active, and completed a shift to accusative alignment, but that it is equally likely to be due to the influence of English.

1.2 Verbs in Māori

There are five important classes of verbs in Māori, and it will be useful to describe each here. Verbs with two arguments are either canonical transitive verbs or experience verbs. There are also three types of intransitive verbs. Firstly we will look at two argument verbs

1.2.1 Two argument verbs

There are two kinds of transitive verbs in Māori. The first group is the canonical transitive verbs. These are the proto-typical transitive verbs, e.g., *patu* ‘hit’, *whāngai* ‘feed’ and *here* ‘tie’ or ‘tie up.’ Clark calls these verbs “A” verbs and describes them simply as verbs involving an agent and an object (1976: 71). The following sentences show canonical transitive verbs in the active (4) and the passive (3) patterns.

(3)	i	patua	te	kurī	e	te	tamaiti
	TAM	hit.Cia		the dog	AGT	the	child
		‘the dog was hit by the child’					(Bauer 1997: 42)

(4)	e	kai	ana	ngā	tamariki	i	ngā	āporo
	TAM	eat	TAM	the.PL	children	DO	the.PL	apple
		‘the children are eating the apples’					(Bauer 1997: 40)	

It has been noted that canonical transitive verbs appear in the “passive” construction, as in (3), more often than experience verbs (Clark 1976: 76). When a canonical transitive verb does appear in the active pattern, its object is usually marked with *i*, as in (4).

The second group of two argument verbs is experience verbs. Experience verbs name some sort of “mental state or perception” (Harlow 2001: 30). The experiencer argument of an experience verb is not necessarily in control of whether the action takes place, as the agent of a canonical transitive verb is, and the patient is usually unaffected (Bauer 1997: 41). Examples of experience verbs include *kite* ‘see’, *rongo* ‘hear’ and *mōhio* ‘know’. Experience verbs usually appear in the “active” construction (Chung 1978: 78-79), and their patient is most often marked with *ki* as in (5).³

- (5) ka mōhio taku hoa ki te tangata rā
 TAM know my friend DO the man DIST
 ‘my friend knows that man’ (Bauer 1997: 41)

Experience verbs are most often considered a type of transitive verb (possibly because their English translations are transitive), but they do not always display the same behaviour as canonical transitive verbs in Māori. Bauer (1983) analyses the syntactic behaviour of experience verbs, and concludes that they are neither transitive nor intransitive. She looks at experience verbs in imperatives, relativisation, complement clauses, nominalisations, topicalisation (including actor-emphatic) constructions and object-incorporation. Bauer concludes that experience verbs sometimes behave in the same way as canonical transitive verbs, at other times they behave like intransitive verbs, and sometimes they behave differently from both transitive and intransitive verbs. We will see, in chapter 3, that experience verbs are most frequently treated in the same way as intransitive verbs, even though they have two semantic participants. Experience verbs have also been called middle verbs (e.g., Chung 1978), which is what the equivalent verbs are still called in the literature concerning some other Polynesian languages (e.g., Seiter 1978, Dukes 1998).

1.2.2 Intransitive verbs

In addition to the two main groups of transitive verbs, there are also three types of intransitive verbs. There has been some debate about the grouping of intransitive verbs and their terminology (see Bauer 1997: 46), but, as none of the terminology is

³ *Kite* ‘see’ is an exception to this, its second argument is marked with *i* and *rongo* ‘hear’ can sometimes appear with a second argument marked with *i*.

crucial to this thesis, I will follow Bauer (1997). The first two groups are action intransitives and state intransitives.

Action intransitives express actions, for example, *oma* ‘run’ and *haere* ‘go’.

- (6) ka oma rātou
 TAM run 3.PL
 ‘they ran’ (Bauer 1997: 37)

Unlike the action intransitives, the single argument of a state intransitive is a patient or experiencer, rather than an actor, and is described as being in a particular state (Bauer 1997: 38). Examples of state intransitives include *iti* ‘be small’, *kaha* ‘be strong’, *nui* ‘be big,’ and *pai* ‘be good’. The properties expressed with state intransitive verbs can also be used in non-verbal classifying sentences. The non-verbal construction is used for statements about inherent properties, as in (7), while verbal constructions express transient or dependent properties, as in (8).

- (7) he nui te whare taonga
 CLS big the museum
 ‘the museum is big’ (Bauer 1997: 38)

- (8) ka nui te hui
 TAM big the gathering
 ‘the gathering is big’ (Bauer 1997: 233)

The third type of intransitive verb is neuter verbs, as in (9). These have also been called “verbalised adjectives” (Maunsell 1842: 50-52) and participles (Williams 1862: 40). Examples of neuter verbs are *riro* ‘be seized, taken, acquired’, *mahue* ‘be abandoned’, *whati* ‘be broken’, *pau* ‘be consumed’, *hinga* ‘be defeated’ and *mutu* ‘be finished’.

- (9) kua mutu te hui
 TAM finished the meeting
 ‘the meeting is over’ (Bauer 1997: 39)

Neuter verbs share some properties with state intransitives, including the fact that their “subject” is a patient-like argument. However, neuter verbs are not semantically stative. Hooper claims that, “in the overwhelming majority of cases they are aspectually dynamic, and denote single occurrences of events” (Hooper 1984a: 50).

Both state intransitives and neuter verbs can appear with a cause phrase, which expresses the instigator or cause of an event. The cause phrase is always marked with *i*.

- (10) ka matakū te tamaiti i a koe
 TAM frightened the child CAUSE PERS 2.SG
 ‘the child was frightened by you’ (Bauer 1997: 493)

Example (10) shows *matakū*, a neuter verb. The cause phrase, *koe* ‘you’ is marked with *i*.

1.3 Passive universals

The passive in Māori is unusually frequent. Hohepa and Hale claim that it is used 75%-85% more frequently than a corresponding active construction (class lectures 1970, MIT). There have been various suggestions to account for the passive in Māori, and these will be discussed in chapter 2. Some universals of passive constructions will be discussed here.

Jespersen claims a variety of uses of the passive in English, and these can be summarised under three main functions (Jespersen 1924: 167-168).

- (i) passives involve no mention of the agent for contextual reasons
- (ii) passives bring a topical non-agentive element into subject position
- (iii) passives create a syntactic pivot so that co-referential deletion may apply

These primary functions of the passive have also been noted in other languages. Shibatani claims that the primary function of the passive is to defocus the agent. In many languages, including Finnish, Cheremis and Turkish, overt expression of an agent is prohibited. Furthermore, in languages in which the agent can appear, it is much more likely that it will be omitted (Shibatani 1985: 831).

Keenan also argues for the demotion of an agent, rather than the promotion of a patient, as the primary function of the passive (Keenan 1975). Keenan notes that, in several languages, such as Latin, Turkish and Slavic, the passive can demote an agent without promoting any other constituent, (Keenan 1975: 347).

Givón also concludes that the most important factor in a passive construction is that the agent is defocused (Givón 1990: 569). He suggests that the promotion of a non-agent constituent is simply a necessary consequence of agent demotion. Givón further notes that the passive tends to “reframe the event as a resulting state,” rather than the “agent-initiated process” that the active encodes (Givón 1990: 571).

Cross-linguistic studies reveal that the passive typically involves the demotion of an agent and the stativisation of a clause. As we will see, the passive in Māori is consistent with neither of these tendencies. The agent argument is omitted just as often in the active pattern as it is in the passive construction. Moreover, the passive in Māori does not normally have a stative interpretation, but a dynamic one (Bauer 1997: 483).

It is clear that the so-called passive in Māori is not proto-typical. If linguists are searching for language universals, then we should be sceptical of using a given term with atypical constructions in a particular language. I shall return to this point, but it seems that we ought to consider other possibilities, before we accept that the passive in Māori is simply different from passives in most other languages.

2

Māori – accusative or ergative?

2.1 Introduction

Māori is traditionally known as an accusative language. However, the frequency of the passive, and its unconventional use, has led some linguists to consider the possibility that this construction is, in fact, ergative and Māori may be an ergative language. This chapter will review the arguments for both the ergative and the accusative hypotheses. Section 2.2 looks at the accusative hypothesis and section 2.3 looks at the ergative hypothesis. Under either hypothesis, the *-Cia* suffix is problematic. If the accusative analysis is adopted, it marks an odd and frequent passive. Under the ergative analysis, the more “basic” clause type is more marked morphologically. Section 2.4 discusses the proposals accounting for *-Cia* from both sides of the debate.

Given that the classification of Māori as an accusative or ergative language is still in debate, it is difficult to discuss either analysis clearly without using the terminology particular to that analysis, and thereby prejudice the argument. For that reason, A, S and O (following Dixon 1979) will be used for the remainder of this thesis to refer to universal core categories. S is the single argument of an intransitive verb, A is the agent-like argument of a transitive verb and O is the theme-like argument of a transitive verb. These terms can be used with reference to an accusative or an ergative language. Under an accusative system speakers identify A with S, and under an ergative system S is identified with O, as illustrated in figure 2.1.

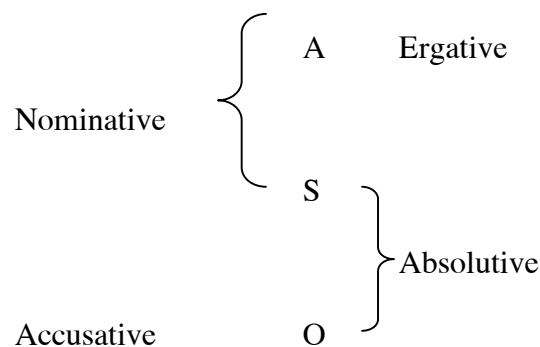


Figure 2.1: Accusative and ergative case systems

Māori has traditionally been known as accusative with active and passive structures. However, as the goal of this thesis is to determine whether Māori is ergative, accusative or mixed, it is preferable not to label clauses “active” or “passive” here. Following Clark (1976), sentences such as (11)a and (11)b will be known as pattern I. These have traditionally been called active.

- (11) (Pattern I)
- | | | | | | |
|----|--|-------|------|---|-------------------|
| | V | (a) A | i/ki | O | |
| a. | ka inu te tangata i te wai | | | | |
| | TAM drink the man DO the water | | | | |
| | ‘the man drinks the water’ | | | | (Clark 1976: 67) |
| | | | | | |
| b. | e here ana a Huia i ngā kuri | | | | |
| | TAM tie up TAM PERS Huia DO the.PL dog | | | | |
| | ‘Huia is tying up the dogs’ | | | | (Bauer 1997: 477) |

The O in pattern I is marked with *i* or *ki*. As mentioned in chapter 1, Os of experience verbs are usually marked with *ki*, while canonical transitive verbs mark their Os with *i*. Pattern I A has zero case-marking, as in (11)a, unless it is a person’s name, in which case it is marked with *a*, as in (11)b.

Clauses that are called passive under the accusative hypothesis will be called pattern II here. (12)a and (12)b are examples of this type of sentence.

- (12) (Pattern II)
- | | | | | | |
|----|---|---|---|-------|-------------------|
| | V-Cia | e | A | (a) O | |
| a. | i moea anō e Whakaue a Rangiuru | | | | |
| | TAM sleep.Cia again AGT Whakaue PERS Rangiuru | | | | |
| | ‘Whakaue slept with Rangiuru again’ | | | | (Bauer 1997: 487) |
| | | | | | |
| b. | ka murua e rātou ngā rua kūmara | | | | |
| | TAM plunder.Cia AGT 3.PL the.PL hole kumara | | | | |
| | ‘they plundered the kumara pits’ | | | | (Bauer 1997: 486) |

The verb has an ending *-Cia*, where C is a consonant.¹ Pattern II A is marked with *e* and O has zero case-marking, as in (12)a, unless it is the name of a person, in which case it is marked *a*, as in (12)b. Note that the order of the NPs after the verb is relatively free in Māori, although VAO appears to be the most common word order, in both pattern I and II (Bauer 1997: 40, 50, 58).

¹ Although the consonant is probably best analysed as part of the stem (e.g., Hale 1968: 414-420, Sanders 1991), I will follow Clark (1973) and others and refer to the suffix as *-Cia*.

The third pattern is that of intransitive verbs. As this does not need to be distinguished from any other pattern, it will simply be referred to as the intransitive construction. This is exemplified in (13).

- (13) a. V (a)S
 kua haere ia
 TAM go he
 'he has gone'
- b. kua haere a Hone
 TAM go PERS Hone
 'Hone has gone'

The single argument has zero case-marking, as in (13)a, unless it is the name of a person, in which case it is marked with *a*, as in (13)b.

To summarise, the accusative and ergative hypotheses analyse the two patterns with the following case-markings:

Pattern I (active)	V	<i>a/∅</i>	A nominative	<i>i/ki</i>	O accusative
Pattern II (passive)	V-Cia	<i>a/∅</i>	O nominative	<i>e</i>	A oblique
Intransitive	V	<i>a/∅</i>	S nominative		

Table 2.1: Case markings under the accusative analysis

Pattern I (anti-passive)	V	<i>a/∅</i>	A absolutive	<i>i/ki</i>	O oblique
Pattern II (active)	V-Cia	<i>a/∅</i>	O absolutive	<i>e</i>	A ergative
Intransitive	V	<i>a/∅</i>	S absolutive		

Table 2.2: Case markings under the ergative analysis

Tables 2.1 and 2.2 show that \emptyset , or *a* (for people's names), marks the unmarked argument as either nominative, under the accusative analysis, or absolutive, under the ergative analysis. *E* marks the passive agent as oblique under the accusative

hypothesis, but, under the ergative hypothesis, it marks the transitive agent. Similarly, *i* marks the transitive object under the accusative analysis, but an oblique argument under the ergative analysis.

2.2 Māori as an accusative language

Māori is assumed to be accusative by most linguists who work closely on the language (e.g. Bauer 1993, 1997, Pearce and Waite 1997, Waite 1987, 1989), and a number of arguments have been put forward in support of this hypothesis (e.g. Chung 1977).

This section will review and discuss the arguments for an accusative hypothesis, under which pattern I clauses are active and pattern II clauses are passive. The arguments include the fact that pattern II is morphologically marked (2.2.1), evidence from *ki te* and *hei* control, and participle formation (2.2.2), and negative verbs, which are considered raising verbs in Māori (2.2.3).

2.2.1 Morphological “markedness”

The most obvious argument in favour of Māori being an accusative language is that pattern II is more “marked”, because the verb form contains the suffix *-Cia*. Intuitively, we would expect passive and antipassive forms of the verb to be morphologically derived from a more basic active form. So, a passivisation operation that adds a suffix to the verb stem seems more likely than the alternative – an antipassive construction which loses its ending (Sinclair 1976: 24).

2.2.2 Control

Chung uses evidence from three types of control to argue that Māori is an accusative language (Chung 1977, 1978). This section examines sentences with *ki te*, *hei* and participle formation control and concludes that only an A or an agentive S can act as controllee in the lower clause. This patterning of S with A suggests that Māori has accusative alignment in control clauses.

Ki te control, the most common type of control, applies in sentential complements embedded under verbs of volition or ability, verbs of motion, and verbs of sending or command (Chung 1977: 363). When the A or S of the

complement verb is co-referential with an NP in the main clause, it is deleted by *ki te* control as in (14).²

- (14) ka whakaaro au_i ki te haere PRO_i
 TAM decide I COMP go
 ‘I decided to go’ (Chung 1977: 363)

When the A or S of the complement verb is not co-referential with an NP in the main clause, the subjunctive particle *kia* is used to introduce the lower clause, as in (15).

- (15) ka whakaaro au kia haere ia
 TAM decide I SBJ go he
 ‘I decided that he would go’ (Chung 1977: 363)

Pearce and Waite (1997) show that *kia* always takes a finite clause, but that the subject pronoun need not be overt. In contrast, *ki te* never allows an overt pronoun because it always takes a non-finite clause.

The focus so far has been on the controllee NP in the lower clause, however, Chung and others also use evidence from NPs that can act as controller of a *ki te* clause to argue that Māori has accusative alignment (Chung 1977: 367). Although it seems that restrictions on the controller NP are better explained with reference to the semantics of the main verb, I will review the arguments briefly because others have used them as evidence for the accusative hypothesis.

2.2.2.1 Restrictions on the controller

Bauer claims that only “subjects” (S/A) can act as controller in the main clause (Bauer 1997: 621), and examples (16), (17) and (18) do suggest that S and A can both act as controller.

- (16) ka noho S_i ki te whakatā PRO_i i tō manawa
 TAM sit COMP breathe DO 2.POSS breath
 ‘Sit down to get your breath back’ (Chung 1977: 367)

In (16), the S of the intransitive verb *noho* ‘sit’ is ‘you’, and, although it is not pronounced in the imperative construction, it controls PRO in the lower clause.

- (17) ka hiahia ngā tāngata_i ki te tākaro PRO_i ki a ia
 TAM want the.PL men COMP wrestle DO PERS him
 ‘The men wanted to wrestle with him’ (Chung 1977: 364)

² I will use PRO to refer to the controllee in the examples and discussion in this section.

(17) above, is given by Chung (1977, 1978) as an example of a transitive A controlling PRO in the lower clause. Another example is given in Bauer (1997).

- (18) i mōhio au_i ki te tataki PRO_i i taku whakapapa
 TAM know I COMP arrange DO my genealogy
 ‘I know how to recite my genealogy’ (Bauer 1997: 621)

Both ‘know’ and ‘want’ (in (17) and (18)) are experience verbs in Māori; the A of these verbs is not thematically agentive, so that the experiencer argument might be better classed as S (cf. chapter 1 for a discussion of experience verbs). Neither Chung nor Bauer gives an example of a canonical transitive verb whose A can control PRO in the subordinate clause. Furthermore, ‘want’ and ‘know’ in examples (17) and (18) are not used as transitive verbs; they take a sentential argument and not an NP O. As it is not clear whether the controller in sentences like (17) and (18) is A or S, they cannot be used as proof that transitive As can control PRO in the lower clause. For this, an example such as (19) would be required.

- (19) Hone_i threatened PRO_i to kill Rewi

When I asked an informant how this would best be expressed in Māori, he gave me the following sentence:

- (20) ka whakawehi a Hone_i ki te patu PRO_i i a Rewi
 TAM threaten PERS Hone COMP kill DO PERS Rewi
 ‘Hone threatened to kill Rewi’

It seems that it is possible for A to control PRO in a lower clause introduced by *ki te*.

Chung states that *ki te* can be controlled by subjects (S/A) and direct objects, as in (21), but no other types of NPs (1977: 365). As can be seen from (21) and (22), O can indeed control PRO, regardless of whether the main verb is in pattern I (21), or II (22).

- (21) i tonu au i a Kupe_i ki te tiki PRO_i i te waka
 TAM send I DO PERS Kupe COMP fetch DO the canoe
 ‘I sent Kupe to get the canoe’ (Chung 1977: 364)
- (22) ka tonoa a ia_i e tana pāhi
 TAM order.Cia PERS he AGT his boss
 ki te mahi PRO_i i tana mahi
 COMP do DO his work
 ‘He was ordered by his boss to do his work’ (Bauer 1997: 621)

Under an accusative analysis, the argument that controls PRO in (22) would be the subject of a passive sentence, so (22) still fits with Bauer’s hypothesis that only

subjects can control PRO (Bauer 1997: 621). However, in (21), the O is clearly not a subject, so example (21) is evidence against Bauer's claim. Examples (16) and (22) demonstrate that S can control PRO, and example (20) suggests that an agentive A (that is, A of a canonical transitive verb) can control PRO, in support of Chung's claim that both subjects and direct objects can act as controllers.

Other types of NPs, including As of pattern II clauses (23) and obliques (24), cannot control *ki te*. The fact that pattern II A cannot control PRO, as in (23), is easily explained under the accusative analysis, as these are oblique arguments, marked with *e*. Under the assumption that only the core arguments subject and object can control, it follows that an oblique agent cannot control PRO.

- (23) *ka hiatiatia e ngā tāngata_i ki te takaro PRO_i ki a ia
 TAM want.Cia AGT the.PL men COMP wrestle OBL PERS him
 'the men wanted to wrestle with him' (Chung 1977: 364)
- (24) *ka tono a Hata ki a koe_i ki te noho PRO_i ki raro
 TAM order PERS Hata to PERS 2.SG COMP sit to below
 'Hata ordered you to sit down' (Bauer 1997: 622)
- (25) ka tono a Hata ki a koe kia noho ki raro
 TAM order PERS Hata to PERS 2.SG SBJ sit to below
 'Hata ordered you to sit down' (Bauer 1997: 622)

Example (24) suggests that an oblique argument, marked with *ki*, cannot control PRO in a lower clause introduced by *ki te*. Compare this with examples (21) and (22) where the same verb, *tono* 'order' is used, but the patient controller is an argument of the verb, and the complement clause can be introduced by *ki te*.

Although Chung uses syntactic evidence to determine the constraints on the controller of *ki te* complements, she acknowledges that the choice of controller is partly determined by the semantics of the main verb, "in a way not well understood even for the English analogue" (Chung 1977: 367). More recent studies of control phenomena have argued that the choice of controller is entirely semantic (e.g., Jackendoff 1974, 1987, Radford 1981: 381, Comrie 1984, and Sag and Pollard 1991). Some verbs, including the order/permit type take 'object control', while others, including promise or want/expect type verbs take 'subject control' (Sag and Pollard 1991: 65). These generalisations account for the Māori examples above, and no reference to the syntax is required. Verbs of the order type, as in (21) and (22), illustrate object control and examples (14), (17), (18) and (20)

illustrate subject control. The fact that A cannot control the lower verb when the main verb is in pattern II, as in (23), is support for the accusative analysis, as it suggests that A is an oblique argument in pattern II.

I have mostly discussed the controller of a *ki te* subordinate clause (as do Chung 1977, 1978 and Bauer 1997). However, the data I have encountered indicate that *hei* and participle formation clauses are parallel to *ki te* control clauses. I, therefore, assume that the conclusions about which NPs can be controller of these clauses are the same for all types of control. The following sections look more closely at which NPs can be controllee in each of *ki te*, *hei* and participle formation control.

2.2.2.2 Restrictions on the controllee - *ki te*

Chung (1977, 1978) argues that, as only S and A can be controlled, and therefore deleted from a lower clause introduced by *ki te*, Māori is an accusative language. This section examines the evidence, and we see that *ki te* complement clauses are accusatively aligned in Māori and, therefore, support for the accusative analysis. However, we shall also see that, cross-linguistically, control clauses select S and A even in an ergative language and this is, therefore, not sufficient evidence of general accusativity in Māori.

In Māori, the S of an intransitive clause can be deleted with *ki te*, as in (26).

- (26) kāore a Pare_i i pai ki te puta PRO_i mai
 not PERS Pare TAM agree COMP come here
 ‘Pare did not agree to go outside’ (Orbell 1968:4)

The A of canonical transitive clauses in pattern I can also be deleted.

- (27) e hiahia ana a Hōne_i ki te patu PRO_i i ngā manu
 TAM want TAM PERS Hone COMP kill DO the.PL bird
 ‘Hone wants to kill the birds’ (Chung 1978: 112)

The experiencer argument of an experience verb, however, cannot be deleted. Pearce and Waite (1997: 71) note that the following sentence is only grammatical with *kia*, the subjunctive marker, to introduce the complement clause.

- (28) *e pirangi ana a Moana_i ki te mōhio PRO_i ki tōna koroua
 TAM want TAM PERS Moana COMP know DO her elder
 ‘Moana wants to know her elder’ (Pearce and Waite 1997: 71)

Transitive O in pattern I cannot be deleted under *ki te* control (29).

- (29) e hiahia ana a Hōne_i ki te patu te kōtiro
 TAM want TAM PERS Hone COMP hit the girl
 *‘Hone wants the girl to hit him’
 ‘Hone wants to hit the girl’ (Chung 1978: 112)

O in pattern II, which would be nominative under an accusative analysis, cannot be deleted (30) either.

- (30) *i hiahia au_i ki te patua PRO_i e Rewi
 TAM want I COMP hit.Cia AGT Rewi
 ‘I wanted to be hit by Rewi’ (Chung 1978: 113)

And finally, oblique arguments cannot be deleted under *ki te* control.

- (31) *ka haere ia_i ki te homai e Rewi te pukapuka
 TAM go he COMP give AGT Rewi the book
 ‘He went for Rewi to give the book (to him)’ (Chung 1978: 112)

In order to account for the above facts, Chung states that the target of *ki te* control must be both a subject and a semantic agent/experiencer (1978: 114). Example (28) however, shows that experiencer arguments do not pattern like this; the experiencer NP cannot be deleted. Chung’s statement does, however, account for why, neither Os in pattern I (29), nor Os that become subjects in a passive transformation (30), nor agents in pattern II (an accusative passive) can control PRO. *Ki te* control is thus not an entirely A/S selecting construction, but it does suggest a sort of accusative pattern as most intransitive Ss and pattern I A of canonical transitive verbs can be controlled, while O cannot be controlled.

In addition to experiencer arguments, there are other Ss that cannot be deleted under coreference with a main clause NP. Example (32) shows a complement clause headed by a neuter verb (see chapter 1 for a discussion of neuter verbs). Complement clauses that contain a neuter verb are only grammatical if they are introduced by *kia*.

- (32) *E pirangi ana a Moana_i ki te mahue PRO_i i tānā tāne
 TAM want TAM PERS Moana COMP left CAUSE her male
 ‘Moana wants her husband to leave her’ (Pearce & Waite 1997: 49)

Pearce and Waite (1997) show that the verb in the subordinate clause of a *ki te* complement cannot be unaccusative. By unaccusative, they mean neuter verbs (32), experience verbs (28), negative verbs and pattern II verbs in Māori. Therefore the only verbs that appear in *ki te* complements are canonical transitive verbs and intransitive verbs that have an agentive S. In other words, the only NPs that can be controlled and deleted are agentive pattern I As and agentive Ss. Unaccusative

verbs must take *kia*, the subjunctive marker. Sentences (28) (experience verb), (30) (pattern II) and (32) (neuter verb) above would all be grammatical with *kia* in place of *ki te*.

Neither Chung's nor Bauer's proposals for the use of *ki te* can fully account for the facts. I instead propose the following generalisation;

Ki te control is used when an NP in the main clause is coreferential with an agentive A or S of the subordinate clause and the verb in the lower clause is in pattern I. In all other cases, the subjunctive *kia* is used.

The advantage of this statement over both Chung's and Bauer's formulations above is that it makes greater reference to the semantics of a clause and is, therefore, better able to capture the facts noted by Pearce and Waite (1997).

This section has shown that an NP can only be the controllee in the subordinate clause if it is A or S and semantically agentive, which is support for the accusative analysis.

2.2.2.3 Restrictions on the controllee - *hei* control

The second type of control that Chung uses as evidence of accusative alignment in Māori is *hei* control clauses. The restrictions on *hei* control are similar to those on *ki te* control, but I will briefly present the relevant examples.

Like *ki te*, *hei* also introduces adverbial clauses of purpose, but it is used less commonly than *ki te*. According to Bauer, *hei* can express function, role and purpose (Bauer 1997: 215). Bauer argues that the complement clause is actually a nominalisation when used to express purpose. According to Bauer, these constructions occur in positions typical of NPs, that is, as arguments, adverbials and non-verbal predicate phrases. Furthermore, unlike in *ki te* complements, the S or A of the verb may be expressed with *mā/mō* 'for,' as in (33), in the same way that the subject argument can be expressed in other types of nominalisations in Māori (for example some *-Canga* nominalisations, see Bauer 1997: 521-522).

- (33) ...ka takaia... ngā taonga nui o mua, hei
 TAM prepare.Cia the.PL treasure big of before for
 mau mā rātou ki te ringa, hei oha mā ō rātou
 carry belong 3.PL to the hand for greet belong their
 whanaunga, ana tae atu ki te pā
 relative when arrive away to the pa
 ‘...the great treasures of former times... would be prepared, for
 them to carry in their hands, as a greeting for their relatives when
 they reached the pa’ (Bauer 1997: 531-32)

Bauer acknowledges that, in cases where the subject is not overt, it may be better to regard the construction as verbal (Bauer 1997: 527, 531). Chung argues that the restrictions on *hei* control clauses are the same as those on *ki te* clauses and, therefore, assumes that *hei* introduces verbal clauses (Chung 1978: 115). Pearce and Waite (1997) support Chung’s claim that *hei* control clauses pattern like *ki te* control clauses. As in complement clauses introduced by *ki te*, only As of canonical transitive verbs (that is, not experiencer arguments of experience verbs) and agentive Ss can be controlled. Ss of unaccusative verbs cannot be deleted.

Chung only gives examples of *hei* control with As of canonical transitive verbs, as in (34) and (35).

- (34) ka tukua mai ko tētahi parirau hei hao i
 TAM put.Cia here top one wing for scoop DO
 te tangata
 the person
 ‘(it) stretches out a wing to scoop him up’ (Chung 1978: 115)
- (35) ko koe ki waho, hei pakipaki i tā tāua ope
 top 2.SG to outside for collect DO our.DL company
 ‘You outside, to keep our troops company’ (Chung 1978: 115)

Chung claims that the experiencer argument of experience verbs can be controlled, but gives no example. Pearce and Waite (1997) claim that this is not true. As with *ki te* complements, experience verbs cannot occur in subordinate clauses introduced by *hei*, as example (36) shows.

- (36) *ka noho atu a Moana ki tōna anō iwi
 TAM stay thither PERS Moana at her own tribe
 hei mōhio ki tōna koroua
 COMP know OBL her old man
 ‘Moana stayed at her iwi (tribe) to get to know her elder’
 (Pearce and Waite 1997: 71)

Example (36) with an experience verb can only be grammatical with the subjunctive *kia* in the place of *hei*. Pearce and Waite claim that arguments of unaccusative verbs (e.g., pattern II (37) and neuter verbs (38)) cannot occur in

complement clauses introduced by *hei*. Like experience verbs, they must be introduced by subjunctive *kia* in purposive adverbial clauses (1997: 72).

- (37) *ka noho atu a Moana ki tōna anō iwi
 TAM stay thither PERS Moana at her own tribe
 hei āwhinatia e tōna whānau
 COMP help.Cia AGT her family
 ‘Moana stayed at her iwi (tribe) to be helped by her family’
 (Pearce and Waite 1997: 71)

- (38) *ka noho atu a Moana ki tōna anō iwi
 TAM stay thither PERS Moana at her own tribe
 hei mahue i tānā tāne
 COMP be abandoned CAUSE her husband
 ‘Moana stayed at her iwi (tribe) to be abandoned by her husband’
 (Pearce and Waite 1997: 71)

These data suggest that *hei* control can only introduce clauses that are headed by canonical transitive verbs or agentive intransitive verbs, just like *ki te* control.

The same conclusions that were made in the previous section also apply here. The fact that only agentive pattern I As (that is, not of experience verbs) and agentive Ss can be deleted under coreference with an NP in the main clause offers some support for the accusative hypothesis, although it is not conclusive.

2.2.2.4 Restrictions on the controllee - participle formation

The third type of control that Chung draws upon to support the hypothesis that Māori is an accusative language is control with participles. As the same conclusions that were made above for *ki te* and *hei* control also apply to participle formation - only NPs in the lower clause that are both subjects and semantic agents of pattern I verbs may be deleted under coreference with a controlling NP in the main clause – I only mention a few relevant examples here.

Participle formation is a construction that occurs most commonly with intransitive verbs and, therefore, there is less evidence that these clauses support the accusative analysis of Māori. Despite this, the restrictions seem to be the same as for the other types of control clauses, and the same conclusions can be drawn.

An adverbial clause of purpose is introduced by the bare participle, with no TAM, as in (39).³

- (39) hoki ana te wahine rā ki te whare tangi ai
 return TAM the woman that to the house to weep PART
 ‘the woman returned to the house to weep for him’ (Orbell 1968: 22)

Bauer (1997: 600) notes that this construction is most commonly found with intransitive verbs, but she does give an example of a participle formation with a verb used transitively, *whanga* ‘wait for’ (40).

- (40) ..i tae anō au ki aua pae whenua i
 TAM arrive again 1.SG to those ridge land at
 te ākau whanga ai i te pōkai kaka
 the shore wait PART DO the flock kaka
 ‘..I reached those ridges by the shore to wait for the flocks of kaka’
 (Bauer 1997: 600)

Chung also gives an example of a transitive verb, *mau* ‘take’, in the subordinate clause.

- (41) ka tae mai te taraka mau i ngā tāngata
 TAM arrive hither the truck take DO the.PL men
 ki te ngahere
 to the forest
 ‘the truck arrived to take the men to the forest’ (Chung 1978: 115)

Examples (40) and (41) show that the A of a canonical transitive verb in the subordinate participle clause can be deleted under coreference with an NP in the main clause. Sentence (39) shows that this is possible with an intransitive S. Neither Bauer nor Chung provide any example of participle formation control with a controlled O, but Bauer’s observation that it mostly occurs with intransitive verbs suggests that such examples are not common. Despite the lack of positive evidence from O, restrictions on participle formation seem to be the same as those on *ki te* and *hei* complement clauses; only S and A can be controlled. This is support for the accusative hypothesis.

2.2.2.5 Summary of control

Evidence from three types of control complements in Māori shows that adverbial clauses of purpose are restricted according to an accusative pattern. The deleted NP

³ Unlike *ki te* and *hei* control clauses, participle formation subordinate clauses must contain the particle *ai* (Bauer 1997: 600).

in the subordinate clause of *ki te*, *hei* and participle control can only be A of a pattern I canonical transitive verb or agentive S, as we would expect of an accusatively aligned language. Although I have mainly discussed evidence from *ki te* control, *hei* control and participle formation both seem to be restricted in the same way as *ki te* control and, therefore, we can draw the same conclusions.

Chung remarks that the restriction on deleted targets of control clauses – that they must be semantic agents – is cross-linguistically common (Chung 1978: 114). Infinitival/purposive clauses, like *ki te* clauses, normally refer to some controlled action and so tend to have an A or S ‘agent’ NP that is co-referential with some NP in the main clause (Dixon 1994: 102). Even ergative languages tend to treat A and S alike in control constructions (Dixon 1994: 102, Manning 1996). The following examples from Basque, an ergative language, show that only S and A can be deleted from a control clause. In example (44), O in the lower clause can never be controlled by an NP in the main clause.

- (42) dantzatzerat joan da
 dance.INFIN.to go he.is
 ‘he has gone to dance’
- (43) txakurraren hiltzera joan nintzen
 dog.DEF.GEN kill.INFIN.to go I.was
 ‘I went to kill the dog’
- (44) ikhusterat joan da
 see.INFIN.to go he.is
 ‘he_i has gone to see him_j’
 *‘he_i has gone for him_j to see him_i’ (Anderson 1976: 12)

The universality of accusative alignment in control clauses will be discussed further in chapter 3.

2.2.3 Raising

Hohepa (1967) analyses two negatives in Māori as higher verbs that take a complement clause, and since Chung (1970), all negatives in Māori have been treated as raising verbs. Chung uses evidence from negative raising verbs in Māori in support of the hypothesis that Māori is an accusative language (Chung 1978: 132-145). According to Chung (1978), and Chung and Seiter (1980), only “subjects” can be raised to become S of the negative verb. This section analyses the evidence, and we will see that negative verbs do support the claim that Māori

has accusative alignment. Note, however, that raising with negative verbs has also been used in support of the ergative hypothesis (section 2.3.3)

A basic negative sentence consists of a negative verb and its sentential complement, as in (45). Example (46) is the raised variant, where S of the lower verb has been raised to S of the negative verb.

- (45) kīkai i haere a Tamahae
 NEG TAM go PERS Tamahae
 ‘Tamahae didn’t go’

- (46) kīhae a Tamahae i haere
 NEG PERS Tamahae TAM go
 ‘Tamahae didn’t go’ (Chung & Seiter 1980: 625)

Although raising is optional for most NP arguments, it is obligatory for pronouns (Chung 1978: 135), so that the following sentence is ungrammatical:

- (47) *kaua e haere tātou
 NEG TAM go 1.PL
 ‘Let’s not go!’ (Chung 1978: 135)

Only the raised variant is possible with a pronoun:

- (48) kaua tātou e haere
 NEG we TAM go
 ‘Let’s not go!’ (Chung 1978: 135)

Chung argues that negative verbs are intransitive in Māori, because the raised NP can be qualified by the indefinite article *he*, which only modifies S and pattern II O (Chung 1970, cf. section 2.3.7). When the agent of the complement clause remains embedded, *he* cannot qualify it, as shown in example (49).

- (49) *kaore i patu he pirihihana i te tamaiti
 NEG TAM hit a policeman DO the child
 ‘a policeman didn’t kill the child’ (Chung 1970: 3)

However, when the agent is raised out of the complement clause to become S of the negative verb, *he* is allowed, as in (50).

- (50) kāhore anō he wahine kia patu i te tuna
 NEG yet a woman SBJ kill DO the eel
 ‘Women haven’t yet killed the eels’ (Chung 1970: 137)

The only NPs that can be raised to S of a negative verb in Māori are S (46), pattern I A (51) and pattern II O (52).

- (51) kaore a Rewi i patu i a Hone
 NEG PERS Rewi TAM hit DO PERS Hone
 ‘Rewi didn’t hit Hone’ (Sinclair 1976: 12)

- (52) kaore a Hone i patua e Rewi
 NEG PERS Hone TAM hit.Cia AGT Rewi
 ‘Rewi didn’t hit Hone/it wasn’t Hone that Rewi hit’
 (Sinclair 1976: 12)

A of a transitive verb in pattern II cannot be raised, as in (53).

- (53) *kaore e Rewi i patua a Hone
 NEG AGT Rewi TAM hit.Cia PERS Hone
 ‘Rewi didn’t hit Hone’
 (Sinclair 1976: 12)

Nor can O be raised when the verb is in pattern I, as in (54).

- (54) *kaore i a Hone i patu a Rewi
 NEG DO PERS Hone TAM hit PERS Rewi
 ‘Rewi didn’t hit Hone’
 (Sinclair 1976: 12)

Oblique phrases can never be raised, as shown in (55).

- (55) *kaore ki te whare i haere a Pani
 NEG OBL the house TAM go PERS Pani
 ‘Pani didn’t go to the house’
 (Sinclair 1976: 12)

These data support the accusative analysis. Sentences (46) and (51) show that intransitive S and transitive A can both be raised, thereby patterning as in an accusative language. Furthermore, example (52) demonstrates that only pattern II O can be raised. Under the accusative analysis, this is the intransitive subject of a passive construction. O in pattern I cannot be raised (54), nor can pattern II A, as in (53), nor oblique NPs, as in (55). Raising with negative verbs is, therefore, restricted to subjects, in support of an accusative analysis of Māori. However, it must be noted that raising with negative verbs has also been used as evidence for the ergative hypothesis (see section 2.3.3).

2.3 Māori as an ergative language

Although Māori has traditionally been considered an accusative language, some linguists have considered the possibility that it could be ergative. Sinclair (1976), Modini (1985), and Gibson and Starosta (1990) argue that an ergative analysis of Māori accounts for some of the less usual facts about Māori syntax more completely than the accusative hypothesis. The following sections review and discuss their arguments in support of the claim that Māori is an ergative language.

The three papers referred to in this section argue that Māori is ergative from different perspectives. Sinclair (1976) looks for subject properties amongst the

various noun phrases, using Keenan's (1976) list of proto-typical subject properties. He claims that syntactic subject properties, such as the ability to be relativised, lie in the "a-phrase" (zero case-marked S, pattern I A and pattern II O), while semantic subject properties, such as the NP most likely to be pronominalised, are in the "e-phrase" (pattern II A). He further argues that the frequency of pattern II clauses, the use of the particle 'i,' and the fact that pattern II is obligatory in transitive imperatives can all be better accounted for under an ergative analysis.

Gibson and Starosta (1990) argue that Māori must be ergative based on the fact that pattern II is the construction normally employed in transitive clauses and, therefore, the most basic. If pattern II clauses are the "unmarked" choice for transitive clauses, then S is marked like O and Māori must be ergative. A major failing of the Gibson and Starosta paper is that, although they claim that their data comes from Clark (1973) and Chung (1978), they give no examples to support their hypothesis. It is, therefore, difficult to evaluate their claims.

The third paper that argues that Māori is an ergative language is Modini (1985), who also fails to include examples to support his arguments. Modini's arguments are based on typical word order, the particles *i* and *e*, and relative clause strategies. He argues that the *-Cia* suffix is best treated as a thematic verb marker, similar to a kind of transitivity marker.

Given that Gibson and Starosta (1990) and Modini (1985) do not give any data to support their arguments, most of the arguments and examples repeated here are from Sinclair (1976). Arguments about frequency, raising, topicalisation, relative clauses, the particle *i*, and pronominalisation and definiteness will be reviewed and discussed in the following sections.

Under the hypothesis that Māori is an ergative language, pattern II (56) is the basic construction for a transitive verb. Pattern I clauses (57) are antipassive. O in pattern II (56) is zero case-marked for absolutive case, as is A in pattern I (57) because it is S of an antipassive. Pattern II *e* (56) is the ergative marker of transitive A, and *i* in pattern I (57) marks the patient in the antipassive construction as oblique. Example (58) of an intransitive sentence is included for comparison.

- | | | | | | | |
|------|-----|----------------------------|-----|----------|-----|------|
| (56) | I | horoia | ngā | tamariki | e | Mere |
| | TAM | wash.Cia | the | children | AGT | Mere |
| | | 'Mere washed the children' | | | | |

(57) I horoi a Mere i ngā tamariki
 TAM wash PERS Mere DO the children
 ‘Mere washed the children’ (Sinclair 1976: 21)

(58) Kua haere a Hōne
 TAM go PERS Hone
 ‘Hone has gone’

It can be seen from the examples that, under the ergative analysis, S and O are treated similarly and are both zero case-marked. Transitive A, as in (56), is marked differently, and with *e*. In the antipassive construction, A is zero case-marked, for absolutive case and O is obliquely marked, with *i*.

2.3.1 Frequency and “basicness”

It has been noted several times that pattern II is the most frequent choice for transitive verbs. Hale and Hohepa found that the passive was 75-85% more frequent than the corresponding active (Hale and Hohepa, MIT lectures, February 1970). Clark (1973: 576) notes that 56% of canonical transitive verbs in Orbell’s (1968) collection of narratives are in pattern II. In a similar study of verbs, I also found that pattern II occurred more frequently with transitive verbs (cf. chapter 3). Under an ergative analysis, pattern II is the basic one and it should not, therefore, be surprising that it is the most frequent. This is one of the strongest arguments in favour of the ergative hypothesis.

2.3.2 Imperatives

Under the ergative analysis, pattern II is the basic clause type for transitive verbs. It is then unsurprising that pattern II is used in transitive imperative constructions in Māori, as in (59).

(59) tuaina te rākau
 fell.Cia the tree
 ‘Fell the tree!’ (Chung 1977: 357)

The second person pronoun, marked with ergative case, is unpronounced as happens in many other languages. Accounting for pattern II in imperative constructions is one of the major problems of the accusative hypothesis. It is necessary to simply state that the passive is obligatory with transitive imperatives,

without giving any motivation for such an unusual rule. Evidence from imperative clauses, therefore, favours the ergative analysis.

2.3.3 Raising

Sinclair (1976: 11-12) uses evidence from negative raising verbs in Māori to support his claim that Māori is an ergative language. Negation was already discussed, in section 2.2.3, since Chung uses it as proof of accusativity in Māori (Chung 1978). However, under Sinclair's ergative hypothesis, pattern II is basic and raising selects the absolutive NP. The evidence for treating negatives as raising verbs was discussed in section 2.2.3 and will not be repeated here.

Section 2.2.3 showed that the only NPs which can be raised to S of the negative verb are S (60), pattern I A (61), and pattern II O (62).

(60) kīhae a Tamahae i haere
 NEG PERS Tamahae TAM go
 'Tamahae didn't go' (Chung & Seiter 1980: 625)

(61) kaore a Rewi i patu i a Hone
 NEG PERS Rewi TAM hit DO PERS Hone
 'Rewi didn't hit Hone' (Sinclair 1976: 12)

(62) kaore a Hone i patua e Rewi
 NEG PERS Hone TAM hit.Cia AGT Rewi
 'Rewi didn't hit Hone' (Sinclair 1976: 12)

The ungrammaticality of raising A in pattern II (53), O in pattern I (54) and oblique NPs (55) was shown in section 2.2.3.

The facts outlined above support Sinclair's claim and the ergative analysis of Māori. We would expect, in an ergative language, that only the absolutive arguments can be raised to S of the intransitive verb. The absolutive arguments are S, pattern II O and pattern I A.

The evidence from negative verbs in Māori is, therefore, compatible with both the accusative and the ergative hypotheses.

2.3.4 *ko*-clefting (topicalisation)

Sinclair (1976) uses evidence from *ko*-clefting, which is a kind of topicalisation in Māori, to support his claim that Māori is ergative. It seems that only S and pattern II O can be *ko*-clefted and topicalisation is, therefore, evidence in favour of the

ergative hypothesis. However, pattern I A, an absolutive argument under the ergative analysis, cannot be *ko*-clefted, which is problematic for the ergative hypothesis.

In Māori, new topics can optionally be introduced by *ko* and fronted. Bauer states that, “only subject NPs can be freely topicalised” (Bauer 1997: 656). S can be *ko*-clefted:

- (63) ko Hone i haere ki te moana
 top Hone TAM go OBL the sea
 ‘It was Hone that went to the sea’ (Chung 1977: 362)

And O of pattern II clauses can be *ko*-clefted:

- (64) ko Hone i patua e Rewi
 top Hone TAM hit.Cia AGT Rewi
 ‘It was Hone that Rewi hit’ (Sinclair 1976: 12)

Although Bauer (1997) states that “subject” NPs can be freely topicalised, this is only true of intransitive subjects. Bauer (1991) notes that A of a canonical transitive verb cannot be *ko*-clefted. To topicalise an A NP, the actor emphatic construction is normally used, as in (65). Note that, in the actor-emphatic construction, the O, or patient argument, is \emptyset -marked, but the verb does not take the transitive *-Cia* suffix. The A in an actor-emphatic is possessively marked with *nā* (in past tense clauses) or *mā* (for future tense clauses).

- (65) nā Rewi i whāngai te kūao kau
 POSS Rewi TAM feed the baby.animal cow
 ‘Rewi fed the calf’ (Bauer 1991: 9)

According to Chung, pattern I O can also be topicalised, although only with a pronominal copy *ai* as in (66).

- (66) ko te tangata i patu ai a Hone
 top the man TAM kill PRON a Hone
 ‘It was the man who Hone killed’ (Chung 1977: 362)

Under the ergative hypothesis, O in pattern I is an oblique argument and, therefore, it is unlikely to be topicalised. Sinclair states that it is not possible to *ko*-cleft pattern I O. He marks (67) below as ungrammatical and does not consider the possibility of a pronominal copy.

- (67) *ko (a) Hone i patu a Rewi
 top (PERS) Hone TAM hit PERS Rewi
 ‘it was Hone that Rewi hit’ (Sinclair 1976: 362)

Chung's example in (66), with the presence of the pronominal copy *ai*, may be better analysed as a relative clause on *te tangata* 'the man', which would mean that O of pattern I cannot be directly topicalised.

In summary, evidence from *ko*-clefting supports the ergative hypothesis. *Ko*-clefting is a syntactic construction that treats S and O in the same way and differently from A. To topicalise A of a canonical transitive verb, the actor-emphatic construction is preferred. The fact that pattern I A is not topicalised in the same way as the other absolutive arguments is problematic for the ergative hypothesis. Topicalisation is analysed further in chapter 3, where we see that restrictions on topicalisation are more complicated than Sinclair's analysis suggests. Judgements on the grammaticality of topicalised elements change depending on the transitivity of the clause.

2.3.5 Relative Clauses

Another piece of evidence that Sinclair uses as support for his claim that Māori is an ergative language comes from relative clauses. It seems that only absolutive arguments, that is, S, pattern II O and pattern I A, can be relativised.

There are two main relative clause strategies in Māori, deletion and pronominalisation. We are concerned here only with the deletion strategy. Firstly, A can only be relativised when the verb in the relative clause is in pattern I, as in (68). Sentence (69) in pattern II is ungrammatical.

- (68) kua haere **te tangata i tono i a Tamahae**
 TAM go the man TAM order DO PERS Tamahae
 kia haere ki te ki ika, ki te whare
 SBJ go COMP catch fish, OBL the house
 'The man who told Tamahae to go fishing has gone to the house'
 (Sinclair 1997: 15)

- (69) *kua haere **te tangata i tonoa a Tamahae**
 TAM go the man TAM order.Cia PERS Tamahae
 kia haere ki te hi ika, ki te whare
 SBJ go COMP catch fish, OBL the house
 'The man who told Tamahae to go fishing has gone to the house'
 (Sinclair 1997: 14)

As might be expected, S can always be relativised:

- (70) ... kua tata ki te taha o te toka rangitoto
 TAM near to the side of the rock scoria
 e tū ana i te ara
 TAM stand TAM at the path
 ‘... [she] neared the side of the scoria rock which was standing in
 the path’ (Bauer 1997: 567)

- (71) ka mōhio au ki te wahine e waiata ana
 TAM know 1.SG to the woman TAM sing TAM
 i te huarahi rā
 at the street dist.
 ‘I know the woman who is singing in that street’ (Bauer 1997: 564)

O is most readily relativised when the verb is in pattern II, as in (72).

- (72) ..ka kai te tangata nei i ngā ō i
 TAM eat the man near DO the.PL provision TAM
 tiakina rā e tana rōpā māna
 save.Cia DIST AGT his slave belong. 3.SG
 ‘..this man ate the provisions which had been set aside for him by
 his servant’ (Bauer 1997: 566)

However, O of experience verbs can be relativised in pattern I, as in (73) and (74).

- (73) i hokona mai e ia te whare i
 TAM buy.Cia hither AGT he the house TAM
 pirangi a Hata
 want PERS Hata
 ‘He bought the house that Hata wanted’ (Bauer 1982: 311)

- (74) i tūtaki a ia ki te tamaiti i mōhio
 TAM meet PERS he to the child TAM know
 a Rewi
 PERS Rewi
 ‘He met the child that Rewi knew’ (Bauer 1982: 311)

The fact that O of experience verbs can be relativised in pattern I is problematic, because this is an oblique argument under the ergative analysis. The ergative hypothesis predicts that only absolutive arguments can be relativised with the deletion method (Sinclair 1976: 14). In Māori, and other Polynesian languages, experience verbs are less likely to take the verbal suffix *-Cia*, and so the option of relativising on pattern II O is not usually available. We might, therefore, expect that a relative clause on the O of an experience verb would most likely be in pattern I. Still, it is unclear why the pronominalisation method of relativisation is not preferred with these oblique-like arguments.

Relative clause strategies show that only absolutive arguments can be relativised in Māori, which is evidence in favour of analysing Māori as an ergative language. The fact that the theme-like argument of experience verbs in pattern I can be relativised with the deletion method is unexpected, as these are oblique arguments under the ergative hypothesis. It must be noted here that relative clauses are also evidence in favour of an accusative hypothesis – only nominative arguments can be relativised and O must become the subject of a passive construction to be relativised. However, relative clauses on experience verbs are just as problematic for the accusative analysis as they are for the ergative hypothesis. Relative clauses are discussed further in chapter 3, where we see that grammaticality judgements change depending on the transitivity of a clause, as with topicalisation.

2.3.6 The preposition *i*

Sinclair claims that one advantage of the ergative analysis is that it substantially reduces the ambiguity of the particle *i* (Sinclair 1976: 23). Under the traditional, accusative analysis, the prenominal particle *i* marks accusative case on pattern I O, as well as various obliques, including location, source, cause, time adverbials and comparatives. Under the ergative analysis, *i* would only mark ablative and general oblique arguments. Pattern I O is in an antipassive clause and is, therefore, an oblique argument.

One of the functions of *i* is to mark the agent or cause phrase of neuter and state intransitive verbs, as in (75) (cf. chapter 1).

- (75) kua mate te manu i a Hata
 TAM die the bird CAUSE PERS Hata
 ‘The bird has been killed by Hata’ (Sinclair 1976: 19)

Sinclair does not see this particular use of *i* as problematic. If the translation of *i* with the cause phrase of neuter verbs is something like “at the hands of...”, or “by reason of...”, the ablative-oblique case analysis can equally apply (Sinclair 1976: 24).

Chung does not believe that Sinclair’s proposal reduces the ambiguity of *i*, as it does not separate oblique arguments marked with *ki*, from those marked with *i*. She suggests that Sinclair’s proposal is no better or worse than the traditional

(accusative) one (Chung 1977: 358). However, it seems that removing the accusative use of *i* from its list of functions does reduce its ambiguity somewhat, and this is, therefore, an advantage of the ergative analysis.

2.3.7 Pronominalisation and definiteness

The previous sections discussed the syntactic arguments for treating Māori as an ergative language. We saw evidence from raising, *ko*-clefting and relative clauses in support of Sinclair’s claim that the syntactic subject in Māori is an alignment of S and pattern II O. However, Sinclair also argues that pattern II A is the semantic subject in Māori. Sinclair suggests that Keenan’s (1976) definition of a universal category “subject” does not apply to Māori with regard to the semantic subject properties of pronominalisation and definiteness. Or rather, Māori splits the subject properties, so that the syntactic subject is an alignment of S and pattern II O, while the semantic subject is pattern II A. Sinclair claims that this split supports the ergative hypothesis, as it highlights the fact that S and O pattern similarly and differently from A.

Keenan (1976: 319) claims that subjects are more likely to be definite and pronominal. Sinclair points out that, in Māori, it is impossible to have an indefinite NP in A position in pattern I or II. *He* is the indefinite article in Māori, and it can only modify S, as in (76), and pattern II O, as in (77) and (78). Indefinite articles tend to introduce new information, so it seems that new information can only appear in S or pattern II O position in Māori. Furthermore, if pattern II A is always definite, it must always represent old information.

(76) ka tahu he ahi ki waenganui o te whare
 TAM burn INDEF fire OBL middle of the house
 ‘A fire burned in the middle of the house’ (Sinclair 1976: 16)

(77) ka patua he poaka e Hone
 TAM kill.Cia INDEF pig AGT Hone
 ‘Hone killed a pig’ (Chung 1977: 360)

(78) No reira, i rapua ai e ia he tikanga
 thereby TAM seek.Cia pron AGT he INDEF charm
 karakia māna
 chant for him
 ‘Thus he sought out incantations’ (Sinclair 1976: 16)

Sinclair also claims that *he* cannot modify pattern I A (79), or O (80), or pattern II A (81).

(79) *ka patu he tangata i te wheke
 TAM kill INDEF man DO the octopus
 ‘A man killed the octopus’

(80) *ka patu te tangata i he wheke
 TAM kill the man DO INDEF octopus
 ‘The man killed an octopus’ (Sinclair 1976: 16)

(81) *i patua te poaka e he tangata
 TAM kill.Cia the pig AGT INDEF man
 ‘Some man killed the pig’ (Chung 1978: 360)

Despite the fact that *he* occurs more commonly with S and pattern II O, Bauer’s (1997) consultants accepted the following example of an indefinite A in pattern I.

(82) i tūkinō he tangata i tēnei tamaiti
 TAM abuse INDEF man DO this child
 ‘A man abused this child’ (Bauer 1997: 149)

Chung et al. (1995) claim that the indefinite article cannot modify A, but Bauer argues that its use depends more on semantics. In example (82), the child is the focus of the clause. Supporters of the ergative analysis might argue that *he* can qualify A, in example (82), because it is antipassive and in absolutive case. However, example (82) is unusual. There are few naturally occurring examples of an indefinite A.

Keenan also notes that subjects tend to be highly referential, that is, the subject position can always be filled by personal pronouns, proper nouns and demonstratives, but not always by an indefinite NP (Keenan 1976: 318-322). Sinclair argues that semantic subject properties in Māori lie in pattern II A, as this is the NP that is most readily pronominalised. An example of a pronominalised, pattern II A is given in (83).

(83) i tetahi Mane, ka whakareri a Hata ma
 OBL one Monday, TAM prepare PERS Hata & others
 ki te kuti hipi. Ka tonoa e ia ngā
 COMP shear sheep. TAM order.Cia AGT 3.SG the.PL
 hepara ki te whiu mai i ngā hipi ki te
 shepards COMP drive hither DO the.PL sheep OBL the
 wuruheti
 woolshed
 ‘One Monday, Hata and others prepare for shearing. He tells the
 shepherds to drive the sheep to the woolshed.’ (Sinclair 1977: 15)

Sinclair does not see a contradiction in the fact that the semantic subject in Māori is pattern II A, while the syntactic subject is an alignment of S and O. A pronominalised NP represents old information and the discourse topic. It should not, therefore, be surprising that pattern II A is more commonly pronominalised (Sinclair 1976: 15-16).

Sinclair uses the above facts to claim that pattern II A is the semantic subject, because it can never be indefinite and is easily pronominalised. Keenan's generalisations about universal "subject" are not easily applied to an ergative language, and it is not clear which NP in Māori is the subject. Keenan's subject properties are split between S and pattern II O (a more syntactic notion of subject) and pattern II A (a semantic notion of subject). A similar split has been noted in other languages (for example, Tagalog, Inuit) and is discussed further in chapter 3.

Despite the fact that applying Keenan's subject properties to Māori does not conclusively indicate which NP should be labelled "subject", Sinclair shows that in two important ways - pronominalisation and definiteness - S and O pattern alike and differently from A. This is, therefore, evidence in support of the ergative hypothesis.

2.4 Accounting for the *-Cia* suffix

Thus far, this chapter has reviewed the arguments for both the accusative and ergative hypotheses of the Māori case system. This section considers the verbal suffix, *-Cia*, which is problematic for either hypothesis. Under the accusative analysis, it does not mark a proto-typical passive, while under the ergative analysis, the basic transitive clause is more morphologically complex than the derived antipassive.

It has often been noted that, under the accusative analysis of Māori, the passive construction is unusually frequent, especially in past tense. If the accusative hypothesis is adopted, an explanation must be given for why the passive (pattern II) is so frequent in Māori. It is not satisfactory to simply say that Māori is an accusative language with a "funny passive" (Clark 1973: 598). Three main suggestions to account for the frequency of the passive have been made. These are; that it is used in perfective clauses (Clark 1973, 1976), that it is used with affected direct objects (Chung 1977, 1978), and that it is used to express dynamic events

(Bauer 1993, 1997). I will argue that all three can account to some extent for the use of this construction, but that it is not correct to call it passive.

Firstly, the passive in Māori tends to be used frequently in perfective clauses (that is, in clauses marked with *ka*, *kua* and *i*), while the active seems to be preferred in imperfective clauses (for example, clauses marked for progressive aspect with *e...ana*) (Clark 1973). Sentence (84) expresses a perfective event, and sentence (85) expresses an imperfective one.

(84) ka hopukia e ia he poaka, ka whiua
 TAM catch.Cia AGT he INDEF pig, TAM throw.Cia
 ki runga ki te ahi
 to top to the fire
 ‘He caught a pig and threw it on the fire’

(85) na, hopu ana a Hutu i ngā otaota o te
 so, catch TAM PERS Hutu DO the.PL weeds of the
 kūwha, piki tonu ake ana
 entrance, climb on up TAM
 ‘Hutu caught hold of the plants at the entrance and kept climbing upwards’
 (Clark 1973: 579)

While sentence (84) describes two single completed acts, sentence (85) in pattern I indicates a series of grabs, as Hutu climbs upwards. Sentence (86) and (87) also contrast in perfectivity; the main clause in (86), which follows pattern II, describes an accomplished fact, while the pattern I clause containing *patu* ‘kill’ in (87) refers to a hypothetical event.

(86) ka kite a Pito, patua iho a Titapu
 TAM see PERS Pito, kill.Cia down PERS Titapu
 ‘when Pito discovered this, he killed Titapu’

(87) Taihoa e patu i a au, kia haka au ki a koutou
 wait.Cia TAM kill DO PERS I, SBJ dance I to PERS you
 ‘wait, don’t kill me until I have danced for you’ (Clark 1973: 579)

There are exceptions to the passive as perfective generalisation. Clark notes the following exception from his own data:

(88) ...ka hanga a Mahia i tana pūtara, he kauri
 ...TAM make PERS Mahia DO his trumpet INDEF kauri wood
 ‘Mahia made himself a trumpet of kauri wood’ (Clark 1973: 578)

Example (88) is an exception to Clark’s rule that passive (pattern II) is preferred with perfective events; here a perfective event is expressed with a pattern I clause.

However, Clark maintains that his theory accounts for the facts more completely than any other. Chung finds another exception in Clark's data:

- (89) ka whatīa tonutia mai
 TAM break.Cia still.Cia here
 'he kept breaking it' (Chung 1978: 77)

Example (89) is of a pattern II verb used with an imperfective, repeated event.⁴

Chung sees a correlation between the affectedness of the direct object, and the use of the passive in Māori, so that the passive is more likely to be used with affected direct objects. Chung notes that the passive is never used in clauses containing a reflexive, as in (90), or a cognate direct object, as in (91).

- (90) ka whakakino a Paowa i a ia
 TAM CAUS.ugly PERS Paowa DO PERS he
 'Paowa made himself ugly' (Chung 1978: 78)

- (91) ka tangi taua wahine i ōna tangi
 TAM cry that woman DO 3.SG.PL cry
 mō āna tamariki
 for 3.SG.PL children
 'the woman cried her cries for her children' (Chung 1978: 79)

She argues that reflexive and cognate direct objects are not affected at all, "given that they are not referentially independent." Cognate direct objects do not refer, and the reference of reflexives is determined by their antecedents (Chung 1978: 79). According to Chung, Māori simply has a rule that says, "apply passive to clauses containing an affected direct object" (Chung 1978: 80, Chung and Seiter 1980: 624). Chung's proposal also accounts for why the passive tends not to occur with experience verbs; their objects are not "affected" by the action (Chung 1978: 78).

Although the affectedness of the direct object seems to correlate with the occurrence of the passive, there are still examples of the passive being used with unaffected direct objects, as in (92).

⁴ Note that the adverb *tonu* 'still', like most adverbs in Māori, must also take the *-Cia* suffix.

- (92) tēnā a Ponga mā te hoe mai rā, ā,
 that PERS Ponga &co the paddle hither dist and
 ka **kitea** atu e te tini wāhine kōhi
 TAM see.Cia away by the many women gather
 pipi i Onehunga, ka **pōwhiria**
 pipi at Onehunga TAM welcome.Cia
 ‘Now Ponga and company paddles along and were seen by the large
 group of women gathering pipis at Onehunga, and were welcomed’
 (Bauer 1997:482)

Example (92) shows *kite* ‘see’, an experience verb, with a passive ending. Experience verbs are less transitive than canonical transitive verbs (cf. chapter 1), and the objects of experience verbs are not affected by the verb. In (92), both ‘see’ and ‘welcome’ have the passive ending, but the object, ‘Ponga and co’, is not affected.

Examples (93) and (94) show two instances of *ruku* ‘to dive’ that appeared in the same text, within a few lines of each other. Bauer suggests that these are evidence against Chung’s claim that the passive is used with affected direct objects. Neither the affectedness of the direct object, nor the perfectivity of the clause would seem to predict that (93) should be in pattern II and (94) in pattern I.

- (93) kātahi ka rukuhia e Hotu
 then TAM dive for.Cia by Hotu
 ‘Then [it] was dived for by Hotu’
- (94) ka hoki te kōrero ki a Hotu i ruku rā
 TAM return the story to PERS Hotu TAM dive dist
 i te punga o tā rāua waka
 DO the anchor of their canoe
 ‘The story returns to Hotu who dived for the anchor of their canoe’
 (Bauer 1997: 482)

Sentence (94) could, however, be explained by that fact that it contains a relative clause on the agent. It is not possible to relativise an agent in pattern II using the deletion method (cf. section 2.3.5). Therefore, even if the perfectivity and the affectedness of the direct objects in (93) and (94) seem indistinguishable, pattern I may be preferred in (94) because of the relative clause.

Bauer’s own suggestion for the frequent passive in Māori is that it mainly has a dynamic reading. This is unlike the passive in English, which can have a stative, or dynamic, interpretation (Bauer 1997: 483). Bauer gives the example of the English sentence *the table was set*, which can describe either the state of the

table, or the action of setting it. Whichever interpretation is preferred in English depends on context (Bauer 1997: 483).

The following examples are both in pattern II (passive under the accusative analysis), however, (95) is clearly dynamic, while (96) has a more stative interpretation.

(95) e hangaa ana te whare
 TAM build.Cia TAM the house
 ‘the house is being built’

(96) kua hangaa kē te whare
 TAM build.Cia CONTRASTIVE the house
 ‘the house is already built’ (Bauer 1997: 483)

The most natural reading of (95) is of a dynamic event. Sentence (96) requires the particle *kē* and TAM marker *kua* to capture the stativity of the English translation. Bauer’s consultants seem to prefer the dynamic reading for pattern II clauses, choosing other constructions, such as state intransitives or clefting with *he mea*, if a stative reading is desired (Bauer 1997: 483).

Each of Clark, Chung, and Bauer’s suggestions partly accounts for the occurrence of pattern II verbs in Māori. Pattern II clauses are more frequent than pattern I clauses in Māori, but not randomly so. It seems that perfective, non-stative clauses, which contain affected direct objects, are more likely to use a pattern II verb.

However, none of the factors, described above, correlate with a prototypical passive construction. As we saw in chapter 1, the passive is typically used to demote an agent NP, and consequently, to promote a patient NP. Cross-linguistically, the agent NP is not usually expressed overtly (Shibatani 1985: 831), and passive verbs tend to be semantically stative (Givón 1990: 571). The passive in Māori does not seem to follow either of these tendencies. Bauer (1997: 483) notes that Māori speakers prefer a dynamic, rather than stative, reading of pattern II verbs. She also notes that the agent can be deleted if it is understood from context (Bauer 1997: 485), that is, in an operation more like pro-drop than agent defocusing. As well as the above factors, we might wonder why the passive is not normally used with present or future tenses, or with imperfective aspect, and why it is obligatory with transitive imperatives. None of these conditions correlate with the use of a passive. It seems that, although Clark, Chung and Bauer have partially

accounted for the occurrence of pattern II verbs in Māori, it is a mistake to call this construction “passive”.

Initially, the ergative hypothesis may seem to account better for the frequency of pattern II; if it is the basic pattern, then it should be no surprise that it is also the most frequent. However, one problem with this hypothesis is that the basic clause type (pattern II) contains the more morphologically complex verb. Intuitively, it seems that the basic verb form should also be the more morphologically simple one. Therefore, proponents of the ergative hypothesis need to account for the *-Cia* suffix, which occurs with transitive verbs. Sinclair sees this as a disadvantage of the ergative hypothesis and does not provide an alternative explanation (Sinclair 1976: 24). Modini (1985) proposes that the *-Cia* suffix marks the verb to which it attaches as thematic; that is, it gives information about the theme. According to Modini, the absolutive, patient NP is the theme in an ergative language. This is similar to a transitive marker, but Modini prefers the term “thematic” because it describes its role in discourse. Although *-Cia* appears most often in a transitive construction, its actual function is to mark the patient NP as theme. Modini argues that the verb in the antipassive construction, pattern I, is rhematic that is, it gives information about the agent (Modini 1985: 90-91). Gibson and Starosta (1990) do not see it as a problem that the most basic construction is the more morphologically complex one. As pattern II is more frequent and the neutral choice for transitive verbs, it is the less “marked” one (Gibson and Starosta 1990: 201). They do not specifically provide an account of *-Cia* in modern Māori, but seem to assume that it is a kind of transitive marker (Gibson and Starosta 1990: 206). This is the most likely scenario and it accords with suggestions for the original Proto-Polynesian suffix **-Cia* (see e.g., Pawley 2001).

Supporters of the ergative hypothesis overlook the fact that, if their analysis is adopted, we are left with an odd antipassive. If pattern II is preferred, as suggested by Clark and others, in past tense and with perfective aspect, then, by implication, pattern I is more common in present and future tenses, and with imperfective aspect. This is no better an account of an antipassive construction than any of the above accounts of the passive. Despite the fact that pattern II has

been found to be more frequent than pattern I, an ergative analysis would still leave us with an unusually high number of antipassive clauses.

2.5 Conclusion

This chapter has presented arguments for both the accusative and the ergative hypotheses of the Māori case system. We have seen that both analyses have evidence in their favour, but neither is conclusive. Evidence from control and raising in Māori supports the accusative analysis. Only S and A can be controlled and deleted from a control clause, and only nominative arguments can be raised to S of a negative verb.

However, raising with negative verbs also supports the ergative hypothesis – only absolutive arguments can be raised. Topicalisation, relative clause formation and pronominalisation and definiteness seem to support the ergative hypothesis. In these constructions, S and O are treated similarly, and differently from A.

If Māori is accusative, it has an odd use of the passive, which is difficult to account for. If it is ergative, it is not fully so, because control with *ki te*, applies to pattern I A and S in an accusative alignment. The possibility that Māori has both accusative and ergative structures, and is, in fact, a split-ergative language must be considered. The following chapter examines the split-ergative hypothesis.

3

The Split-Ergativity Hypothesis

3.1 Introduction

In the previous chapter, we saw that Māori cannot be described as either wholly ergative or wholly accusative. It appears that Māori has some accusative features and some ergative features. This chapter argues that Māori is, in fact, a split-ergative language; that is, it has both accusative and ergative clauses. Whether a clause is ergative or accusative can be predicted by the degree of transitivity of that clause. Under the Transitivity Hypothesis (1980), Hopper and Thompson claim that the most transitive clauses are marked ergatively in an ergative language, while those that are less transitive appear with accusative marking. This chapter investigates the factors that trigger ergative marking in Māori. We will see that ASPECT, AFFECTEDNESS OF O, DYNAMISM, INDIVIDUATION OF O and PARTICIPANTS are significant features of transitivity in Māori.

The presence of syntactic accusativity in highly transitive clauses (where we expect Māori to be ergatively aligned) follows from Manning's Inverse Grammatical Relations Hypothesis (1996). Manning claims that agent-oriented processes, such as control and imperative addressee, operate with an accusative syntax all the time, in all languages, including Māori. It is only in surface structure relations, such as topicalisation, relative clauses and questions that an ergative, S/O pivot is present. Manning's Inverse Grammatical Relations hypothesis (1996) builds on previous accounts of ergativity (e.g. Dixon 1979, 1994, Anderson 1976), and claims that there are two levels of structure in any language. Different syntactic processes are sensitive to either level of structure in a systematic way. It will be shown that Hopper and Thompson's Transitivity Hypothesis, together with Manning's Inverse Grammatical Relations Hypothesis, accounts for much of the alignment of Māori.

As a split ergative language, Māori has both accusative and ergative clauses. In the previous chapter, the traditional active clauses were labelled pattern I. These clauses, as in (97), will also be called accusative clauses in this chapter. Pattern II

clauses, as in (98), which are passive under the accusative analysis, will also be referred to as ergative clauses.

- (97) *e here ana a Huia i ngā kurī*
 TAM tie TAM PERS Huia ACC the.PL dog
 ‘Huia was tying up the dogs’ (Bauer 1997: 477)
- (98) *I herea e Huia ngā kurī*
 TAM tie.Cia AGT Huia the.PL dog
 ‘Huia tied up the dogs’

Case markings for the split-ergative analysis are summarised below, in table 3.1.

	Ergative (pattern II)		Accusative (pattern I)	
	Case	Particle	Case	Particle
A	ergative	<i>e</i>	nominative	\emptyset/a
S	absolutive	\emptyset/a	nominative	\emptyset/a
O	absolutive	\emptyset/a	accusative	<i>i/ki</i>

Table 3.1 Table of split-ergative marking in Māori

In accusative clauses, A and S behave similarly and are marked with nominative case, or \emptyset case-marking (*a* with people’s names). O in an accusative clause is marked for accusative case, with *i* or *ki*. In ergative clauses, S and O behave similarly and are marked with absolutive case, which is, like nominative case in the accusative clauses, \emptyset or *a*-marked (for people’s names). A of an ergative clause is marked with *e* for ergative case.

We can see from the table that S is sometimes in absolutive case, and sometimes in nominative case, although it is always \emptyset case-marked. As will become clearer in section 3.3.2, intransitive clauses also pattern ergatively or accusatively based on their transitivity. Although S always carries the same marking, O patterns like S in clauses with high transitivity features, such as those marked with the perfective marker *i*. Conversely, in clauses with low transitivity features, like progressive marked clauses, A and S pattern similarly.

The verbal suffix, *-Cia*, traditionally considered a passive suffix, must be otherwise accounted for under the hypothesis that Māori is a split-ergative language. *-Cia* only occurs in ergative clauses, and so must be treated as a kind of ergativity marker, although historically it was probably a marker of transitivity. Chapter 4

examines Māori syntax, including the *-Cia* suffix, from a diachronic perspective and suggests how the split-ergative system in Māori developed from ergative Proto-Polynesian.

Māori thus has three clause types: intransitive, ergative and accusative. A necessary consequence of adopting the split-ergative hypothesis is that Māori has no passive or antipassive construction. I suggest that this is not as problematic as it might seem. In chapter 1, we looked at universals of passives, and saw that cross-linguistically, passives are used to promote a non-subject constituent, and to reframe an event as stative or resultative. An antipassive construction is not the exact corollary of passives in ergative languages.¹ Antipassives focus on the underlying A of a clause, and O appears only in a peripheral, oblique phrase (Dixon 1994:146). Dixon adds that both passives and antipassives are often used to put a particular NP into pivot function for the purposes of clause combining (Dixon 1994: 152).

In chapter 1, we saw that pattern II in Māori does not correspond to any typical passive. So, the first point is that under the accusative analysis, Māori has a passive only in name, and this is a disadvantage of the accusative analysis.

Furthermore, in Māori, other constructions fulfil the functions of passives and antipassives in other languages. To focus an S or O NP, topicalisation with *ko* or *he mea* is used (see section 3.3.2.1), and the actor-emphatic is used to focus on an A (although note that the O NP is not really defocused in an actor-emphatic clause). Events can be reframed as a state or a resultative in Māori with neuter or state intransitive verbs (cf. chapter 1). Finally, it does not seem necessary to put a particular NP into pivot function for clause combining. It has been noted that, in Māori, any constituent can be omitted if it is understood from context (Bauer 1997: 561). Therefore, an NP does not need to be in S position for co-referential deletion to occur.

Lastly, it should be added that neither Tongan (Churchward 1953: 72-75, Dukes 1998), nor Samoan (Mosel & Hovdhaugen 1992: 772-773) has a passive or an antipassive construction, which suggests that neither existed in Proto-Polynesian (cf. chapter 4 for evidence that Proto-Polynesian was ergative, like Tongan and Samoan).

Firstly, we will look for evidence of morphological ergativity, that is, when S and O are marked similarly. The existence of morphological ergativity does not imply

¹ Indeed, it is possible for an ergative language to have both passive and antipassive constructions (e.g., Mam, a Mayan language, see England 1988).

syntactic ergativity, where S and O are treated similarly in a particular syntactic construction, but I in the remainder of this chapter, I will show that Māori has both morphological and syntactic split-ergativity.

3.2 Morphological split-ergativity

Under the traditional, accusative analysis of Māori, ergative clauses are described as passive, but it has often been noted that they have a distribution quite unlike the passive of any other language. The passive is much more frequent in past narratives (Bauer 1997: 479). Clark suggests that the passive is used to signal perfective aspect (Clark 1973: 579), while Chung argues that passive is used when the object is affected (Chung 1978: 76), and Bauer suggests that the passive is used with dynamic, rather than stative, events (Bauer 1993: 406, 1997: 483-484). As discussed in section 2.4, to call this construction “passive” is to assign the passive a special function in Māori, quite different from any traditionally used by linguists. If linguists are searching for cross-linguistic universals, and if linguistic terminology is to be precise, using a given term to describe different phenomena in different languages should be avoided.

I agree that perfective aspect, dynamic events and an affected direct object are all predictors of pattern II. However, I propose that it is not the passive that is used with perfective aspect, dynamic events and clauses containing affected direct objects, but ergative case marking. All of the conditions found by Clark, Chung and Bauer to favour the “passive” are, in fact, conditions that serve to increase the transitivity of a clause (transitivity will be defined in the following section). The marking on highly transitive clauses is ergative, and Māori is a split-ergative language.

Languages that are split-ergative are often said to be split based on one or more defining parameter. According to Dixon (1994), languages can be split depending on the semantics of the NPs, the tense/aspect/mood of the clause, and there can be a main clause/subordinate clause split.² We will see that it is possible to consider the first two types as part of the same kind of split – based on the transitivity of the clause. This section looks at the Transitivity Hypothesis (Hopper & Thompson

² Dixon also includes active/agentive marking on intransitive Ss as a type of split-ergativity (Dixon 1994: 70-83). However, active/agentive marking is not generally considered a type of split-ergativity (see Mithun 1991: 542, Harris 1997: 367).

1980), and we will apply it to Māori. Dixon's claim that there can be a main clause/subordinate clause split will be dealt with more fully in section 3.3.

3.2.1 The Transitivity Hypothesis (Hopper and Thompson 1980)

Traditionally, transitivity is understood as a property of an entire clause. A transitive clause involves at least two participants, and an action that is “transferred” or “carried over” in some way from the agent to the patient (Hopper & Thompson 1980: 251). Hopper and Thompson seek to characterise this intuitive understanding of transitivity more explicitly, and in universal terms. They claim that transitivity consists of ten component parts, each of which involves a different aspect of the effectiveness or intensity with which an action is transferred from one participant to another. Together these serve to increase or decrease a clause's transitivity.

	HIGH	LOW
A. PARTICIPANTS	2 or more participants, A and O	1 participant
B. KINESIS	action	non-action
C. ASPECT	telic/perfective	atelic/imperfective ³
D. PUNCTUALITY	punctual	non-punctual
E. VOLITIONALITY	volitional	non-volitional
F. AFFIRMATION	affirmative	negative
G. MODE	realis	irrealis
H. AGENCY	A high in potency	A low in potency
I. AFFECTEDNESS OF O	O totally affected	O not affected
J. INDIVIDUATION OF O	O highly individuated	O non-individuated

(Hopper and Thompson 1980: 252)

Hopper and Thompson argue that these ten component features are crucial in any language, and that they have morphosyntactic consequences. They formulate the following Transitivity Hypothesis, in order to account for how transitivity is morphosyntactically or semantically marked in languages.

If two clauses (a) and (b) in a language differ in that (a) is higher in Transitivity according to any of the features A-J, then, if a concomitant grammatical or semantic difference appears elsewhere in the clause, that difference will also show (a) to be higher in Transitivity.

(Hopper and Thompson 1980: 255)

³ Hopper and Thompson use the terms telicity and perfectivity interchangeably. We will, however, concentrate on the notion of perfectivity, and it will be defined below

Importantly for the present hypothesis, Hopper and Thompson note that in many ergative languages, ergative case marking correlates with a number of high transitivity features. Characteristically, the ergative construction signals one or more of the following transitivity features:

ERGATIVE	NON-ERGATIVE
verb codes two participants	verb codes only one participant
perfective aspect	imperfective aspect
total involvement of O	partitive O
definite O	indefinite O
kinetic	stative
volitional V	involuntary V
active participation of A	passive participation of A

(Hopper & Thompson 1980: 268)

Of these, we can see that the first three correspond to previous accounts of the “passive” construction in Māori. Clark observed that pattern II was preferred with “AO” or type “A” verbs; that is, verbs that typically involve both an agent and an object (Clark 1976: 76). He also noted that pattern II usually occurred in clauses in perfective aspect (Clark 1973: 579) and Chung argues that pattern II is used when the object is affected (Chung 1978: 80), which correlates with the third transitivity feature that Hopper and Thompson associate with ergative marking.

3.2.2 The Transitivity Hypothesis and Māori

We shall now examine transitivity features in Māori, and I will show that none exclusively accounts for the appearance of pattern II. Rather, it is a combination of these factors that trigger the ergative marking we see in pattern II clauses. We will look at evidence from previous accounts of pattern II in Māori, and from results of a small study of verbs and their arguments.

3.2.2.1 Participants

The first factor that increases transitivity, and thereby the probability of ergative marking, is the rather obvious feature that more transitive verbs code two participants, and less transitive verbs only have one. According to Hopper and Thompson, verbs are lower on the transitivity continuum when their objects are not affected by the action, and in many languages “clauses with less than ideal patients (i.e., those that do

not receive any action) are coded [...] with various of the trappings found in intransitive clauses” (Hopper & Thompson 1980: 254).

All grammars of Māori note that, in Māori, as in all Polynesian languages, verbs can be divided into two important classes – canonical transitive verbs and experience verbs (Bauer 1997: 39-41, Harlow 2001: 163). As we saw in chapter 1, experience verbs include verbs such as *kite* ‘see’, *rongo* ‘hear’ and *hiahia* ‘want’. Although these verbs have two participants, the patient argument is not affected by the action, and experience verbs are, therefore, lower on the transitivity continuum than canonical transitive verbs. We might, therefore, expect that difference to be marked in Māori, so that canonical transitive verbs occur most frequently in the more transitive, ergative clause pattern (pattern II), and experience verbs are in the accusative pattern (pattern I).

It is often remarked that, although it is possible for experience verbs to appear in pattern II in Māori, canonical transitive verbs do so much more frequently. Harlow notes that, in general, “all sentences that contain a transitive verb and an object as patient” can appear in pattern II (Harlow 2001:188). Bauer also notes that pattern II clauses “involve two participants engaged in a transitive action” (Bauer 1997: 42).

In a small study of verbs and their arguments, I coded 627 verbs from 30 pages of narrative text (Orbell 1968). Of these, 267 were transitive in the traditional sense (i.e., they had an object) including experience verbs. Each verb was coded for pattern I or II and various other factors, which will be examined below. It should be noted here that I only coded instances where there was a true choice of pattern I or II, for example, no imperatives were included. Dividing these 267 verbs as simply pattern I or II resulted in more verbs in pattern I than II. 114 verbs were in pattern II and 153 in pattern I. However, once I removed all the experience verbs (because they normally occur in pattern I), and only included three tokens of any one verb so as not to skew the results, there were far fewer verbs in pattern I. 88 tokens were in pattern I and 106 in pattern II. This proportion is similar to other studies that find pattern II to be more frequent with canonical transitive verbs.

It is necessary to examine more closely the verbs that occurred in pattern I to see if they are indeed less transitive, as predicted by the Transitivity Hypothesis. As mentioned above, nearly half of verbs in pattern I were experience verbs. The remaining pattern I verbs were also less transitive, in the same way that experience

verbs are less transitive than canonical transitive verbs, that is, the O was not affected or only partially affected. Many were labile verbs (verbs that can be either transitive or intransitive) such as *inu* ‘drink’, *kai* ‘eat’, *piki* ‘climb’ and *waiata* ‘sing’. Others would not fall into Clark’s category of “AO” verbs because they did not encode a prototypically transitive action. Examples of verbs in pattern I include *hongī* ‘greet’, *whai* ‘follow’, *matakitaki* ‘watch’, *mau* ‘carry’ and *whakahua* ‘recite’. Although these verbs do have a second argument, it is either not affected by the verb (*whai* ‘follow’), or it is less affected than the object of a canonical transitive verb (*mau* ‘carry’). In contrast, none of the pattern II verbs were labile verbs (with the possible exception of *tangihia* ‘weep’). Examples of verbs that appeared in pattern II include; *patua* ‘beat/kill’, *whiria* ‘plait’, *tangohia* ‘take hold of’, *tuhuna* ‘set fire to’, *tāpukea* ‘bury’ and *werowerotia* ‘stab’. These verbs are prototypically transitive, in that each has an object that is affected or changed, in some way, by the action.

So, a closer analysis of the actual verbs does indeed confirm that clauses with “less than ideal patients” (Hopper & Thompson 1980: 254) are more likely to occur in pattern I, the accusative pattern, in Māori. This includes experience verbs, but also other verbs whose patients “do not receive any action” (like *whai* ‘follow’).

3.2.2.2 Aspect

Hopper and Thompson claim that perfective clauses, other things being equal, are interpreted as more transitive than imperfective clauses because the transfer of the action from agent to patient is complete (Hopper and Thompson 1980: 252). They use telicity and perfectivity interchangeably, and only note that a telic or perfective event is one viewed from its endpoint, so that the activity is viewed as completed (Hopper & Thompson 1980: 252).

Comrie defines a telic event as one that leads up to a well-defined terminal point (Comrie 1976: 45). Perfective aspect “indicates the view of a situation as a single whole, there is no distinction of the various separate phases that make up that situation”. In contrast, the imperfective “pays essential attention to the internal structure of the situation” (Comrie 1976: 16). Comrie further notes that defining perfective events as “completed”, as is frequently done, puts too much emphasis on the endpoint of an event (Comrie 1976: 18). Although perfective aspect is frequently correlated with past tense, future events can also be viewed as ‘complete’ and

therefore perfective (indeed many languages have a future perfective construction). As telicity is a semantic property, which is not easily deducible out of context, we will concentrate on the notion of perfectivity.

Hopper and Thompson note that in many languages, such as Hindi and Georgian, an ergative construction is preferred in perfective environments. The examples below show that, in Hindi, non-ergative case-marking is preferred with imperfective aspect, as in (99)a, but ergative case-marking is preferred with perfective aspect, as in (99)b.

- (99) a. garib aadmii mandir-kee saamnee phuul
 poor man temple.OBL before flower
 beectaa thaa
 selling(MASC) past(MASC)
 ‘the poor man used to sell flowers in front of the temple’
- b. kiaan-nee bail-kii oor chaRii phēēkii
 farmer.ERG ox.OBL at stick.FEM threw.FEM
 ‘the farmer threw a stick at the bullock’
 (Hopper and Thompson 1980: 272)

Example (99)a describes an imperfective habitual event, and verbal agreement is with A and masculine. In contrast, sentence (99)b describes a perfective event and A is in ergative case, while verbal agreement is with O and feminine.

Clark (1973) suggests that, in Māori, pattern II is preferred when the clause is interpreted as perfective. In section 2.4, we saw examples from Clark (1973), repeated below, that show how patterns I and II reflect a contrast in perfectivity. Sentence (100), in which both verbs are in pattern II, describes two single complete and perfective actions, while sentence (101) describes a series of movements, thus imperfective, and the verbs, *hopu* ‘catch’ and *piki* ‘climb’, are both in pattern I.

- (100) ka hopukia e ia he poaka, ka whiua
 TAM catch.Cia AGT he INDEF pig, TAM throw.Cia
 ki runga ki te ahi
 to top to the fire
 ‘He caught a pig and threw it on the fire’
- (101) na, hopu ana a Hutu i ngā otaota o te
 so, catch TAM PERS Hutu DO the.PL weeds of the
 kūwha, piki tonu ake ana
 entrance, climb on up TAM
 ‘Hutu caught hold of the plants at the entrance and kept climbing upwards’
 (Clark 1973: 579)

Sentences (102) and (103) also contrast in perfectivity. In (102), *patua* ‘kill’, describes a complete act, and appears in pattern II, while *patu* in (103) is in pattern I because the action is not viewed as complete. The presence of the subjunctive *kia* indicates that the action is irrealis, it may not happen.

(102) ka kite a Pito, patua iho a Titapu
 TAM see PERS Pito, kill.Cia down PERS Titapu
 ‘when Pito discovered this, he killed Titapu’

(103) taihoa e patu i a au, kia haka au ki a koutou
 wait.Cia TAM kill DO PERS I, SBJ dance I to PERS 2.PL
 ‘wait, don’t kill me until I have danced for you’ (Clark 1973: 579)

Clark suggests that more perfective clauses, in other words those that denote completed events, appear in pattern II while imperfective ones are usually in pattern I (Clark 1973: 579). Bauer also claims that pattern II is normally used to express completed events (Bauer 2004: 23).

Note that both Bauer and Clark correlate pattern II with ‘completed’ events. Generally, their examples are in past tense and, therefore, completed. However, as noted above, it is more accurate to define perfective as ‘complete’ rather than ‘completed’. Future events may also be viewed in their entirety, as complete, and marked perfective. In section 3.3, we will see that future tense clauses sometimes pattern with past tense clauses in Māori, and ergatively.

Tense and aspect are marked in Māori with preverbal particles. *I* and *ka* are both used to mark perfective aspect, but neither marks perfectivity exclusively. *I* is an absolute past tense marker of perfective aspect (Bauer 1997: 84-85, 120). *Ka* is a relative tense marker; the tense must be taken from context. Harlow (1989: 208) argues that *ka* has no tense, mood or aspect value; it simply marks a clause as verbal. *Kua* marks perfect aspect – for past events that have present relevance (Comrie 1976: 52). *Kua* is the only tense marker that cannot freely occur with transitive verbs in pattern I, except in questions. Bauer’s consultant found the following sentence, with either verb, ungrammatical:

(104) *Kua āwhina/kōhuru a Pani i a Tū
 TAM help/murder PERS Pani DO PERS Tū
 ‘Pani has helped/murdered Tū’ (Bauer 1993: 405)

We might then expect ergative clauses to be normally marked with *ka*, *kua* and *i* and, conversely, that *kei te*, *i te* and *e...ana*, all TAMs of imperfective aspect, will most

often mark pattern I clauses. It was difficult to confirm predictions. In my study of narrative text, 85% of all clauses were marked with *ka*, the relative tense marker. Therefore, *ka* can mark either pattern I or II. We do not have enough information to determine whether *i* is indeed preferred with pattern II.

We can see that clauses that can be interpreted as complete and perfective in Māori normally appear in pattern II, the ergative pattern. This is in line with Hopper and Thompson's Transitivity Hypothesis, and supports the split-ergative hypothesis of Māori.

3.2.2.3 Affectedness of O

The third important feature that serves to increase the transitivity of a clause and, therefore, the probability of ergative case marking in Māori is the AFFECTEDNESS OF O. Hopper and Thompson claim that clauses containing an O that is totally affected by the verb are considered to be more transitive than those in which the O is only partially affected, and that this is morphosyntactically marked in many languages (Hopper & Thompson 1980: 262).

In the examples below from Finnish (105), we can see that Finnish speakers use accusative case for a fully affected O (105)a and partitive case for a less affected O (105)b.

(105) a. liikemies kirjoitti kirjeen valiokunnalle
 businessman wrote letter.ACC committee-to
 'the businessman wrote a letter to the committee'

 b. liikemies kirjoitti kirjettä valiokunnalle
 businessman wrote letter.PART committee-to
 'the businessman was writing a letter to the committee'

(Hopper & Thompson 1980: 262)

The Finnish examples also show the close link between perfectivity and the affectedness of O. A totally affected O also means that the transfer of the action is complete and perfective. Hopper and Thompson claim that, in general, partitive Os are universally associated with intransitive verbs, or at least some signal of reduced transitivity (Hopper & Thompson 1980: 263). If the O is only partially affected, the event cannot be viewed as complete and is, thus, less transitive.

A well-known pair of English sentences also illustrate the point:

- (106) a. John sprayed paint on the wall
 b. John sprayed the wall with paint

In sentence (106)b, *the wall* appears as direct object of the verb and is understood to be totally affected. When *the wall* is an oblique argument, as in (106)a, it is only partially affected.

The distinction is even more marked in Hungarian:

- (107) a. János festék-et fújt a fal-ra
 Janos paint.OBJ sprayed the wall.on
 ‘Janos sprayed paint on the wall’
- b. János befújta a fal-at festék-kel
 Janos sprayed the wall.ACC paint.with
 ‘Janos sprayed the wall with paint’
 (Hopper & Thompson 1980: 262)

The second sentence, (107)b as in its English translation, implies that the wall is completely affected, and this is grammatically marked in three ways in Hungarian. Firstly, the verb is in the objective conjugation, which is the verb paradigm for transitive clauses. Secondly, the verb has the perfectivising prefix *be-*, which signals completion of the activity, and lastly, the O takes accusative case and is directly after the verb, in ‘true O’ position. In the first sentence (107)a, the O is before the verb, the position for indefinite, quasi-incorporated Os. Furthermore, the verb has no perfectivising prefix, and it is in the subjective (intransitive) conjugation (Hopper & Thompson 1980: 263).

Using a particular construction depending on the affectedness of O is familiar from section 2.4, where we saw that Chung claims pattern II in Māori (her passive) applies to clauses containing an affected direct object (Chung 1978: 80). In this way, Chung accounts for the fact that pattern II is less frequent in clauses that contain an experience verb; the objects of these verbs are not directly affected by the action (Chung 1978: 78-79). She further argues that clauses containing reflexive objects or cognate direct objects are always in pattern I, as in (108) and (109). Chung claims that neither reflexive objects nor cognate objects can be understood as affected because they are not referentially independent (Chung 1978: 79).

- (108) ka whakakino a Paowa i a ia
 TAM caus.ugly PERS Paowa DO PERS he
 ‘Paowa made himself ugly’ (Chung 1978: 78)

- (109) ka tangi taua wahine i ōna tangi
 TAM cry that woman DO 3.SG.PL cry
 mō āna tamariki
 for 3.SG.PL children
 ‘the woman cried her cries from her children’ (Chung 1978: 78)

Hopper and Thompson note that reflexives have an intermediate status between one and two argument clauses, but that they typically display features associated with lower transitivity (Hopper & Thompson 1980: 271). So, Chung’s claim is in line with the Transitivity Hypothesis. It is, however, not the case that a reflexive can never be fully affected. Consider the following pair of sentences from English, where the direct object, despite being a reflexive, is understood to be as affected as in (106)b above.

- (110) a. John spayed paint onto himself
 b. John sprayed himself with paint

In sentence (110)b, where *himself* is the object of the verb, *John* is understood to be more affected than when the reflexive is an oblique argument, as in (110)a. The same distinction exists in Hungarian.

- (111) a. János festék-et fújt magá-ra
 Janos paint.OBJ sprayed self.on
 ‘Janos sprayed paint on himself’
 b. János befújta magá-t festék-kel
 Janos sprayed self.ACC paint.with
 ‘Janos sprayed himself with paint’

In (111)a, the reflexive is oblique and understood as partially affected, and in (111)b, where the reflexive is in accusative case, *Janos* is understood as fully affected.

Pearce (1999) gives the following example (112) of a reflexive in pattern II in Māori, so it seems that there is no restriction against reflexives in pattern II.

- (112) i heruina e Hera ia anō
 TAM comb.Cia AGT Hera 3.SG again
 ‘Here combed herself’ (Pearce 1999: 316)

Pearce does not, however, note whether pattern II implies a more affected O, but this is the prediction, based on the Transitivity Hypothesis and evidence from Hungarian and English.

This section has shown that clauses that contain an affected O normally occur in pattern II in Māori, which is in line with the Transitivity Hypothesis. Experience verbs normally appear in pattern I, because their object is not affected by the action.

3.2.2.4 Punctuality & Dynamism

Another parameter that increases the transitivity of a clause and, therefore, the likelihood of ergative alignment in Māori is PUNCTUALITY. Hopper and Thompson (1980: 252) note that punctual events (those carried out with no obvious transitional phase between inception and completion) are more transitive than non-punctual or durative events, and that this is formally marked in many languages. For example, in Samoan, punctual clauses appear with ergative case marking, as in (113)b while less punctual clauses are in pattern I, as in (113)a.

- (113) a. *sā manatu le tama i le teine*
 TAM think the boy OBL the girl
 ‘the boy thought about the girl’
- b. *sā manatua le teine e le tama*
 TAM think.Cia the girl ERG the boy
 ‘the boy remembered the girl’ (Hopper & Thompson 1980: 267)

The following examples from Bauer imply that pattern II can also give experience verbs a punctual reading in Māori.

- (114) *i kitea e Hone i mauāhara a Pita*
 TAM see.Cia AGT Hone TAM bear.grudge PERS Pita
ki a ia
 to PERS 3.SG
 ‘Hone discovered that Pita bore a grudge against him’
 (Bauer 1997: 647)

- (115) *...kua mōhio kua hinga te pā, ka whati*
 TAM know TAM fallen the pa TAM flee
 ‘...and realising that the pa had fallen, they fled’ (Bauer 1997: 87)

Example (114) shows that *kite* ‘see’, an experience verb, can have the punctual interpretation ‘discover’ when it occurs in pattern II. Similarly, *mōhio* ‘know’ is translated as ‘realise’ in (115). The punctual reading of pattern II has not been previously noted for Māori, as it has for Samoan. More examples would be required to see if pattern II can generally make a less transitive verb punctual.

Bauer does note that pattern II in Māori usually codes a dynamic event, rather than a stative one, so that the following example has a default dynamic reading (Bauer 1997: 483).

- (116) *i whakamaoatia ngā kai e Pani*
 TAM caus.cook.Cia the.PL food AGT Pani
 ‘Pani cooked the food’ (Bauer 1997: 483)

To capture the stative reading of an English passive, it would be necessary to use a state intransitive verb, as in (117).

- (117) ka maoa ngā kai
 TAM cooked the.PL food
 ‘the food is cooked’ (Bauer 1997: 483)

A dynamic event is not automatically punctual, but, as noted by Comrie, “since punctual events automatically involve a change of state, they are automatically dynamic” (Comrie 1976: 50). Given that both dynamic and punctual events contrast with stative events, it might be necessary to widen Hopper and Thompson’s parameter. Rather than punctuality, we could say that the broader feature of dynamism affects a clause’s transitivity.

Herd (2005) claims that the TAMs *kua*, *ka* and *i*, which we saw mark perfective clauses, are used with processes that are essentially dynamic (cf. Comrie 1976: 51). Examples (118) and (119) illustrate the eventive reading of *i* and *ka*.

- (118) i tae koe ki ō mātua
 TAM arrive 2.PERS to your.PL parent
 ‘Did you go to your parents?’ (Orbell 1968: 42-3)

- (119) ka mate te tangata nei, ka tanumia
 TAM die the man DIEX1 TAM bury.Cia
 ‘This man died, and was buried’ (Orbell 1992: 63)

Herd shows that these TAMs signal another high transitivity feature – dynamism. He suggests that when *i*, *ka* and *kua* do appear with an inherently stative predicate, an eventive reading is often forced. This can be either inceptive/inchoative, as in (120) and (121), or dynamic, as in (122) and (123).

- (120) i ora ahau
 TAM well 1.SG
 ‘I became well’ (Biggs 1969: 41)

- (121) ka riri a Hotu mo te kai ka rungatia i
 TAM angry pers Hotu with the food TAM above.Cia DO
 tana ringa
 his hand
 ‘Hotu got angry at the food being moved over his hand’
 (Johansen 1948: 23b)

- (122) ka ora ake a Tāwhaki i tōna mate
 TAM well up PERS Tāwhaki AGT his sickness
 ‘Tāwhaki recovered from his illness’ (Biggs 1965: 66)

- (123) ka hongi te ihu ki te hauāuru, kua rongo
 TAM sniff the nose to the west wind TAM smell
 i te haunga o tōna ariki
 DO the wind of his chief
 ‘he smelled the winds of the west wind, and recognised the scent of his
 master’ (Bauer 1997: 119)

We have seen that dynamic events are normally in pattern II in Māori, as predicted by the Transitivity Hypothesis. We also saw that it may be possible for pattern II to give an experience verb a punctual reading. Herd (2005) shows, furthermore, that the TAMs *ka*, *kua* and *i*, markers of ergative clauses, can force a dynamic reading on an otherwise stative predicate.

3.2.2.5 Individuation of O

The last transitivity feature that is relevant to Māori is INDIVIDUATION OF O. According to Hopper and Thompson, “non-referential or indefinite Os show striking correlation with the verb morphology, case-markings and word-order characteristic of ‘intransitive’ clauses in a number of languages” (Hopper and Thompson 1980: 259). They note that when the O is more highly individuated, the action is more effectively transferred from the agent to the patient (Hopper & Thompson 1980: 253). Compare *Fritz drank the beer* with *Fritz drank some beer*. In the first sentence, we understand that all of the beer was drunk (the action is complete), whereas this is not the case in the second sentence.

Hopper and Thompson note that, in many languages, where the O is non-referential, the verb is often assigned to the morphosyntactic class of intransitive verbs (Hopper & Thompson 1980: 257). The extreme example is object incorporation. In Chukchee, an incorporated O is non-referential, and the verb is intransitive, as in (124)b. When the O is definite and referential, the ergative construction is required, as in (124)a.

- (124) a. tumg-e na-ntēwat-ēn kupre-n
 friends.ERG set.TRANS net.ABS
 ‘the friends set the net’
- b. tumg-ēt kopra-ntēwat-gʔat
 friends.NOM net-set.INTR
 ‘the friends set nets’ (Hopper & Thompson 1980: 257)

In Māori, object incorporation can also occur, and the clause is never in pattern II. As expected, it is treated as intransitive.

- (125) e tuihtuhi reta ana ia
 TAM write letters TAM 3.SG
 ‘she is writing letters’ (Bauer 1997: 199)

The transitivity hypothesis predicts that clauses with a referential O will most frequently occur in an ergative pattern because these clauses are highly transitive. Bauer notes that, in the following pattern II sentence (126), *tohunga* ‘priest’ must refer to a specific priest, even though it is modified by *he*, the indefinite article (Bauer 1997: 166).

- (126) kainga i waho, ka whakaritea he tohunga
 eat.Cia at outside TAM appoint.Cia INDEF tohunga
 hei whāngai mō Tūwhakairiora
 COMP feed belong Tū-whakairi-ora
 ‘they ate out of doors, and a tohunga (priest) was appointed to feed
 Tu-whakairi-ora’ (Bauer 1997: 166)

The fact that O is referential here contributes to the clause’s high transitivity, and the ergative pattern is used, as expected.

My study of transitive verbs and their arguments provides further evidence that clauses containing referential Os occur more often in pattern II. O was pronominalised or omitted in 50% of pattern II clauses, compared with only 28% in pattern I clauses (see tables in section 3.3.2.7.) Pronominalised NPs are necessarily referential, and omitted Os are similarly recoverable from context in Māori (Bauer 1997: 485, 627-628). The fact that pattern II O is more frequently omitted, and therefore referential, is evidence in favour of the claim that pattern II is the pattern for highly transitive clauses. Note that this is also further evidence against the accusative hypothesis of Māori. If one of the functions of a passive is to promote the patient, we would not expect that NP to be deleted, and certainly not more often than in an active construction.

3.2.2.6 Accounting for pattern II

The high transitivity features that Hopper and Thompson claim are more likely to occur with ergative marking are the same factors that Clark and others use to account for pattern II in Māori. I propose that no single feature can account for pattern II marking, rather each factor contributes to the transitivity of the clause, which in turn

increases the probability of ergative case-marking. With this in mind, we can now look at some cases of pattern II that were not easily accounted for by previous suggestions (Bauer 1997: 481-482).

Chung cites example (127) of a clearly imperfective event against Clark's claim that pattern II is used with perfective events.

- (127) ka whatāia tonutia mai
 TAM break.Cia still.Cia here
 'he kept breaking it' (Chung 1978: 77)

However, we can see that pattern II is required here because, as suggested by Chung, the O is completely affected by the action of breaking (Chung 1978: 77).

Example (128) contains two pattern II verbs, *kitea* 'see' and *pōwhiria* 'welcome', which have Os that are not typically affected by the action, so we might expect pattern I marking here.

- (128) tēnā a Ponga mā te hoe mai rā, ā,
 that PERS Ponga &co the paddle hither DIST and
 ka **kitea** atu e te tini wāhine kōhi
 TAM see.Cia away AGT the many women gather
 pipi i Onehunga, ka **pōwhiria**
 'Now Ponga and company paddles along and were seen by the large
 group of women gathering pipis at Onehunga, and were welcomed'
 (Bauer 1997:482)

We could argue that the two events are perfective; 'the women saw Ponga and company and welcomed them,' and the clauses have ergative case marking for this reason. In addition to this, the O is omitted in both clauses, but is understood as 'Ponga and company'. As we saw in section 3.2.2.5, omitted Os are referential and, therefore, more highly transitive. Both the perfectivity of the clauses, and the referential O contribute to their high transitivity, and they are, therefore, in pattern II.

Bauer notes the following examples, (129) and (130), which occur within a few lines of each other, yet the first is in pattern II, while the second is in pattern I.

- (129) kātahi ka rukuhia e Hotu
 then TAM dive for.Cia AGT Hotu
 'Then [it] was dived for by Hotu/then Hotu dived for [it]'

- (130) ka hoki te kōrero ki a Hotu i ruku rā
 TAM return the story to PERS Hotu TAM dive DIST
 i te punga o tā rāua waka
 DO the anchor of their canoe
 ‘The story returns to Hotu who dived for the anchor of their canoe’
 (Bauer 1997: 482)

In section 2.4, I suggested that *ruku* ‘dive’ in (130) was in pattern I because there was a relative clause on the A, *Hotu*, and it is not possible to form a relative clause on A in pattern II (cf. section 3.3.2.3). This is probably true, but it seems that the referentiality of the Os also provides some explanation for why (129) is in pattern II and (130) in pattern I. O in (129) is omitted, but understood to refer to a previously mentioned NP. The referentiality of O makes the clause more transitive and thus accounts for the ergative case marking. In contrast, sentence (130) introduces a new O, *te punga* ‘the anchor’. The fact that this is the first mention of *te punga*, makes it non-referential and thus contributes to the lower transitivity of the clause and the fact that it is in pattern I.

The following example illustrates the same point.

- (131) ...ka hao i te ika, ka keri i te roi,
 ...TAM catch DO the fish TAM dig DO the fernroot
 ka keri i te panahi, ka pae, ka tīrekitia
 TAM dig DO the convolvulus root TAM collect TAM stack.Cia
 ‘...[they] caught fish, dug up fern root, dug up convolvulus root,
 gathered [it], and [it] was stacked up (Bauer 1997: 480)

In example (131), there are four pattern I clauses, followed by one pattern II clause. The first three clauses introduce different and new Os, and they are, therefore, in pattern I. The fourth verb, *pae* is glossed by Bauer as ‘collect,’ and her translation suggests that this is a transitive verb without an A or an O. However, the dictionary lists as one definition of *pae*, ‘be collected’ (Williams 2003: 244), and so it seems that *pae* is more like a neuter verb and thus intransitive, rather than transitive, as Bauer’s translation suggests. The single argument of a neuter verb is the grammatical S (cf. chapter 1). This would explain why the verb does not appear in pattern II, when the semantic patient is referential. The fifth verb, *tīrekitia* ‘stack’ has a referential, omitted O and is the only verb to appear with transitive, ergative marking.

The examples show that a collection of factors affect the transitivity of a clause in Māori, so that the more transitive a clause is, the more likely it is to appear in pattern II, with ergative marking.

3.2.3 Split-ergativity in main clauses - conclusion

Split-ergative marking in Māori is consistent with Hopper and Thompson's Transitivity Hypothesis (1980). The most transitive clauses in Māori are ergatively marked (pattern II), and the least transitive clauses have accusative marking (pattern I). Previous suggestions for the occurrence of pattern II clauses are correct, but rather than identifying them as a passive construction, these factors correlate with high transitivity, so that the most transitive clauses are ergatively marked. Factors that trigger high transitivity and ergative marking in Māori are: when the verb codes two participants, (i.e., "AO" verbs), perfective aspect, a dynamic rather than stative verb, and total affectedness of O. I have also argued that individuation of O is important in Māori, so that clauses containing referential Os, especially omitted Os, are more likely to be in pattern II. These are the primary factors that lead to ergative marking in Māori, but further research would reveal whether other features of high transitivity, such as AGENCY, also influence the appearance of ergative case marking.

It seems, therefore, that, rather than Dixon's types of split-ergative languages, it might be more efficient to say that languages are simply split based on the transitivity of a clause, and one or more factors is significant. So that, for languages that Dixon classes as split ergative based on the animacy hierarchy, we might say that the most important factor is AGENCY. In other languages, it is ASPECT. For other languages, it is the mood of the clause, so that realis clauses are ergative and irrealis clauses are accusative (e.g., a number of Australian languages, Blake 1977: 16).

The following section analyses complex clauses in Māori, and shows how the split-ergativity hypothesis can be maintained, despite evidence of syntactic accusativity in highly transitive clauses.

3.3 Syntactic split-ergativity and the Inverse Grammatical Relations Hypothesis

The previous section accounted for the ergative marking in main clauses in Māori, that is, morphological ergativity. We saw that Māori is split, as expected under the Transitivity Hypothesis (Hopper & Thompson 1980), so that ergative marking (pattern II) is preferred in highly transitive clauses. Chung (1978) argues, however, that Māori is an accusative language because certain syntactic processes, including

control, are restricted to A and S, as in an accusative language (cf. section 2.2.2). This section will show that control is restricted accusatively, but that this behaviour follows directly from Manning's Inverse Grammatical Relations Hypothesis (1996, henceforth IGRH) and is compatible with the split-ergativity hypothesis. According to Manning, some syntactic processes, like control, are always accusatively restricted, in all languages.

Manning's hypothesis builds on earlier work on ergativity and the notion of "subject" by Anderson (1976) and Dixon (1979, 1994). Anderson (1976) claims that even morphologically ergative languages have a clear syntactic notion of "subject," which is the same as in accusative languages, a grouping of A and S. The correspondence between syntax and morphology is simply less straightforward in ergative languages than in accusative languages (Anderson 1976: 16). Anderson claims that this is true for all languages, except Dyirbal, in which syntactic processes such as control and relativisation pattern S like O. Anderson thus concludes that there are very few truly ergative languages.

Dixon (1979, 1994) proposes two types of ergative language, morphological and syntactic, and notes that the underlying grammatical relations of a language often do not mirror the surface morphology. Syntactically ergative languages, like Dyirbal, have an S/O pivot for syntactic processes, while other languages, despite morphologically marking S and O similarly, still have an A/S pivot at the syntactic level. These languages are, therefore, only morphologically ergative.

Dixon further suggests that the notion of "deep" subject exists in all languages for semantic reasons. Dixon's "deep" subject is similar to Jespersen's (1924) notion of logical subject and is an alignment of A and S. This is independent of whether a language is ergative or accusative at either or both the levels of syntax or morphology. Dixon also expands the concept of split-ergativity. Languages may be split along various parameters, such as the semantics of the NPs, the tense or aspect of a phrase, and some languages have a main clause/subordinate clause split. In section 3.2, I suggested that the first two of these might be better described as a split dependent on the transitivity of a clause, where one or more high transitivity parameter triggers ergative marking. In the main clause/subordinate clause split, Dixon claims that subordinate clauses, such as relative clauses, are more likely to operate with an S/O

pivot. Control clauses will always pattern with an A/S pivot, because they are sensitive to the semantic notion of “deep” subject.

Manning (1996) explores the often-conflicting evidence from split pivot languages, and the confusing notions of “subject” in ergative languages. In expanding his own theory, he broadens the definition of an ergative language, and labels more languages as syntactically ergative.

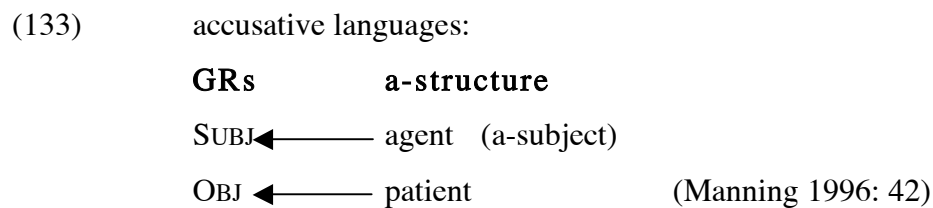
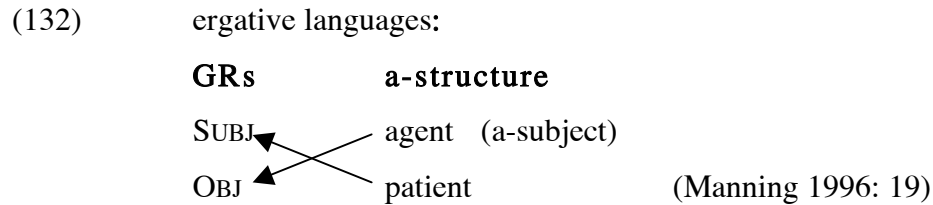
Since Keenan’s (1976) list of proto-typical subject properties, linguists have noted that, in many languages, these properties seem to be split between two NPs and, therefore, that more than one NP is eligible for the label “subject”. In Tagalog, for example, the Topic NP is the focus of the clause and has “reference related prominence” while the Actor NP has “role related prominence”: only Topic NPs can launch quantifiers and be relativised, while only Actors can bind reflexives and control adverbial purpose clauses (Schachter 1976). In Inuit, only S and O NPs can be relativised, but possessive reflexives can only be bound by A or S (Manning 1996: 14). In chapter two, we saw that Sinclair (1976) has similar problems trying to label the subject in Māori. He concludes that syntactic subject properties are in the “a-phrase” (S, pattern II O, and pattern I A), while the semantic subject seems to be in the “e-phrase” (pattern II A).

Manning postulates two levels of structure, which he calls argument structure (a-structure) and grammatical relations structure (gr-structure). Purely syntactic processes like relativisation and topicalisation are sensitive to gr-structure (similar to surface structure in other approaches), while the more semantic processes of binding, control and imperative addressee are sensitive to a-structure (similar to deep structure in transformational grammar).

Positing two levels of structure allows us to capture two different notions of subject; on each level the subject is the privileged entity. At a-structure, where all languages are the same, the “a-subject” is always an alignment of A and S. Manning’s notion of a-subject is similar to Dixon’s notion of “deep” subject, Schachter’s notion of Actor (Schachter 1976) and Jespersen’s notion of logical subject (Jespersen 1924), which is basically an alignment of A and S. However, Manning differs from previous accounts by proposing that derivational operations like passives, causatives and antipassives occur at the level of a-structure, and thereby yield additional a-subjects. For example, in a passive both the logical subject and the surface subject (logical

object) would count as a-subjects (Manning 1996: 19). The a-subject is, therefore, not a purely semantic concept, as Dixon and Jespersen's concepts of "deep" subject are, but also a syntactic one.

The mapping between a-structure and gr-structure is shown in diagrams (132) and (133).



We can see that it is only at gr-structure that ergative and accusative languages differ. In an accusative language (133), there is a straight through mapping and the gr-subject is the same as the a-subject - an alignment of A and S. Ergative languages (132) have an inverse relationship between a-structure and grammatical relations. The gr-subject is an alignment of S and O. According to Manning, it is misleading to label one or the other NP "subject", because each level of syntactic structure has a different subject, which is important for various processes.

In an ergative language, the a-subject NP is oblique at grammatical relations level, while the NP that was patient at a-structure functions as gr-subject or pivot at the level of grammatical relations. This is similar to the Inverse Analysis of ergativity (Dowty 1982, 1991 and Mel'cuk 1988), under which S and O NPs are subjects and A is a direct object. Unlike Manning's theory, the Inverse Analysis applies before valency changing rules, so that antipassive in an ergative language is the same rule as passive in an accusative language. Manning, on the other hand, does not expect the surface subject or pivot to be "the basis of syntactic organization throughout the grammar of the language" (Dowty 1991: 582). Instead, he expects to find a principled division between phenomena that are sensitive to the level of grammatical relations, and those that are sensitive to argument structure (Manning 1996: 20). Languages that

seem to divide subject properties between two NPs split them in the same way, and Manning's IGRH accounts for this.

Diagrams (132) and (133) illustrate the mapping of arguments from a-structure to gr-structure. The second mapping necessary to Manning's theory is argument projection. This determines the argument structure of a verb based on its meaning. Manning notes that Dowty's (1991) theory of argument projection is compatible with the IGRH (Manning 1996: 36). The basic argument structure for a verb is an ordered list of the verb's arguments, for example:

- (134) a. yawn <[1]> [1] John yawned
 b. finish <[1, 2]> [1] Sarah finished [2] her book
 c. present <[1, 2, 3]> [1] Judith presented [2] an award to [3] Cynthia
 (Manning 1996: 42)

Manning applies two more principles to the ordering of a verb's arguments. Firstly, direct arguments precede obliques and secondly, within each of the direct and oblique arguments, arguments are ordered according to a thematic obliqueness hierarchy. Manning adopts the hierarchy proposed by Bresnan and Kanerva (1989)

- (135) Ag > Ben > Recip/Go/Exp > Inst > Th/Pt > Loc
 (Manning 1996: 43)

Diagrams (132) and (133) demonstrate that it is ergative languages that motivate, or justify, the two levels of structure that Manning proposes. Manning classifies many more languages as syntactically ergative than Dixon, because he labels languages ergative or accusative at the level of grammatical relations, rather than at a-structure. All languages demonstrate syntactic accusativity at the level of a-structure. Languages that Dixon classes as split-ergative because control operates with an A/S pivot, but relative clauses operate with an S/O pivot are classed as ergative by Manning. We expect all languages to restrict control in an accusative way, but it is in syntactic operations at the level of grammatical relations, like relative clauses, that ergative languages differ from accusative ones. Therefore, this is the level at which a language should be labelled accusative or ergative.⁴

⁴ Dyirbal seems to be an exception to the IGRH because control is ergatively restricted. Manning argues, however, that rather than control, this is a clause chaining type construction, which would be expected to pattern ergatively. Dyirbal therefore fits Manning's predictions in having an S/O pivot at gr-structure, but argument structure that follows universal lines (Manning 1996: 66).

Manning does not consider languages that are split-ergative based on any of the parameters subsumed under transitivity in the previous section, but I will argue that his theory can account for languages, like Māori, which are split in this way. According to Manning, ergative alignment is only possible at gr-structure. In Māori, therefore, we only expect ergativity to be present at gr-structure in the most transitive clauses. Therefore, syntactic operations like topicalisation, relative clauses, quantifier float and raising (operations that are restricted at gr-structure) should show evidence of ergativity in highly transitive clauses, but be accusatively aligned in less transitive clauses. This means that, in highly transitive clauses, for example those with perfective TAM marker *i*, S will pattern like O. In less transitive clauses, such as those containing experience verbs and those marked with progressive marker *e...ana*, S will pattern like A. Like all languages, Māori will be accusatively aligned at a-structure.

The following sections analyse Māori with Manning's Inverse Grammatical Relations Hypothesis, and we see that the predictions made in the previous paragraph are largely true of Māori. Section 3.3.1 looks at syntactic operations that are restricted at a-structure, while section 3.3.2 analyses processes sensitive to gr-structure, which are expected to operate with an S/O or neutral pivot in an ergative or split-ergative language.

3.3.1 Argument structure

Although argument structure is largely semantic, so that the a-subject is typically the NP with the most proto-agent properties (in the sense of Dowty 1991), it is a syntactic level of structure, and so atypical subjects are also possible, for example, the a-subjects of *suffer*, *undergo* and *receive* (Manning 1994: 36). The a-subject is simply the least oblique argument (Manning 1996: 132).

Manning assumes an accusative (A/S) organization for all languages at the level of argument structure (Manning 1996: 40), but he proposes that valency-changing operations such as passive, antipassive and causatives occur at a-structure, which results in multiple a-subjects. For example, in a passive, both the logical subject and the surface subject (logical object) would count as a-subjects (Manning 1996: 19). This accounts for why binding in Inuit is controlled, not only by A and S, but also by passive agents and causees (Manning 1996: 52).

Manning claims that restrictions on control, binding and imperative addressee occur at a-structure and are, therefore, accusatively aligned in all languages. We shall examine control, binding and imperative addressee structures in Māori, and see that Manning’s predictions are largely supported by the Māori data. Control and imperative addressee are accusatively aligned. It is not clear whether binding follows Manning’s predictions, however. The restrictions on binding require further research before we can say that only A and S can be binders in Māori.

3.3.1.1 Control

Restrictions on control are at the level of argument structure under the IGRH and are, therefore, the same for all languages, accusative and ergative. Purposive (infinitival) clauses normally refer to some attempt at a controlled action, and generally, have an A or S ‘agent’ (Dixon 1994: 102). According to Manning, “the a-subject of an infinitive clause must always be controlled by the immediately higher a-subject under which it is embedded” (Manning 1996: 125). These predictions are true of Māori, and we see that, furthermore, only ‘agentive’ As and Ss can be controlled. Experiencer arguments and Ss of neuter verbs cannot be deleted from clauses introduced by *ki te*.

In chapter 2, we saw evidence from *ki te* control with verbs like *pirangi* ‘want’, *tono* ‘order’ and *hiahia* ‘want’ that shows that Māori seems to have accusative alignment in control constructions. The arguments for *ki te* control as an accusative, A/S selecting construction will be repeated briefly here. We shall only be concerned with which NPs in the lower clause can be controlled, as the restrictions on controlling NPs in the main clause were found to be related to the semantics of the main verb (see section 2.2.2).

Firstly, S can be controlled, as in (136).

- (136) kāore a Pare i pai ki te puta mai
 not PERS Pare TAM agree COMP come here
 ‘Pare did not agree to come out’ (Orbell 1968:4)

A of a canonical transitive verb can only be controlled in the accusative pattern (pattern I) (137), but not in the ergative pattern, as the ungrammatical (138) shows.

- (137) e hiahia ana a Hōne ki te patu i ngā manu
 TAM want TAM PERS Hone COMP kill DO the.PL bird
 ‘Hone wants to kill the birds’ (Chung 1978: 112)

- (138) *i hiahia au ki te patua te poaka
 TAM want I COMP kill.Cia the pig
 ‘I wanted to kill the pig’ (Chung 1978: 114)

Ss of less transitive verbs, such as the experiencer argument of an experience verb and the S of a neuter verb cannot be controlled, as in (139) and (140). Both of the following sentences are only acceptable with *kia*, the subjunctive marker.

- (139) *e pirangi ana a Moana ki te mōhio ki tōna koroua
 TAM want TAM PERS Moana COMP know DO her elder
 ‘Moana wants to know her elder’ (Pearce and Waite 1997: 71)

- (140) *e pirangi ana a Moana ki te mahue i tana tāne
 TAM want TAM PERS Moana COMP left AGT her male
 ‘Moana wants her husband to leave her’ (Pearce & Waite 1997: 49)

O cannot be controlled in either the accusative (pattern I) (141), or the ergative pattern (pattern II) (142).

- (141) *e hiahia ana a Hōne ki te patu (ai) te kōtiro
 TAM want TAM PERS Hone COMP hit (PRO) the girl
 ‘Hone wants the girl to hit him’ (Chung 1978: 112)

- (142) *i hiahia au ki te patua e Rewi
 TAM want I COMP hit.Cia AGT Rewi
 ‘I wanted to be hit by Rewi’ (Chung 1978: 113)

Evidence from *ki te* control shows that only ‘agentive’ As and Ss in the lower clause can be controlled. The fact that the verb in the lower clause must be in pattern I, the accusative pattern, also supports the claim that pattern I is the accusative pattern.

The data in (136) - (142) suggest that, in Māori, only agentive a-subjects may be controlled and deleted. Manning claims that it is possible for other a-subjects to be controlled. For example, in the English sentence *he wants to be loved*, the derived passive subject or logical object is controlled in the lower clause. This is predicted by the IGRH because passive subjects (logical objects) are also a-subjects. However, it seems that in Māori, and possibly in other languages that have a subjunctive construction, control is restricted to a purely semantic notion of subject. If the A or S is not agentive, the subjunctive must be used.

We can conclude that control of adverbial clauses in Māori is restricted to a-subjects in line with Manning’s claim that control is always accusatively aligned (Manning 1996: 48).

3.3.1.2 Binding

Manning proposes that binding is restricted at the level of a-structure and, therefore, that only a-subjects can act as binders in all languages. Manning's theory of binding is similar to previous proposals that define binding on a command relationship at argument structure (see Manning 1996: 50-59, 128-147).

Binding in Māori, however, is not well understood, and so it is impossible to confirm Manning's predictions for Māori at this stage. Māori does not have special reflexive pronouns, rather reflexivity is expressed by ordinary non-reflexive pronouns with or without a support form *anō* 'again' or (*an*)*ake* 'only'. In example (143), the support form is required to make the reflexive reading unambiguous. Without either *anō* or *anake*, the pronoun, *ia*, could also refer to a third person.

- (143) kei te horoi a Mere_i i a ia_i (anō/anake)
 TAM wash PERS Mere DO PERS 3.SG (again only)
 'Mary is washing herself' (Bauer 1993: 168)

Bauer (1997) observes that it is difficult to formulate any absolute rules on binding in Māori. She simply notes some tendencies, including the fact that the binder must normally precede the bindee in order for the reflexive interpretation to be unambiguous (Bauer 1997: 637). Binding in Māori clearly requires study that is beyond the scope of this thesis. I will, therefore, leave the issue to future research. See Bauer (1997: 635-653) for some generalisations of binding in Māori.

3.3.1.3 Imperative Addressee

The third type of syntactic structure that Manning claims is constrained at the level of a-structure, and accusatively aligned is imperative addressee restrictions. According to Manning, the only possible addressees of imperative constructions are "the highest a-subjects of the clause that is construed as controlling the event (Manning 1996: 148).

Imperatives in Maori have previously received some attention because transitive imperatives are always in pattern II. Under the traditional accusative analysis, this has been difficult to account for, and it has been necessary to simply require that transitive imperatives be in the passive voice. An obligatory passive for the imperative construction seems poorly motivated, and the present hypothesis may offer a better explanation.

As we saw in chapter 2, Sinclair (1976), in favour of the ergative analysis, claims imperatives as proof that Māori is an ergative language; if pattern II is the basic verb form for transitive clauses, it is unsurprising that it is the one used with imperatives. While Sinclair does not suggest any alternative function for the *-Cia* suffix, the obvious function under his analysis is a marker of transitivity.

It is unexpected that imperatives, a type of irrealis clause and therefore low in transitivity (Hopper & Thompson 1980: 277), should appear with the transitive morphology. However, we will see that other transitivity factors are more important in Māori than REALIS, and it is these that trigger ergative morphology (but not ergative syntax).

Māori demonstrates syntactic accusativity in imperative addressees: the only NPs that can be deleted as imperative addressees are As and Ss, as predicted by Manning. Example (144) shows an imperative with an intransitive verb, where the addressee is S.

- (144) Haere atu!
 move away
 ‘Go!’ (Bauer 1997: 446)

The following example is an imperative on a transitive verb, where the addressee is A.

- (145) kawea tō wai mō tō teina
 carry.Cia your water belong your younger sibling
 ‘Take your water to your junior relative’ (Bauer 1997: 447)

In section 3.1, I proposed that the verbal suffix *-Cia* is an ergative marker. If imperative addressees are restricted in an accusative way, then it is initially surprising that imperative verbs take the ergative ending, particularly in a language that is split ergative based on the transitivity of a clause. According to the Transitivity Hypothesis (Hopper & Thompson 1980), ergative marking occurs in the most transitive clauses. One of Hopper and Thompson’s transitivity parameters is REALIS/IRREALIS, and they note that indicative forms are more transitive than non-assertive forms such as conditionals, subjunctives and imperatives. In many Australian ergative languages, non-ergative constructions are used for verbs in future tense, imperative mood, imperfect, potential or irrealis aspect (Blake 1977: 16). Clearly, the realis division is not significant in split-ergativity in Māori. Pattern II, the ergative pattern, morphologically marks imperatives, a type of irrealis clause. I suggest that other

transitivity features, such as participants and dynamism, are more critical in Māori, and it is these that trigger ergative marking.

Māori seems to have syntactic accusativity (only S and A can act as addressee), but uses ergative morphology in its imperative constructions. Manning cites two related reasons for this kind of situation; one is diachronic and the other semantic (Manning 1996: 70-71). He points out that synchronic morphology may reflect earlier syntactic configurations, because syntactic change generally precedes morphological change. He also notes that such a diachronic residue can be semantically reinterpreted, so that the ergative morphology can have a synchronic semantic basis (Manning 1996: 71). In chapter 4, we will see that pattern II was the dominant pattern for all transitive verbs in Māori and other Polynesian languages. This was, therefore, the pattern used for imperatives, and the *-Cia* suffix on imperative verbs in Māori might be considered a residue from an earlier fully ergative system.

Support for treating *-Cia* as a transitivity marker in imperatives comes from the fact that it is sometimes optional. Examples (146) and (147) apparently have the same meaning, yet (146) is in the intransitive form with an oblique goal-type complement, while (147) is in the transitive form, and the patient appears as an argument of the verb.

- (146) e whio ki ngā tamariki kia haere mai
 IMP whistle to the.PL children SBJ move hither
 ‘Whistle out to the children to come!’
- (147) whionga atu tō kurī kia hoki mai
 whistle.Cia away your dog SBJ return hither
 ‘Whistle out to your dog to return!’ (Bauer 1997: 447)

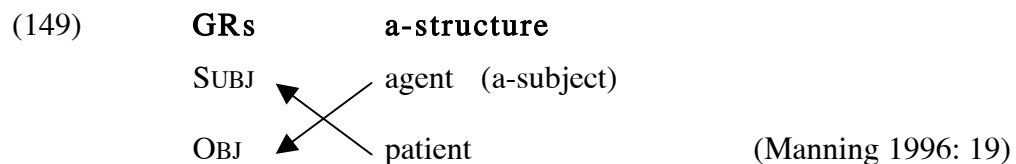
Individual speakers vary in their use of either form, but it seems that the presence of *-Cia* increases the transitivity of the clause. It is also possible for the verb to appear in the transitive form, with an ending, but without an object in the same clause, as in (148).

- (148) Werohia!
 pierce.Cia
 ‘Spear it!’ (Bauer 1997: 448)

Despite the fact that imperatives show evidence of morphological ergativity, Manning's claim that all languages are syntactically accusative with regards to imperatives is supported. In Māori, only S and A can act as the addressee of an imperative construction. The *-Cia* verbal suffix appears in imperative constructions as a residue from a formerly fully ergative morphology, and is a transitivity marker in modern Māori.

3.3.2 Grammatical Relations Structure

Grammatical relations structure (gr-structure) is the name that Manning gives to the surface structure of any language. It is equivalent to the level of final grammatical relations in Relational Grammar, f-structure in LFG, and basically the same as S-structure in GB. In the previous section, we saw that all languages, including Māori, are accusative at the level of argument structure, where binding, control and imperative addressee are restricted. It is only at the level of grammatical relations structure that ergative languages are distinguished from accusative ones. Accusative languages treat A and S similarly at both levels of structure. As shown in diagram (132) above, repeated here as (149), the a-subject and patient of a transitive verb have an inverse relationship at the level of gr-structure in ergative languages.



The a-structure patient becomes the gr-subject, or pivot, and patterns like S of an intransitive verb. The NP that was the privileged term at a-structure, the a-subject, is the non-pivot at gr-structure, and is labelled OBJ (Manning 1996: 48). Manning's gr-subject is the same as Dixon's pivot (1979, 1994), a grouping of S and O. According to Manning, gr-structure comes about as a result of the grammaticisation of discourse roles. The pivot is derived from the grammaticisation of either the topic, in an accusative language, or the focus, in an ergative language (Manning 1996: 35 and see section 3.3.2.7).

As stated in section 3.3, under Manning's Inverse Grammatical Relations Hypothesis, certain syntactic constructions are constrained at the level of a-structure, and others are constrained at the level of gr-structure. Structures that are restricted at

gr-structure include relative clauses, topicalisation, quantifier float, question formation and raising. Manning claims that ergative languages will either distinguish the pivot (S/O) in these constructions, or the operation will apply equally to A, S and O, in which case the pivot will be neutral.

This section analyses these constructions in Māori, and we will see that Māori has ergative alignment at gr-structure, but only in highly transitive clauses, as expected under the split-ergative hypothesis. In the most transitive clauses, Māori has an ergative pivot; pattern II O is treated like S and differently from A. In less transitive clauses, pattern I A is treated like S, and differently from pattern I O. As noted in section 3.2, the features that are expected to trigger ergative alignment in Māori are: when two participants are required by the verb (i.e., “AO” verbs), perfective aspect, an affected direct object and/or a dynamic action. The split-ergative alignment is most clear with regard to topicalisation, question formation and raising with completion complements. It is less straightforward in relative clauses. Despite this, the evidence does not point to an accusative alignment. Rather, it appears that Māori has a neutral pivot in less transitive relative clauses.

In languages that are split-ergative based on the tense or aspect of a clause, it is usually said that past tense clauses pattern differently from those in present and future tense (Dixon 1994: 97-101). As we will see in Māori, however, future tense clauses seem to pattern with the past and are thus highly transitive. It is difficult to understand specifically how future tense clauses pattern in Māori though, because there are few textual examples of future clauses, and because there is no absolute future tense marker in Māori, rather several relative tense markers (*ka*, *e...ana*, *kei te*, *kua*) that can be understood as future in certain contexts. However, the future has been observed to pattern ergatively in some other split languages so it is not unsurprising that Māori patterns in this way. For example, Newari (Tibeto-Burman) has obligatory ergative marking in past/perfect and future/irrealis but it is optional in durative/progressive tenses (Givon 1985). It is, therefore, not the case that the future patterns like the present tense in all split languages.

Section 3.3.2.7 examines restrictions on definiteness and specificity in Māori, which Manning also claims are restricted at gr-structure (Manning 1996: 75). Manning’s intuitions are largely in line with other studies of definiteness. However, it

appears that definiteness may be universally restricted in an ergative manner, and that it is, therefore, best treated on a third level of structure.

3.3.2.1 Topicalisation

Topicalisation or *ko*-clefting was discussed in section 2.3.4, as Sinclair uses it as support for his claim that Māori is an ergative language (Sinclair 1976: 12). As a construction that treats S and O in the same way, topicalisation seems to support the ergative hypothesis. However, a closer analysis of the transitivity of the clauses in which A, S and O can be *ko*-clefted reveals that the split-ergativity hypothesis is more accurate: topicalisation in the most transitive clauses is ergatively aligned, while topicalisation in less transitive clauses is accusative.

In Māori, topics can be fronted with *ko*. S can be topicalised, regardless of the transitivity of a clause. Example (150) shows a topicalised S with the TAM *i*, a perfective past tense marker, while in example (151), S is topicalised when the TAM is *e...ana*, a progressive marker.

(150) ko Hone i haere ki te moana
 TOP Hone TAM go to the sea
 ‘it was Hone that went to sea’ (Chung 1977: 362)

(151) ko Hone e mahi ana ki te whare wānanga
 TOP Hone TAM work TAM to the house learning
 ‘It’s Hone who works at the university’ (Bauer 1991: 5)

As expected under the split-ergative hypothesis, O can only be *ko*-clefted in the most transitive clauses (pattern II) (151). Pattern I O cannot be *ko*-clefted.

(152) ko Hone i patua e Rewi
 TOP Hone TAM hit.Cia AGT Rewi
 ‘it was Hone that Rewi hit’ (Sinclair 1976: 12)

In section 2.3.4, we saw that it is not possible to *ko*-cleft A of a canonical transitive verb. Bauer (1991) notes that the actor-emphatic construction is the preferred method for topicalising the A argument, as in (153), except in present tense, so that *ko*-clefting and the actor-emphatic construction are in complementary distribution: “*ko*-clefts are used for non-transitives, and non-past, non-future transitives” (Bauer 1991: 10). Bauer considers sentences like (152) intransitive, as this is a passive under the accusative analysis. In past (153) or future tense (154), the actor-emphatic must be used.

(153) *nā Rewi i whāngai te kūao kau*
 POSS Rewi TAM feed the baby.animal cow
 ‘Rewi fed the calf’ (Bauer 1991: 9)

(154) *māku koe e whāngai*
 POSS.1.SG 2.SG TAM feed
 ‘I’ll feed you’ (Bauer 1993: 223)

Note that in the actor-emphatic construction, the O or patient argument is \emptyset -marked, but the verb does not take the transitive *-Cia* ending. The A argument is marked with the possessive *nā* or *mā*.

Chung (1977) argues that it is possible to *ko*-cleft an A argument but only gives an example of a *ko*-clefted experiencer argument.

(155) *ko te wahine i kite i te hoariri*
 TOP the woman TAM see DO the enemy
 ‘it was the woman who saw the enemy’ (Chung 1977: 362)

Bauer also gives an example of an experiencer argument that can be *ko*-clefted;

(156) *ko Hone i kite i te tāhae*
 TOP Hone TAM see DO the thief
 ‘it was John who saw the thief’ (Bauer 1993: 220)

Bauer notes that As of canonical transitive verbs can only be *ko*-clefted in present tense clauses, as in (157).

(157) *ko Rewi e whāngai ana i te kūao kau*
 TOP Rewi TAM feed TAM DO the baby.animal cow
 ‘Rewi is feeding the calf’ (Bauer 1991: 4)

Examples (155) and (156) show that experiencer arguments can be *ko*-clefted in past tense. We could conclude that a *ko*-cleft on present tense A (157) is possible because present tense clauses, particularly those marked with the imperfective TAM *e...ana*, are low in transitivity. In the same way, we might argue that experiencer arguments can be *ko*-clefted because they occur in less transitive clauses. That is, in both cases, a present tense A or an experiencer argument can be clefted because it is treated like S of an intransitive verb.

There is evidence that O in less transitive clauses can also be *ko*-clefted. O cannot be *ko*-clefted in pattern I as shown in example (158).

(158) **ko (a) Hone i patu a Rewi*
 top (PERS) Hone TAM hit PERS Rewi
 ‘it was Hone that Rewi hit’ (Sinclair 1976: 362)

However the following *ko*-cleft on O in pattern II with *kei te*, a marker of continuous aspect, was judged grammatical by two informants I asked.

- (159) ko te kōauau kei te tohungia e Hone
 TOP the flute TAM save.Cia AGT Hone
 ‘it’s the flute that Hone is saving’

Kei te, a continuous marker, serves to lower the transitivity of example (159). As we saw in section 3.2.1, clause with progressive TAMs are less transitive than clause with perfective TAMs. Under the split-ergative hypothesis, pattern II is not expected to be grammatical with continuous or imperfective TAMs. Although more judgments must be sought, example (159) may provide evidence that pattern II is currently being reanalysed as passive, and is thus used to topicalise Os in less transitive clauses.

There is a further strategy for topicalising less transitive Os – the possessive-relative clause strategy, as in (160). Bauer remarks that this not the same construction as other ordinary *ko*-clefts because clauses such as (150), (151) and (152) contain headless relative clauses, whereas the relative clause in (160) has a head, namely the determiner *t-* (Bauer 1997: 666).

- (160) ko te kōauau t-ā Hone i tohu
 TOP the flute the.of Hone TAM save
 ‘it was the flute that Hone saved’ (Bauer 997: 666)

As we will see with question formation and relative clauses, the possessive-relative strategy is often used with Os in less transitive clauses, and this is the prediction for topicalisation also. However, this is an infrequent construction. When I asked informants about the grammaticality of sentences such as (160), it seemed that older speakers might be more likely to use it. Younger speakers are more likely to topicalise O in pattern II, regardless of the TAM, as in (159).

Table 3.2 summarises the topicalisation data. We have seen that in clauses with high transitivity, S (150) patterns like O (152), and differently from A, (153) and (154). In less transitive clauses S (151) and A, (155), (156) and (157) pattern similarly, and O (160) must use a different strategy. Māori thus has an ergative pivot in the most transitive clauses, and an accusative pivot in less transitive clauses.

	High transitivity	Low transitivity
A	actor-emphatic	✓
S	✓	✓
O	✓	✗ (only possible with <i>-Cia</i> or possessive-relative clause strategy)

Table 3.2: Topicalisation and split-ergativity

Evidence from cleft sentences also supports the hypothesis that Māori is ergatively aligned at gr-structure. Cleft sentences, which Bauer classes as “non-verbal classifying sentences” (Bauer 1997: 536), are introduced by *he mea*. They contain no TAM marker, but are understood to refer to a completed event. S and O of these sentences are always \emptyset -marked, as in (161) and (162), despite the fact that the verb does not take the transitive ending *-Cia*. If the agent is expressed, it appears marked by *e*, as in (162) or with *nā* or *mā*, derived from an actor-emphatic structure, as in (163) (Bauer 1997: 667). Bauer notes that this type of clause is an example of ergativity in Māori (Bauer 1997: 536-537).

(161) he mea whakarākau taua taniwha
 cls thing cause.tree that taniwha (monster)
 ‘that taniwha was turned into wood’

(162) ...he mea tīpako he tāne e te iwi mana?
 ...cls thing select a man AGT the tribe belong.3.SG
 ‘...did the tribe select a husband for her?’ (Bauer 1997: 667)

(163) mea ngaungau nāna ngā taura ki ana niho
 thing gnaw belong.3.SG the.PL rope with his teeth
 ‘What he did was gnaw the ropes with his teeth’ (Bauer 1997: 667)

We can conclude that topicalisation provides evidence that Māori is split-ergative at the level of gr-structure. Both clefting with *ko* and *he mea* treat S and pattern II O alike, and differently from A, in highly transitive clauses. In both constructions S and pattern II O are \emptyset -marked, and A, when it appears, is marked with *nā* or *mā* (as in the actor-emphatic), or with *e* (in cleft sentences). A is therefore the “marked” constituent. The actor-emphatic is used to topicalise A in the most transitive clauses. In less transitive clauses, Māori has an accusative pivot, as predicted by the split-ergative hypothesis. A can be topicalised with *ko*, if the TAM marker is progressive, so that A patterns like S. Pattern I O cannot be topicalised with

ko. We have also seen that pattern II may sometimes be used to topicalise O in clauses marked with progressive aspect, which suggests that pattern II is being reanalysed as passive.

3.3.2.2 Question Formation

The second syntactic operation that is restricted at gr-structure is question formation. Under the IGRH, ergative languages treat the gr-subject or pivot (S/O) differently from A with regard to question formation strategies. This section analyses the strategies used to question each of A, S and O in Māori, and shows that S and O are treated differently from A, but that question formation, like topicalisation, is sensitive to the degree of transitivity in a clause, thereby providing evidence for the split-ergative hypothesis of Māori. S and pattern II O pattern alike and differently from A in the most transitive clauses, while S and pattern I A pattern alike in less transitive clauses, and O is questioned using a different strategy.

S is questioned in Māori with *ko*-fronting, using *ko* or *he*. The previous section, gave an account of *ko*-clefting for topicalisation. Question formation uses essentially the same process, the question word is fronted with *ko* or *he*, and, as we shall see, the same restrictions as for topicalisation apply. S can be questioned with *ko*-clefting in highly transitive clauses (164), and when the TAM is *e...ana*, the progressive marker (165).

(164) *ko tēhea tīma i toa?*
 TOP Q team TAM win
 ‘which team won?’ (Harlow 2001: 232)

(165) *ko wai e korero ana?*
 TOP Q TAM speak TAM
 ‘who is speaking?’ (Harlow 2001: 232)

O in pattern II, the ergative pattern, can be questioned in the same way as S, with *ko* or *he* fronting, as in (166).

(166) *he aha i murua e te tangata?*
 CLS Q TAM plunder.Cia AGT the man
 ‘what was repossessed by the man?’ (Bauer 1997: 434)

A in pattern II, the ergative pattern, is not normally questioned, but it is possible with an echo-question, as in (167). In an echo-question, the question word appears in the place of the questioned element.

- (167) i pūhia te pūru e wai?
 TAM shoot.Cia the bull AGT Q
 ‘Who shot the bull?’ (Bauer 1997: 436)

However, these are not common and Bauer reports that some speakers find them discourteous (Bauer 1997: 443). The actor-emphatic construction (see below) would be preferred.

As in topicalisation (section 3.3.2.1), the A of a canonical transitive verb in Māori can only be questioned with an actor-emphatic construction, as in (168) (past) and (169) (future).

- (168) nā wai i here atu te kurī?
 belong Q TAM tie away the dog
 ‘who tied up that dog?’ (Bauer 1997: 434)

- (169) mā wai e here atu te kurī?
 belong Q TAM tie away the dog
 ‘who will tie up that dog?’ (Bauer 1997: 434)

Just as we saw for topicalisation, A can be fronted and questioned like S when it occurs in clauses that are low in transitivity, such as those with progressive TAMs (170), or with experience verbs (171).

- (170) ko wai kei te here atu i ngā kurī?
 TOP Q TAM tie thither DO the.PL dog
 ‘Who is tying up the dogs?’ (Bauer 1997: 434)

- (171) ko wai i pirangi ki te kākahu?
 TOP Q TAM want to the dress
 ‘who wanted the dress?’ (Bauer 1997: 434)

Thus far, the evidence suggests that, like topicalisation, question formation in Māori demonstrates ergativity at the level of gr-structure; S and O are treated similarly and differently from A in the most transitive clauses.

The second argument of an experience verb is questioned using the possessive-relative construction, as in (172), or a substitution/echo-question method, as in (173) below. In the substitution method, the question word simply fills the slot of the O. This method is also possible with O of canonical transitive verbs in pattern I, but is judged less natural than either of (166) or (174) (Bauer 1997: 435).

- (172) he aha tā Hata i pīrangi ai?
 CLS what SG.GEN Hata TAM want PART
 ‘what did Hata want?’

- (173) i kite a Rewi i a wai?
 TAM see CLS Rewi DO CLS Q
 ‘Who did Rewi see?’ (Bauer 1997: 435)

According to Bauer, both the possessive-relative and the substitution, echo-question methods are equally good for questioning the O of an experience verb (1993: 9).

Bauer claims that speakers have a choice of strategy to question an O NP (Bauer 1997: 434). She observes that older speakers prefer to use the possessive-relative clause strategy, exemplified above in (172) with experience verbs, to question an O NP of a transitive clause, as in (174) and (175) (Bauer 1997: 434).

- (174) he aha tā tērā wahine e horoi nā?
 CLS Q the.of that woman TAM clean near.II?
 ‘What is that woman cleaning?’

- (175) ko wai ā Hata i āwhina ai?
 TOP Q [the].of Hata TAM help PART
 ‘Who did Hata help?’ (Bauer 1997: 434)

Bauer (1993, 1997) only gives these two examples of the possessive-relative construction with pattern I Os. The first (174) is marked for progressive aspect. The second example that Bauer gives, (175), is a question on the O of *awhina* ‘help’. Bauer (1993: 4) and Pearce and Waite (1997: 71) treat *awhina* as a canonical transitive verb, however Chung considers it to be an experience verb (1978: 47). If *awhina* is an experience verb, or at least less transitive than a canonical transitive verb, the possessive-relative strategy might then be more generally considered the strategy for clauses with low transitivity features, such as experience verbs and clauses in progressive aspect. This would account for its use in (174), and with *awhina* in (175). Bauer’s claim that speakers freely choose the possessive-relative strategy or *ko*-clefting in pattern II to question Os is not supported, and I suggest that the particular strategy is determined by the transitivity of the clause.

Table 3.3 summarises the strategies used to form questions in Māori.

	High transitivity	Low transitivity
A	actor-emphatic	✓
S	✓	✓
O	✓	possessive-relative

Table 3.3 Question formation of affirmative clauses

Question formation strategies in Māori provide evidence that Māori is split-ergative at the level of grammatical relations. S and O are treated in the same way and differently from A in the most transitive clauses. S and O NPs can be questioned by fronting the questioned element with *ko* or *he*, while As in high transitivity clauses can only be questioned with an actor-emphatic construction, as in (168) and (169). In clauses that are low in transitivity, for example, those with experience verbs and those marked for progressive aspect, S and A are treated alike. O is normally questioned with the possessive-relative strategy, or an echo-question in less transitive clauses.

3.3.2.3 Relative Clauses

Under Manning's IGRH, ergative languages either treat S and O differently from A for relative clauses, or the language will have a neutral pivot, so that S, O and A are relativised in the same way. Relative clauses were discussed in chapter 2 (section 2.3.5), as Sinclair (1976) uses them as evidence of ergative alignment in Māori. A closer analysis, however, shows that, like other processes that are constrained at g-structure, relative clauses have evidence of ergativity only in the most transitive clauses, and are, therefore, support for the split-ergative hypothesis of Māori. In less transitive clauses, O can be relativised in the same way as S and A, which suggests a neutral pivot.

There are three methods of forming relative clauses: deletion, pronoun retention and relativisation with a relative pronoun. The next section focuses on the deletion method, as this is the strategy used with all S NPs.

As expected, it is possible to relativise on the S of an intransitive verb, regardless of the transitivity of a clause. The relative clause is simply juxtaposed to the head noun in clauses with low transitivity (176), and those with high transitivity (177).

(176) ka mōhio au ki te wahine e waiata ana
 TAM know 1.SG OBL the woman TAM sing TAM
 i te huarahi rā
 at the street dist.
 'I know the woman who is singing in that street' (Bauer 1997: 564)

(177) te tamaiti i mate
 the child TAM die
 'the child that died' (Orbell 1968: 8)

O in pattern II (the ergative pattern) is relativised in the same way as S (178).

- (178) i waiata a Inia i te waiata i titoa
 TAM sing PERS Inia DO the song TAM compose.Cia
 e Alfred Hill
 AGT Alfred Hill
 ‘Inia sang the song that Alfred Hill composed’ (Bauer 1982: 312)

The following example of a relativised O in the accusative pattern (pattern I) is not grammatical.

- (179) *i hoko mai ia i te whare
 TAM buy hither he DO the house
 i hanga a Hata
 TAM build PERS Hata
 ‘He bought the house which Hata built’ (Bauer 1982: 310)

The evidence thus far suggests that relative clause strategies treat S and pattern II O in the same way. Both can be relativised using the deletion method, as we expect under the split-ergative hypothesis of Māori.

If we look at relative clause strategies on A, there is more evidence that Māori has ergative alignment in highly transitive clauses. An A argument can be relativised with the actor-emphatic. As we saw with topicalisation and question formation, the actor-emphatic marks the A NP as possessive, and the patient is \emptyset -marked, as in (180).

- (180) kua tae mai te kōtiro nāna i
 TAM arrive hither the girl belong.she TAM
 hoki mai ngā whurutu
 buy hither the.PL. fruit
 ‘the girl who bought the fruit has arrived’ (Bauer 1982: 324)

However, A can also be relativised using the deletion method with the verb in pattern I, as in (181).

- (181) ka tū anō taua koroheke i arahi mai
 TAM stand again that old man TAM lead hither
 rā i a Puhihuia
 dist DO PERS Puhihuia
 ‘The old man who had led Puhihuia here stood up again’
 (Bauer 1997: 566)

Under the split-ergative hypothesis, we predict that these two strategies will be in complementary distribution. The actor-emphatic strategy, as in (180), will be preferred with the most transitive verbs, in the same way as it is preferred for topicalising and questioning the most transitive As. The deletion method, as in (181),

will only be grammatical with clauses at the low end of the transitivity scale. Three informants I asked preferred the actor-emphatic form to relativise A in canonical transitive clauses, and one commented that the deletion strategy for a sentence such as (180) might be used more by younger speakers. While (181) contains a past tense TAM, which points to high transitivity, the O is not affected, which reduces the clause's transitivity.

If we look more closely at restrictions on relative clauses on NPs in clauses with low transitivity features, we see that, as expected, the verb is usually in pattern I, but rather than an S/A pivot, all of S (176), A (181) and O can be relativised using the deletion method, so that Māori has a neutral, rather than accusative, pivot in less transitive clauses.

Bauer notes that grammaticality judgments for relative clauses on O change when a different TAM marker is used (Bauer 1982: 316). O of a canonical transitive verb in the accusative pattern (pattern I) can be relativised using the deletion method, when the tense marker is non-past. This construction is not possible if the TAM is past (179). Bauer gives the following grammatical examples of relative clause on O with a progressive TAM marker, *e...ana*:

- (182) e hoko mai ana a ia i ngā kūmara
 TAM buy hither TAM PERS he DO the.PL kumara
 e whakatipu ana a Hata
 TAM caus.grow TAM PERS Hata
 'he buys the kumara Hata grows' (Bauer 1982: 316)

- (183) he mā ngā wai e inu nei tātou
 CLS clean the.PL water TAM drink here 1.PL.INCL
 'the water we drink here is clean' (Bauer 1982: 317)

The most common method for forming relative clauses on the objects of experience verbs is the deletion strategy, with the verb in pattern I, as in (184).

- (184) ko ētahi o ngā tāngata i kite a
 TOP some.PL of the.PL people TAM see PERS
 Tamahae nō Te Kaha
 Tamahae POSS Te Kaha
 'Some of the people Tamahae saw belong to Te Kaha'
 (Bauer 1982: 311)

In the same way that sentences (182) and (183) are less transitive because they are marked for progressive aspect, sentence (184) is less transitive because the object of *kite* ‘see’, an experience verb, is unaffected. This suggests that deletion in pattern I is the relative clause strategy preferred with Os in clauses that are low in transitivity. Bauer argues that it is possible for some Os of experience verbs to be relativised using the deletion method in pattern II (Bauer 1997: 569). This would be unexpected because experience verbs do not frequently occur in pattern II. Bauer does not provide an example to support her claim.

It is useful at this stage to summarise the restrictions on relative clauses. It can be seen from table 3.4 that relative clause strategies are restricted as we predict; S and O are relativised in the same way in clauses with high transitivity features, and in less transitive clauses, Māori has a neutral pivot, so that all of S, A and O can be relativised on in pattern I.

	High Transitivity	Low Transitivity
A	actor-emphatic	✓
S	✓	✓
O	✓	✓

Table 3.4: Summary of Relative Clause Strategies

According to Bauer (1982) speakers have a choice of strategies for relative clauses on O. Relativisation by deletion with the verb in pattern II (178), is only one method to relativise O. Speakers can also use the actor-emphatic construction, as in (185).

- (185) i waiata a Inia i te waiata nā Alfred Hill
 TAM sing PERS Inia DO the song POSS Alfred Hill
 i tito
 TAM compose
 ‘Inia sang the song that Alfred Hill composed’ (Bauer 1982: 312)

It is interesting that O can be relativised using an actor-emphatic strategy, in the same way as A, as in (185). We have predicted that O patterns like S in the past tense. The relative clause in (185) corresponds to the actor-emphatic clause in (186).

- (186) nā Alfred Hill i tito te waiata
 POSS Alfred Hill TAM compose the song
 ‘It was Alfred Hill who composed the song’ (Bauer 1983: 312)

In the actor-emphatic construction, the O NP is \emptyset or absolutive marked, just like O in a pattern II clause. Therefore, we could say that this strategy is not significantly different from the deletion method used with O in pattern II, and with intransitive S. It is not evidence to contradict the hypothesis that relative clauses are ergatively aligned in highly transitive clauses.

This section has shown that relative clauses are restricted as expected under the split-ergative hypothesis of Māori. In highly transitive clauses Māori has ergative alignment; S and O are relativised in the same way, A is normally relativised with the actor-emphatic. Relative clauses on NPs in less transitive clauses have a neutral, rather than accusative, pivot; all of A, S and O can be relativised using the deletion method with a pattern I verb.

3.3.2.4 Quantifier Float

Quantifier float is another absolutive selecting construction in ergative languages, according to Manning, because it is restricted at the level of gr-structure.

In Māori, *katoa* ‘all’, can occur post-head to qualify any NP. However, it can also be moved to a post-verbal position in an instance of quantifier float. There has been almost no attention given to quantifier float in Māori in the literature. Bauer states that only “Subject NPs can float *katoa*” (Bauer 1997: 290). Bauer’s definition of subject is that under an accusative analysis, and includes S, A and pattern II O, as a passive subject. However, although she provides examples of S (187) and pattern II O (188) floating a quantifier, she gives no examples of *katoa* floating from A, in either pattern.⁵

- | | | | | | | | | |
|-------|-----|--------|-------|------|---------|--------|---------|----|
| (187) | ka | puta | katoa | ki | waho | ngā | tāngata | o |
| | TAM | appear | all | to | outside | the.PL | people | of |
| | te | pā | ki te | tahu | kai | | | |
| | the | pa | COMP | cook | food | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
- ‘All of the people of the pa came outside to cook food’
(Bauer 1997: 290)

⁵ Note that, as in example (188), *katoa* takes the verbal suffix, *-Cia*, to agree with the verb, in the same way as manner particles.

- (188) ka whakaputaina katoatia te uaua a
 TAM produce.Cia all.Cia the strength of
 te tāne a te wahine
 the man of the women
 ‘...all the strength of the men and women was produced’
 (Bauer 1997: 291)

Two informants I asked did not like examples of quantifier float from A, and rejected sentences like (189), regardless of the TAM.

- (189) *kua/kei te patu katoa te iwi i a Hone
 TAM hit all the tribe DO PERS Hone
 ‘All of the tribe hit/is hitting Hone’

Quantifier float in Māori requires more research before any firm conclusions can be drawn. However, under the split-ergative hypothesis, we predict that only As in the least transitive clauses, for example, clauses containing experience verbs and those with progressive TAMs, will be able to float *katoa*.

3.3.2.5 Raising with negatives

Raising with negative verbs has been used as evidence for both the ergative and accusative analyses of Māori (cf. chapter 2). As raising verbs, negatives are constrained at the level of gr-structure, and are, therefore, expected to have an S/O or neutral pivot in an ergative language. The evidence presented in chapter 2, and repeated briefly, here shows that raising with negative verbs in Māori has an ergative pivot in clauses that are high in transitivity, and an accusative pivot in less transitive clauses, as expected under the split-ergative hypothesis.

Firstly, S can be raised when the TAM is the past tense perfective marker *i* (190), or when the TAM is the progressive *e...ana* (191).

- (190) kīhae a Tamahae i haere
 NEG PERS Tamahae TAM go
 ‘Tamahae didn’t go’ (Chung and Seiter 1980: 135)

- (191) kāore a Hōne e haere ana
 NEG PERS Hōne TAM go TAM
 ‘Hōne is not/was not/will not be going’ (Harlow 2001: 144)

Pattern II O can also be raised:

- (192) kaore a Hone i patua e Rewi
 NEG PERS Hone TAM hit.Cia AGT Rewi
 ‘It wasn’t Hone that Rewi hit’ (Sinclair 1976: 12)

Examples (190) and (192) show that pattern II O and S can both be raised in highly transitive clauses. This is an ergative pattern and supports the split-ergative hypothesis.

To negate the A argument from a highly transitive clause, speakers seem to have three options. It is ungrammatical to raise pattern II A (193), so speakers may choose not to raise, as in (194).

(193) *kāhore e ngā tāngata kia kitea rāua
 NEG AGT the.PL people SBJ see.Cia 2.DL
 ‘the people didn’t see them’ (Chung 1978: 143)

(194) kore rawa i whakahokia atu e Māhia
 NEG INTENS TAM return.Cia away AGT Mahia
 ngā kura rā
 the.PL red feather DIST
 ‘Mahia never returned those red feathers’ (Bauer 1997: 468)

The second option is shown in example (195), where A is raised from a pattern I clause. The clause is marked with *i*, and thus highly transitive, where we do not expect pattern I.

(195) kāhore a Hōne i patu i te poaka
 NEG PERS Hōne TAM hit DO the pig
 ‘Hōne didn’t kill the pig’ (Chung 1978: 142)

The third strategy for negating A is from the actor-emphatic construction, as in (196).

(196) ehara mā Mere e horoi ngā rīhi
 NEG POSS Mere TAM wash the.PL dishes
 ‘Mary won’t wash the dishes’ (Bauer 1997: 465)

Of the three strategies for negating A, we might predict that either the unraised variant (194), or the actor-emphatic (196) is more common for As in highly transitive clauses. Example (195) is surprising, because we do not expect pattern I in highly transitive clauses. Native speakers must be consulted to determine which strategy is preferred.

In less transitive clauses, Māori has an accusative pivot. S can be raised, as in (191), as can an experiencer argument (197) and pattern I A, (195) and (198).

(197) kāore anō te nuinga o ngā tamariki nei
 TAM yet the majority of the.pl children this
 kia kite i tētahi tereina
 SBJ see DO one train
 ‘Most of the children hadn’t yet seen a train’ (Chung 1978: 142)

(198) kore rawa te kaiārahi e whakamārama i taua pakiwaitara
 NEG INTENS the guide TAM explain DO that story
 ‘the guide will never explain that story’ (Chung 1978: 142)

The patterns for raising with negatives in Māori are summarised in table 3.5.

	High transitivity	Low transitivity
A	✗ /actor-emphatic/pattern I	✓
S	✓	✓
O	✓	✗

Table 3.5: Raising with negative verbs

We can see that, in highly transitive clauses, Māori has an ergative pivot, S and O can be raised. To negate A, either the actor-emphatic, or pattern I is used, or the A is left unraised. Native speaker judgements must be sought to discover which variation is more natural. In clauses with low transitivity, A patterns like S and O cannot be raised.

3.3.2.6 Raising and completion-complement clauses

Another type of raising in Māori is raising with completion-complement (henceforth c-comp) clauses. C-comp clauses are called such because they are introduced by a verb of completion. In Māori, there are three common verbs of completion: *pau*, *oti* and *mutu*. All three belong to the class of verbs known in Māori as neuter verbs, which are normally thought to have “passive-like,” or inherently passive meanings (see chapter 1 for a fuller description of neuter verbs). Example (199) is an example of a simple sentence with a completion verb. It patterns as all neuter verbs do; the patient is \emptyset -marked, and the agent/cause phrase is marked with *i*. Neuter verbs never take the transitive ending *-Cia*.

(199) he nui ngā mahi nunui kua oti
 TAM big the.PL work big.dup TAM completed
 i aua komiti-a-iwi
 CAUSE these committee-POSS-tribe
 ‘A large amount of important work has been completed by these tribal
 committees’ (Hooper 1984b: 3)

Completion neuter verbs can also take a sentential complement. The following examples show *pau* (200), *oti* (201) and *mutu* (202) with sentential complements.

(200) kua pau ngā mōunu te kai e te wheke
 TAM consumed the.PL bait the eat AGT the octopus
 ‘The bait was used up from being eaten by the octopus’

(201) kua oti te whare i a Rewi te hanga
 TAM completed the house CAUSE PERS Rewi the build
 ‘The building of the house by Rewi was completed’

(202) kua mutu te tangata te tangi
 TAM cease the man the weep
 ‘The man stopped weeping’ (Hooper 1984b: 4)

The most striking aspect of these clauses is that they seem to contain two unmarked NPs, the second of which is deverbal. For example, in (200), neither *ngā mōunu* ‘the bait’, or *te kai* ‘eat’ is marked for case. Hooper (1984b) shows that the first NP following the completion verb is its S, and, furthermore, that the deverbal NP cannot be interpreted as subject. Evidence for this comes from the fact that the deverbal NP cannot be *ko*-clefted, as in (203)b, or raised to S of a negative verb, as in (204)b, which is possible for the other NP.

(203) a. ko te tangata i mutu te tangi
 TOP the man TAM cease the weep
 ‘it was the man who stopped weeping’

b. *ko te tangi i mutu te tangata
 TOP the weep TAM cease the man
 ‘it was the weeping that the man stopped’

(204) a. kāhore te whare kia oti i a Rewi
 NEG the house SBJ cease AGT PERS Rewi
 te hanga
 the build
 ‘the building of the house by Rewi was not completed’

b. *kāhore te hanga kia oti te whare
 NEG the build SBJ cease the house
 i a Rewi
 AGT PERS Rewi
 ‘The building of the house by Rewi was not completed’

(Hooper 1984b: 4)

Note also that the agent is marked with *e* in (200), when it follows the verb, but with *i*, in (201) and (199), when it precedes the verb. This implies that the case-marking of the agent is governed by the verb that precedes it (Hooper 1984b: 6). In (200), the transitive verb gives the agent its ergative marker, *e*, (despite the fact that the verb

does not have the transitive ending *-Cia*), and in (201) the agent receives its case marking, *i*, from the neuter verb (cf. (199)).⁶

Hooper examines c-comp clauses, in both Tokelauan and Māori, and concludes that they are convincing evidence of ergativity (Hooper 1984b: 18 and 1999: 167). She also notes that these clauses have not previously been mentioned by Manning, or anyone else, as evidence for ergativity at the level of gr-relations (Hooper 1999: 164), probably because the construction is particular to Polynesian languages. Although Manning does not specifically mention c-comp clauses, he does claim that raising is restricted at gr-structure, and therefore, ergatively aligned in ergative languages. C-comp clauses are a type of raising.

In this section, I will demonstrate that c-comp clauses in Māori point to ergativity at the level of grammatical relations structure. Only S and O can raise to become S of the completion verbs, *pau* and *oti: mutu* patterns accusatively, but this is shown to be due to its semantics.⁷

According to Bauer, neuter verbs, including c-comp verbs, occur most often with *kua*, the perfect marker, but also with *ka* (Bauer 1997: 499). Given that these clauses, by definition, refer to the completion of an event, c-comps verbs must be considered as highly transitive, and we therefore predict ergative alignment. C-comp clauses cannot provide evidence that Māori has accusative alignment in less transitive clauses, because they never occur in clauses with low transitivity.

Examples (200) and (201) above show an O, which has become the S of the completion verbs, *pau* and *oti*, and example (202) shows an intransitive S which has become the S of *mutu*. Example (205) of an A argument raised to S of *oti* is ungrammatical.

(205) *kua oti te tangata te hanga i te whare
 TAM completed the man the build DO the house
 'The man finished building the house' (Hooper 1984b: 7)

However, this rule does not extend to *mutu*. The only arguments that can raise to become S of *mutu* are A and S of the lower clause, in an accusative pattern. The following example (206) was judged grammatical by Hooper's informant. The O of

⁶ See Waite (1989) for further discussion and a GB analysis of c-comp verbs.

⁷In Tongan and Tokelauan (both considered ergative languages), raising with c-comp clauses refers exclusively to absolutive NPs, but it is much more restricted construction, occurring only with *uma* 'finished' in Tokelauan and *osi* 'finished' in Tongan (Hooper 1984b: 18).

the lower verb is marked with *i* for accusative case. It is not possible to possessivise O.

- (206) ka mutu te tangata te patu i te wahine
 TAM cease the man the hit DO the woman
 (*o te wahine)
 (POSS the woman)
 ‘The man stopped beating the woman’ (Hooper 1984b: 7)

Despite the fact that (206) was judged grammatical by her informant, Hooper did not find any examples of *mutu* with a raised A in her corpus of 300 pages of text, which included 112 instances of *mutu* (Hooper 1984b: 7).

Mutu seems to behave differently from both *pau* and *oti*. According to Hooper it most commonly appears in constructions like (207), where *mutu* refers to the cessation of an activity (Hooper 1984b: 5).

- (207) ka mutu te kai ka poroaki iho ki a Hou
 TAM cease the eat TAM take.leave INTENS to PERS Hou
 ‘After they had eaten, they bade Hou farewell’ (Hooper 1984b: 5)

If the A of the lower verb is mentioned, it usually occurs as a possessor. The possessed construction, as in (208), is more common than the transitive one, with the raised A, as in (206).

- (208) mutu kau ana tā māua hunihuni i te poaka
 cease INTENS TAM the.of 1.DL scorch DO the pig
 ‘(when) we finished scorching the pig’ (Hooper 1984b: 7)

Further evidence that *mutu* is different from *pau* and *oti* and more like an accusative selecting verb is the fact that O cannot be raised to S of *mutu*. Example (209) can only have the nonsensical meaning, ‘the pig has finished scorching (something)’ (Hooper 1984b: 7).

- (209) *ka mutu te poaka te hunhunu
 TAM cease the pig the scorch
 ‘The scorching of the pig is finished’ (Hooper 1984b: 7)

Hooper suggests that the different behaviour of *mutu* is a modern development (Hooper 1984b: 18). She proposes a semantic difference between *mutu* and the other neuter verbs. While neuter verbs have always been thought of as “inherently passive” or passive in meaning, *mutu* is simply intransitive (Hooper 1984b: 12). This accounts for why only S is most commonly attracted to *mutu*, rather than O as with other neuter (inherently passive) verbs.

C-comp clauses provide evidence of ergativity in Māori, as only S and O arguments can raise to become S of the matrix verb. *Mutu* is an exception to this, but as Hooper shows, it is semantically different from the other completion verbs, *pau* and *oti*, because it does not share the “passive” interpretation of neuter verbs.

3.3.2.7 Specificity and definiteness

The final restriction that Manning suggests has an ergative bias in ergative languages is definiteness or specificity. Manning proposes that these are restricted at gr-structure and, are therefore, ergatively aligned in ergative languages. According to Manning, the gr-subject has “special interpretive properties” in discourse (these are defined below). This section shows that Māori does have an ergative bias in discourse, and furthermore, that it has been grammaticalised, so that only S and O can occur with the indefinite article *he*. However, contrary to the predictions of the split-ergative hypothesis, the restrictions on *he* do not change with the transitivity of a clause. I will argue that the data are not as problematic as they seem for the split-ergative analysis. Definiteness, although ergatively aligned in Māori, behaves similarly in all languages, which suggests that restrictions on discourse structure and definiteness must occur at a third level of structure. Manning’s theory does not allow for universal ergative alignment as it stands.

Manning appeals to a number of Keenan’s (1976) subject properties to describe the discourse prominence of the gr-subject. According to Keenan (1976): the subject tends to have absolute reference (p317), it is harder to suspend the presupposed reference of a subject (p318), subjects are normally the topic (p318), the subject position is likely to be filled by definite or highly referential NPs (p319), and subjects are more likely to have wide scope (p319).

Manning claims that evidence from ergative languages suggests this type of discourse prominence is a feature of gr-structure. In Tagalog, Schachter notes that the *ang*-marked NP (S/O) is regularly definite (Manning 1996: 12), while Bittner (1987, 1994) suggests that the absolutive NP in Inuit usually has presupposed reference, and is definite.

Adapting Manning’s claims to a split-ergative language, like Māori, we would expect that S and O have presupposed reference, and other properties noted above, in

highly transitive clauses, while A and S have these properties in less transitive clauses.

We shall firstly look for evidence for the split predicted by Manning’s IGRH in narrative discourse in Māori. The data comes from a collection of narrative texts in Orbell (1969), and is the same as that analysed in section 3.2.2. Verbs from thirty pages of text were coded. For this analysis, I included the experience verbs. There were 114 verbs in pattern I and 119 in pattern II. I coded each of the arguments as a full NP, pronoun or omitted. There are also some Os that are coded as “clause”.

Figure 3.1 below shows pattern I verbs and the status of their arguments, and figure 3.2 shows the same for pattern II verbs. There were 360 intransitive verbs, and results from them are included in both charts for comparison.

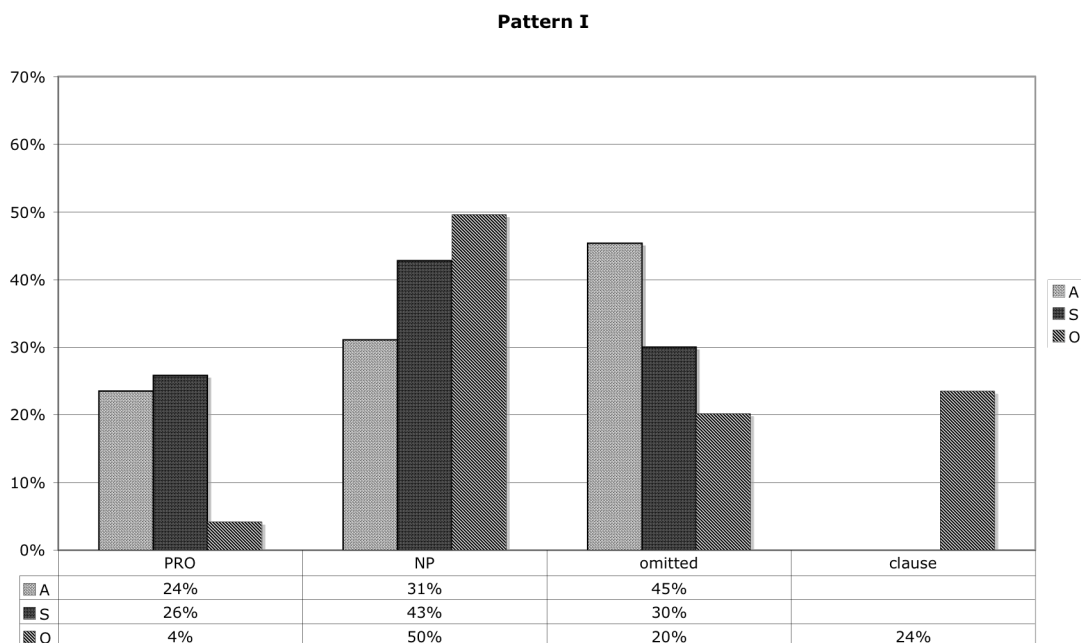


Figure 3.1: Argument type for verbs in pattern I and intransitive verbs

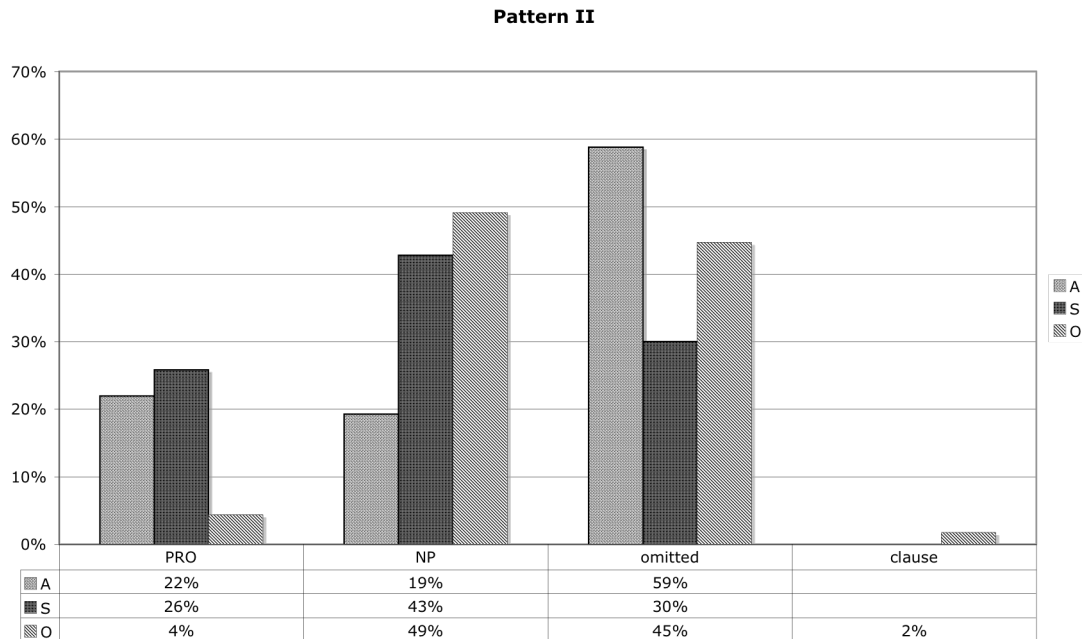


Figure 3.2: Argument type for verbs in pattern II and intransitive verbs

It is clear from both graphs that As are pronominalised or omitted much more frequently than either S and O, suggesting that the A position is usually filled by known information. Instances in which A is a pronoun or omitted count for 69% of As in pattern I and 81% of As in pattern II. Given that the presence of a full NP does not necessarily imply new information, it is possible that many of the NPs which count for 19-31% of As also represent old information. Even if they do not, the argument in A position is the discourse topic around 70% - 80% of the time, whichever pattern is used.⁸

By comparison, instances of pronouns and omission account for 56% of S, 49% of Os in pattern II and 24% of Os in pattern I. The difference between Os in pattern I and II is striking. An omitted O is always recoverable from context, and is, therefore, referential, in the same way as a pronoun is. As we saw in section 3.2.2.5, clauses with a referential O occur in highly transitive constructions, which in Māori, is the ergative pattern II. As already mentioned (section 3.2.2.5), the fact that O is deleted twice as frequently in pattern II than in pattern I lends support to the claim that pattern II is not passive. We do not expect a passive subject (logical O) to be

⁸Although there is little consent on the definitions of the terms ‘topic’ and ‘focus’, I follow Chafe (1976) and Polinsky (1992) so that ‘topic’ refers to old or given information and ‘focus’ is used for new information.

deleted nearly half of the time, and certainly not twice as often as in the corresponding active construction.

So far, it seems that the A position tends to be filled with known or old information or the discourse topic. It is, furthermore, clear that S and O pattern similarly in both patterns. S appears as a NP 43% of the time, while O is a NP 50% of the time in pattern I, and 49% in pattern II. This is in clear contrast to the behaviour of A (which occurs as NP on average only 19-31% of the time in both patterns). We cannot say that all NPs represent new information. However, the fact that new information must be introduced in a NP, and that S and O feature as NPs much more frequently than A, suggests that S and O might be the preferred position for new information.

Evidence that Māori formally distinguishes the focus, rather than the topic, is the fact that only S and pattern II O can be qualified by *he*, the indefinite article, which suggests that only S and O can introduce new information.

The syntactic restrictions on *he* are well known, but the semantics of *he* and the other indefinite article in Māori, *tētahi*, are less clear. Although both *he* and *tētahi* are considered indefinite articles in Māori, we will mostly consider *he*, because *tētahi* has fewer distributional restrictions.

According to Bauer, *he* is used when the type or class of object, and not the individual identity of the NP, is important (Bauer 1997: 148). So *he* is used with NPs that are not the central focus of narration. Polinsky notes that *he* is usually interpreted as indefinite and non-specific, but she argues that it is better to regard *he* as non-referential, which is consistent with its use in predicative function (Polinsky 1992: 230).

Chung et al. (1995) distinguish two uses of *he* – the predicational and existential constructions, but claim that the *he* indefinite is typically associated with existential qualification in Māori (Chung et al. 1995: 433). Like Bauer, they agree that the argument introduced by *he* is not a central focus of narration. To introduce a new NP that is a central focus, speakers typically use topicalisation with *ko* or *he mea* (cf section 3.3.2.1). None of the restrictions, proposed by Chung et al. for *he*, apply to *tētahi* (1995: 453).

Chung and Ladusaw (2004) argue that none of the traditional semantic constraints for indefinites that have figured in the literature (i.e., specific vs. non-

specific, referential vs. quantificational or wide vs. narrow scope) can successfully account for Māori *he* (Chung and Ladusaw 2004: 45). They note that *he* must introduce a new referent, as predicted by Heim's Novelty Condition (1982). They further argue that existential *he* must have narrow scope with respect to negation and quantification (Chung & Ladusaw 2004: 41). This accounts for the fact that (210) cannot mean that a (particular) person did not sing.

- (210) kāore he tangata i waiata mai
 NEG INDEF person TAM sing hither
 'no one at all sang' (Chung and Ladusaw 2004: 41)

As well as these semantic constraints, there are also syntactic constraints on Māori *he*. Chung et al. (1995: 441) state that *he* can only qualify "underlying object NPs", i.e., pattern II O and non-agentive Ss, but not pattern I Os, see (213). This accounts for the grammaticality of (211) and (212).

- (211) e tā, kawea atu he wai ki a au
 VOC slave fetch.Cia thither INDEF water to PERS I
 'O slave, bring me some water' (Bauer 1997: 147)

- (212) kua kā he whare
 TAM be.burned INDEF house
 'A house had burned' (Chung et al. 1995: 439)

Most grammar books note that *he* cannot follow a preposition in Māori (e.g., Harlow 2001: 73), thus *he* cannot qualify pattern I O, and sentences such as (213) are ungrammatical.

- (213) *ka patu te tangata i he poaka
 TAM kill the man DO INDEF pig
 'the man killed some pig' (Chung 1977: 360)

According to Chung et al., S of agentive intransitive verbs, as in (214) and (215), or A of transitive verbs cannot be qualified by *he*, as in (216).

- (214) *ka kau he tama
 TAM swim INDEF boy
 'a boy swam' (Chung et al. 1995: 439)

- (215) *ka whawhai he tāngata
 TAM fight INDEF people
 'people fight' (Chung et al. 1995: 439)

- (216) *i whiu he wahine i tāna mōkai ki te moana
 TAM throw INDEF woman DO her pet into the ocean
 'a woman threw her youngest child into the ocean'
 (Chung et al 1995: 437)

Chung et al. make a distinction between relational and existential uses of *he*, and note that the restrictions they suggest apply only to existential *he*. Relational *he*, which correlates to what others have called a non-specific use of indefinites (Chung et al. 1995: 437), can occur in any position, including with A, as in (218) and S of an agentive intransitive verb, as in (217).

- (217) kua tae mai **he** manuhiri ki taku kainga,
 TAM arrive hither a guest to my house
 kāore he tāngata hei tahu kai
 NEG a people COMP cook food
 ‘some visitors arrived at my house and there was no one to cook food’
 (Orbell 1992: 49)

- (218) ki te whakahoki mai he wahine i ngā
 if return here a woman DO the.pl
 pukapuka, kua kore he nama
 book TAM not a account
 ‘if a woman returns the books, there will be no fines’
 (Chung et al. 1995: 442)

Given that the syntactic restrictions on *he* only apply to the existential uses of *he*, we shall not consider non-specific *he*, that is, *he* in relational clauses, any further.

We must now ask whether the present hypothesis, that Māori is a split-ergative language, can still apply, given that the restrictions on definiteness do not change with the degree of transitivity of a clause. Chung et al. (1995) show that only pattern II O and non-agentive S can occur with *he*, and this is not dependent on any transitivity factor. A can never be qualified by *he* in an existential clause.

As stated above, Manning notes that the absolutive NP in Inuit has specific or wide scope, while the absolutive NP in Tagalog is regularly definite (Manning 1996: 12-14). In contrast to the evidence from Inuit, Chung and Ladusaw claim that Māori *he* can *only* take narrow scope with respect to sentential operators such as negation and quantification (Chung & Ladusaw 2004: 41). It seems that the only conclusion that can be drawn on definiteness in ergative languages is Manning’s, that the absolutive NP has “special discourse/scopal status” (Manning 1996: 98).

Some consideration of universals in definiteness and discourse structure shows that Manning’s intuition on the special status of the absolutive argument is correct, but that the same may be said of all languages, not just those that are ergative at gr-structure. DuBois (1987) argues that all languages are ergatively aligned at the level of discourse, and that the only difference between ergative and accusative languages

is that ergative languages have grammaticalised the S/O focus alignment, rather than the competing correlation of S and A as topic (old information) (DuBois 1987: 839). According to DuBois, verbs' arguments are naturally skewed in all languages so that the flow of information has an ergative shape. New information, the focus, preferentially occurs in S or O position, while old information, the topic, occurs in S or A position (DuBois 1987: 839, 850).

Chung et al. (1995: 449) summarise some of the characteristic properties in the generative literature on the syntax and semantics of existential sentences. Importantly, an existential sentence contains an expletive and a pivot. If we take the English example, *there occurred a severe earthquake in Wellington*, *there* is the expletive and *a severe earthquake*, the pivot. Chung et al. claim that the expletive is the surface subject, but that the pivot may act like subject for morphosyntactic purposes like case marking and/or agreement in some languages. This is common in languages like Māori, which are null argument languages and do not have a phonologically overt expletive. They also claim that the pivot is typically the “underlying direct object”, that is, the logical object of a passive (pattern II O) or S of a non-agentive intransitive verb. Another observation they make is that the pivot in an existential sentence is necessarily an indefinite NP (Chung et al. 1995: 449).

Chung et al. claim that Māori *he* is restricted to existential sentences, and therefore, the above universals apply to it. Their conclusion, that only non-agentive S and Os can be pivot of an existential clause, fits in with DuBois' claim that discourse structure has an ergative bias. However, if this tendency is universally ergative, Manning's intuition that the absolutive argument has special status only in ergative languages cannot be maintained. The absolutive argument seems to have special status in all languages. We must, therefore, ask why Manning puts the restrictions on definiteness at gr-structure when, in two important ways (discourse structure and existential clauses), it is universally ergative.

The primary difference between ergative and accusative languages seems to be that ergative languages have grammaticalised the pivot of an existential clause, or the discourse focus, so that S and O are formally marked in the same way, while accusative languages have not. As suggested by DuBois, the competing tendency of discourse topic (A/S) has greater force in accusative languages (DuBois 1987: 839).

We must then ask why, if the pivot of an existential clause is normally non-agentive S or O, O in pattern I cannot be modified by *he*. The morphological restriction on *he* with prepositions seems to prevent pattern I O, marked with the preposition *i*, from occurring with *he*. However, under the split-ergative hypothesis, pattern I is an accusative pattern, with a nominative subject and accusative object, so if the restrictions on existentials are universally ergative, we might expect O in pattern I to be treated in the same way as O in pattern II, despite the morphological restrictions. The fact that pattern I O cannot be qualified by *he* seems to suggest that pattern I is more like an intransitive construction, and the Os in this construction are oblique arguments. If it were a true O, we would expect it to be able to take the indefinite article. This lends support to the argument, which will be presented in chapter 4, that pattern I was originally an intransitive construction, which is being reanalysed as transitive as it is used in more transitive constructions.

However, evidence from one dialect of Māori suggests pattern I O is becoming a true O, because speakers can qualify pattern I O with *he*. In the Ngāti Porou dialect of Māori, pattern I Os can appear with *he*, and the accusative marker *i* is simply deleted, as in (219) and (220).

- (219) i te whakaahua rātau he pakipūmeka mo Tokmaru
 TAM film they a documentary of Tokomaru
 ‘they have been filming a documentary on Tokomaru Bay’
 (Chung & Ladusaw 2004: 29)

- (220) i tono a ia he whakaroanga mō tana
 TAM demand PERS she a extension of her
 tuhituhi korero
 writing speech
 ‘she asked for an extension of her essay’ (Chung et al. 1995: 454)

It seems that the universal tendency for objects to act as pivots, and therefore, be indefinite has led to the situation illustrated by (219) and (220), where pattern I O and, therefore, all Os can be pivots and marked with *he*. The restriction on prepositions with *he* has led to the deletion of *i*, rather than preventing pattern I O from occurring with *he*.

The fact that all languages seem to have an ergative bias in existentials and discourse structure cannot be easily accounted for under Manning’s theory of grammatical relations. Universal ergative alignment is not predicted at a-structure,

where all languages are accusative. Nor would we expect it at gr-structure, where languages have either an accusative or an ergative pivot.

Manning claims that, “although pivot is a syntactic notion, the origin of subjecthood is discourse prominence” (Manning 1996: 85). This suggests that discourse structure is separate from, but related to, gr-structure. The competing motivations of topic and focus define gr-structure. I, therefore, propose a third level of structure – discourse structure, where all languages are ergative. Discourse structure maps into gr-structure. At gr-structure, languages are accusative if the topic has been grammaticalised, or ergative if the focus is grammaticalised.

This section has shown that Māori is ergatively aligned in discourse, so that new information, or the discourse focus, is preferentially introduced in S or O position, and furthermore, that this preference has been grammaticalised, so that only non-agentive S and pattern II O can occur with *he*, the indefinite article. The findings for Māori were not in line with the split-ergative hypothesis. S and O are always the discourse focus, regardless of the transitivity of a clause. The Māori data were, however, consistent with previous studies that note a universal ergative bias in discourse (DuBois 1987, Chung and Ladusaw 2004). Manning’s IRGH does not allow for universal ergative alignment, although Manning does acknowledge that gr-structure is the result of the grammaticisation of either topic or focus. A third level of structure, at which all languages are ergative, must be posited.

3.4 Conclusion

This chapter has shown that Māori is better described as split-ergative language, rather than either wholly accusative or ergative. Pattern II represents the ergative pattern and pattern I represents the accusative pattern. The degree of transitivity in a clause determines which pattern will be used. As expected under the Transitivity Hypothesis (Hopper & Thompson 1980), clauses identified as highly transitive are ergatively marked, while less transitive clauses are accusatively marked. Hopper and Thompson identify a number of features that serve to affect the transitivity of any clause. The important factors in Māori are: PARTICIPANTS, ASPECT, DYNAMISM, AFFECTEDNESS OF O and INDIVIDUATION OF O. As previously noted (Clark 1973, Chung 1978, Bauer 1997), pattern II clauses are more common in clauses containing a canonical transitive verb (that is, one that requires two participants), in clauses that

are perfective, dynamic (rather than stative), and where O is affected by the verb. I also argued that clauses containing omitted or referential Os were highly transitive and, therefore, likely to occur in pattern II.

The split-ergative hypothesis means that the verbal suffix *-Cia* must be regarded as a marker of ergativity in modern Māori, and historically, as a transitivity marker, rather than a passive marker.

The presence of syntactic accusativity in constructions such as control in Māori has previously been used to argue that Māori is an entirely accusative language (Chung 1977, 1978), but this chapter argues that the syntactic accusativity in Māori follows directly from Manning's IGRH (1996). Under the IGRH, there are two levels of syntactic structure, each with its own subject. Different syntactic processes are sensitive to either level. The a-subject is the "deep", semantic subject. Control, binding and imperative addressee are restricted at a-structure, and in an accusative way, in all languages. Gr-structure is the surface level of structure, and it is only at this level of structure that ergative languages are different. Ergative languages have an S/O pivot at gr-structure. Topicalisation, relative clauses, question formation, raising and quantifier float are all sensitive to gr-structure and, therefore, ergative languages only have ergative alignment with regards to these processes.

In this chapter, I extended Manning's Inverse Grammatical Relations hypothesis to apply to a split-ergative language, like Māori. In highly transitive clauses, Māori is ergatively aligned at gr-structure. Constructions that are restricted at gr-structure include topicalisation, relative clauses, question formation and raising. We saw that O patterns like S and differently from A in highly transitive clauses at gr-structure and in less transitive clauses, A patterns like S and differently from O. In other clauses, that is, less transitive clauses, and all clauses at a-structure, Māori is accusatively aligned. We saw that in control and imperative addressee, Māori, like all languages, is accusatively aligned: only S and A can act as controllee and can be the addressee of an imperative construction. Binding, which Manning predicts is also accusatively aligned in all languages, was less straightforward. There is not enough evidence and more research needs to be done before we can say that only S and A can act as binders in Māori.

This chapter has also examined restrictions on definiteness and discourse structure. Manning claims that these are restricted at gr-structure, and that the

absolute argument has special status in ergative languages. In Māori, there is no split based on the transitivity of a clause with regards to definiteness as we would expect under the split-ergative hypothesis. Rather the absolute argument has “special status,” regardless of the transitivity of a clause. However, this ties in with previous studies of discourse structure (DuBois 1987) and definiteness (Chung & Ladusaw 2004), which argue that S and O are always used to introduce new information and always act as the pivot of existential clauses, in all languages. Manning’s IGRH must be extended to allow for this universal ergativity. I proposed a third level of structure, at which all languages are ergative. The discourse structure level maps onto gr-structure. As suggested by Manning (1996: 85) and DuBois (1987: 839), languages are accusative if the discourse topic (S/A) has been grammaticalised, or ergative if the discourse focus (S/O) has been grammaticalised.

The following chapter will look at Proto-Polynesian, and compare Maori to other Polynesian languages.

4

Māori in its Proto–Polynesian context**4.1 Introduction**

Chapter 3 presented a synchronic analysis of Māori as a split-ergative language. This chapter puts the issue of ergativity in Māori into its historical context. Since Hohepa (1969), there has been substantial debate in the linguistic literature over whether Proto-Polynesian (henceforth PPN) was ergative or accusative, and this chapter will briefly review the arguments for both analyses. The most commonly held view is that PPN was ergative and, in section 4.4, I will suggest how split-ergativity in Māori could have emerged from this. My proposal is based on the historical and comparative literature on Polynesian languages. Along with the other Eastern Polynesian languages, Māori changed towards an accusative system in imperfective clauses, while ergativity remained in perfective clauses. It is, however, not fully accusative, as its Eastern Polynesian sisters are, because the accusative pattern did not extend to the most transitive clauses, as it did in the other languages, and could not, therefore, be reanalysed as the basic active pattern.

4.1.1 Background

The Polynesian languages form a subgroup of the Central Pacific family, which is, in turn, a member of the much larger Austronesian family. Figure 4.1 shows the Polynesian family, taken from Marck 2000. Marck's subgroupings are based on archaeological and linguistic, including glottochronological, evidence. He estimates that the Eastern Polynesian languages diverged no later than AD300-400.¹

¹ For more discussion on the subgroupings, see Pawley 1966, 1996 and Marck 1999, 2000.

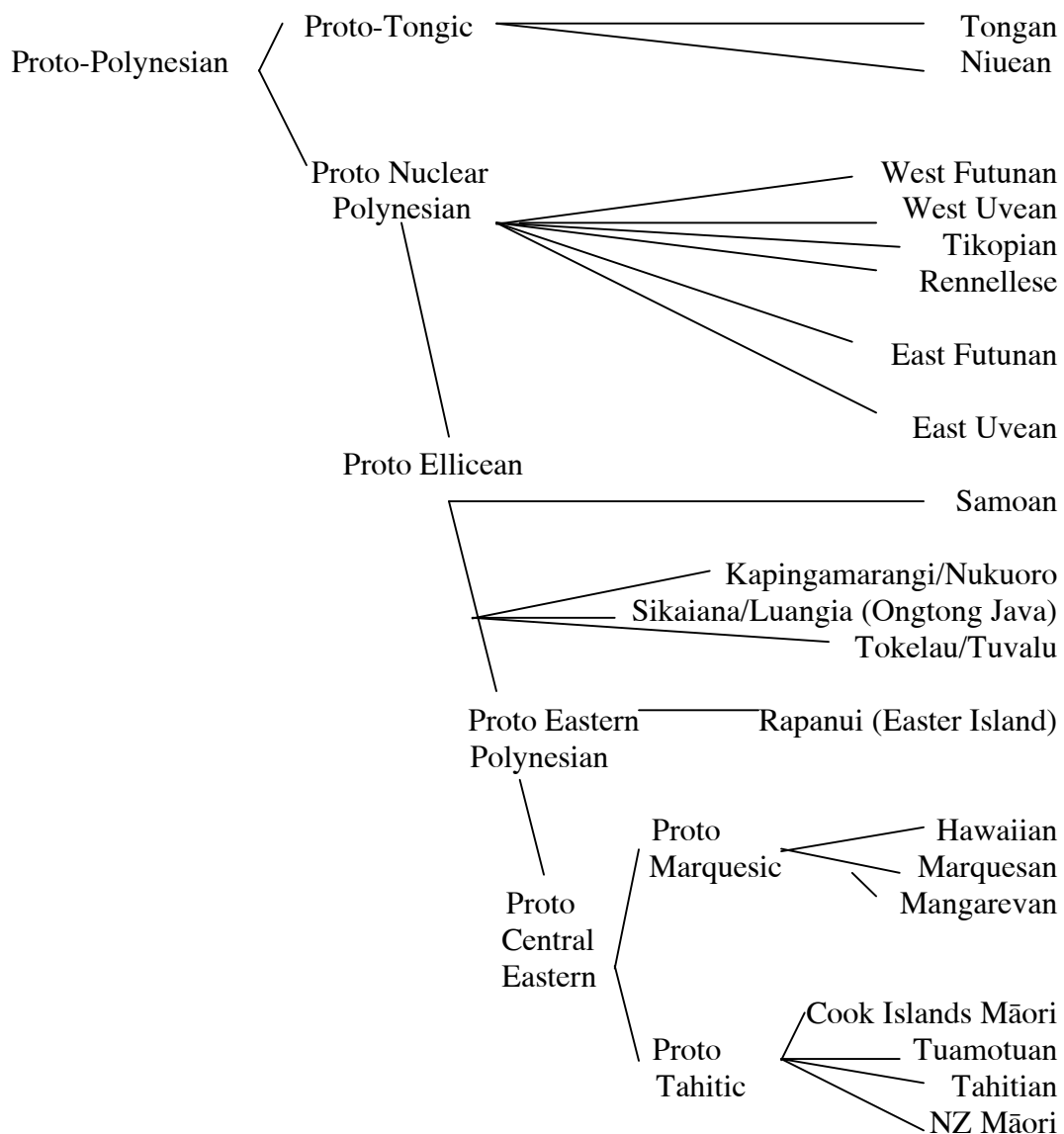


Figure 4.1: Polynesian subgrouping (based on Marck 2000)

Before looking at arguments for an accusative or ergative reconstruction, it is useful to briefly review the patterns that exist for transitive verbs in the various Polynesian languages. In previous chapters, we have seen numerous examples that illustrate the two transitive patterns in Māori. Sentences (221) and (222) show the same patterns for Samoan. In pattern I, as in (221), A is zero case-marked and O is marked with *i* or *ki* (which is glossed as dative case in Samoan, an ergative language). The verb is unsuffixed. In pattern II, exemplified in (222), the verb carries the suffix *-Cia*, and the agent is marked with *e*, while O is unmarked.

(221) sā alofa le tagata ‘i le teine
 TAM love the man DAT the girl
 ‘the man loved the girl’

(222) sā inumia e le tagata le vai
 TAM drink.Cia AGT the man the water
 ‘the man drank the water’ (Clark 1976: 68)

In addition to these patterns for two-argument verbs, Samoan and many other non-Eastern Polynesian languages have a third pattern (pattern III), in which the verbal suffix *-Cia* is omitted, but the case marking is otherwise the same as in pattern II. This is exemplified in (223). The Eastern Polynesian languages do not generally have this pattern.²

(223) sā inu e le tagata le vai
 TAM drink AGT the man the water
 ‘the man drank the water’ (Clark 1976: 68)

In the Eastern Polynesian languages, pattern I is usually analysed as the basic transitive pattern, while pattern II is a derived passive. In non-Eastern Polynesian languages (for example, Tongan and Samoan), transitive verbs occur in pattern II or III, while intransitive and less transitive (in the sense discussed in chapter 3) two argument verbs appear in pattern I. There are, therefore, two possibilities: PPN was accusative like the Eastern Polynesian languages and pattern III was an innovation in the other subgroups, which changed to ergative alignment; alternatively, PPN was ergative, like Tongan or Niuean, and accusativity developed in the Eastern Polynesian languages, which in turn lost pattern III.

4.2 The accusative analysis

If PPN was an accusative language, patterns I and II had the functions they have in present-day Hawaiian, Tahitian and the other Eastern Polynesian languages. **-Cia* was a marker of the passive, and ergativity arose in the non-Eastern Polynesian languages through a reanalysis of passive clauses as transitive. This position has been defended by Hohepa (1969), Hale (1968) and Chung (1978).

² It does, however, appear in the so-called weak imperatives with *me* in Māori, as in (1).

(1) me whāngai ngā kuri e Hone
 TAM feed the.PL dog AGT John
 ‘John must feed the dogs’ (Bauer 1997: 536)

We return to this point in section 4.2.

Hohepa's paper "The accusative-to-ergative drift in Polynesian languages" (1969) is based on a similar hypothesis put forward by Hale (1970) for Australian languages. Hohepa suggests that PPN was like Māori, and that *-*Cia* was a marker of the passive. According to Hohepa, there is a long-term tendency to favour the passive over the active construction in all Polynesian languages. In languages like Tongan and Samoan, the frequency of the passive led to a reanalysis of these clauses as transitive, which resulted in the present-day ergative systems. Hohepa further predicts that, "all Polynesian languages, if they persist, will - through language drift - become ergative languages" (Hohepa 1969: 325).

Clark criticises Hohepa's appeal to a "drift" in Polynesian languages (Clark 1976: 69). The concept of language "drift" is taken from Sapir, who states that, "language moves down time in a current of its own making. It has a drift" (Sapir 1921: 150). Hohepa uses this somewhat vague notion to account for parallel changes in languages that have been separate since PPN. As noted by Clark, in order to seriously maintain this hypothesis, it would be necessary to propose some structural feature, present in PPN, which favoured use of the passive. Hohepa (1969) does not suggest any such feature, but Hale (1968: 88-98) argues for a rule-ordering anomaly that could account for Hohepa's observations.³

Rule ordering is no longer a standard approach to syntax, and Clark and others criticise Hale's hypothesis (Clark 1973: 586-588, 1976: 69-70, Chung 1978: 246). Furthermore, under Hale's theory, there is necessarily a stage where the passive is obligatory for no immediately obvious reason. Clark cannot see any motivation on the part of the speakers for an increasing use of the passive, which would await reanalysis by a future generation (Clark 1976: 70). As noted in section 2.4, a frequent passive is cross-linguistically unusual, and some account ought to be given of why it would become obligatory. The functional overlap between perfective and passive clauses, to which Clark appeals for the ergative analysis (see section 4.3), could also account for the passive-to-ergative shift, but no one who argues for the accusative hypothesis has

³ Hale suggests that the rule for pronominalisation precedes the rule for passivisation in all Polynesian languages, which is cross-linguistically unusual. An inherent pressure to correct to a more usual order caused the Polynesian languages to either make the passive obligatory (as in the non-Eastern Polynesian languages), which in turn led to its reanalysis as transitive and ergative, or reorder the rules (as in the Eastern Polynesian languages), which resulted in a less frequent and more prototypical passive.

claimed that pattern II developed a perfective interpretation in the non-Eastern Polynesian languages.

Chung (1978) also argues that PPN was accusative, but disagrees with both Hale and Hohepa's hypotheses because neither provides any justification for an obligatory passive. Like Hale and Hohepa, Chung argues that PPN **-Cia* was a marker of the passive, pattern I was the basic active construction, and that pattern II was the derived passive. Chung further argues that **i* was an accusative marker in PPN, which was only accidentally homophonous with the oblique preposition **i* (Chung 1978: 289-297). She also claims that the objects of experience verbs were marked with the oblique prepositions **i* or **ki*. In other words, the **i* that marked the second argument of some experience verbs was not the same as **i* that marked objects of canonical transitive verbs (Chung 1978: 262).

Chung claims that PPN was accusative, based on the fact that several "major rules," such as control and raising, select S and A as "subject" in Māori, Tongan and Samoan (Chung 1978: 95-210). Chapter 3 has already shown that subject properties in any language can be split, but that some syntactic constructions universally select the more semantic notion of agent as subject, so that S and A act similarly in control, imperative addressee and binding in all languages. For this reason, I will not discuss Chung's claim any further. The same arguments that were made against her conclusions for Māori in chapter 3 apply equally to PPN.

According to Chung, the passive became more frequent in canonical transitive clauses in Polynesian languages. She claims that the frequency of the passive may have been resulted from a rule that said, "apply passive to clauses containing an affected direct object" (Chung 1978: 262). Due to this rule, the passive applied more frequently than not to canonical transitive clauses, and the passive rule became opaque (in the sense used by Kiparsky for phonology 1971, 1973); that is, passive clauses lacked the semantic and discourse properties most typically associated with passive in the world's languages (Chung 1978: 262). As a result, new speakers would find it difficult to predict when the rule should, and should not, apply. Chung claims that it would have been correspondingly difficult to recover the underlying structure of underlying transitive clauses from their surface structure (Chung 1978: 263). In the daughter languages, the opacity was then reduced in one of two ways. In the Eastern Polynesian languages, like Hawaiian and Tahitian, the condition on passives was lost,

so that the active (pattern I) became the more frequent construction for transitive clauses. In the non-Eastern Polynesian languages, the passive clauses (pattern II) were reanalysed as the basic transitive clauses, and ergative case-marking arose. There was a further change in the non-Eastern Polynesian languages as the **-Cia* suffix became optional. The result of this was the option of pattern III (with an unsuffixed verb) for transitive verbs.

Chung's analysis, like Hohepa's and Hale's, necessitates positing parallel changes in separate languages. Although Clark sees this as something to be avoided (Clark 1981: 203), according to Chung, parallel developments in separated languages are possible, and even usual, if a change began at the time of a split, or if the change "results in a more highly valued grammar from the point-of-view of linguistic theory" (Chung 1978: 253).

Chung maintains that her hypothesis avoids postulating an intermediate stage of obligatory passive because ergativity arose directly from the reanalysis of the passive, but an obligatory passive is indeed what she seems to propose. Her condition on the passive (that it be used in clauses containing affected direct objects) must have resulted in a stage where the passive was unusually frequent, but had not yet been reanalysed. There is also the puzzle of why Māori, an Eastern Polynesian language, should have pattern III in a relatively infrequent construction – the weak imperatives with *me* (see footnote 2 above). Under the accusative analysis, pattern III developed in the non-Eastern Polynesian languages as **-Cia* became optional. There seems no plausible reason why Māori, an Eastern Polynesian language, would have developed pattern III in such a rare construction. Bauer notes that weak imperatives with *me* are more like the kind of construction where an old feature might linger, "protected by rarity from changes that pervade the rest of the system." She regards them as a small piece of evidence that PPN was ergative (Bauer 1997: 538).

4.3 The ergative analysis

To avoid the problem of providing a motivation for parallel developments in separated languages, Clark (1973) applies the comparative method to syntactic reconstruction, and proposes that PPN was ergative. The main advantage of this hypothesis is that only one major change, in the Proto-Eastern Polynesian subgroup, needs to be posited. The ergative analysis is generally accepted today, although the

evidence on which Clark bases his conclusions has been challenged (Harrison 1991, Ota 1999, Kikusawa 2000, Pawley 2001).

Under the ergative analysis, PPN resembled Tongan or Samoan and patterns I, II and III were all productive. Clark reconstructs the following PPN system:

Pattern I	V	S	i/ki	O	}	Type B verbs
Pattern II	V.Cia	e S	O		}	Type A verbs
Pattern III	V	e S	O			

(Clark 1976: 76)

The choice between **i* and **ki* to mark objects in pattern I is semantically determined (Clark 1976: 67). Clark's division of verbs into the categories A and B is important and similar to other treatments of verbs in Polynesian languages. Type A verbs are the most transitive verbs (in the sense of Hopper and Thompson 1980, cf. chapter 3); they have an agent and an (affected) object. Type B verbs are semantically less transitive. Clark includes in this class of verbs: relations between objects and their source, goal or location (e.g., *leave, approach, inhabit*), persons and the objects of their thoughts, perceptions and emotions (e.g., *remember, see, fear*), and persons and the intended audience of their speech or other acts (e.g., *call, scold, worship*) (Clark 1976: 71). Verbs we have thus far called experience verbs are included in the group of type B verbs.

Type A verbs occurred in patterns II and III in PPN and, according to Clark, there was very little difference in meaning between the suffixed and unsuffixed patterns (Clark 1973: 588-589). Clark claims that the **-Cia* suffix was made up of two independent suffixes, **-Ci*, which was an unmarked transitive suffix (although note that the consonant is normally treated as part of the root, cf. footnote page 11), and **-a*, which had a stative or durative aspectual meaning in PPN (Clark 1973: 588-589). Clark's analysis of the **-Cia* suffix has been challenged, although it is now agreed that **-i* was the transitive suffix. The original function of **-a* is disputed (see Pawley 2001: 196, 198-200).

According to Clark, the pattern I object markers **i* and **ki* are reconstructible from pre-PPN prepositions. **i* can be reconstructed as a locative marker in Proto-Eastern Oceanic, and Clark reconstructs **ki* as a dative and instrumental marker as far back as Proto-North Hebridean-Central Pacific. In PPN, the functions "source" and "cause" can be added to the functions of **i*, and **ki* also marks "direction." The fact that both prepositions had a wide range of functions accounts for why an intransitive

construction could extend, so that a peripheral, prepositional phrase could assume a transitive object-like role (Clark 1973: 592).

Clark proposes the following changes from an ergative PPN to the accusative systems that are present in most modern Eastern Polynesian languages (Clark 1973: 589-590).

- (i) an extension of pattern I to both classes of verbs, A and B, originally as a marked imperfective construction.
- (ii) pattern III became extinct as **-Cia* became obligatory in pattern II.
- (iii) pattern II clauses were reanalysed as passive clauses and the **-Cia* suffix was reanalysed as the passive suffix.

Changes (ii) and (iii) may have happened in either order (Ota 1999: 50).

In modern Tongan, pattern I can contrast with pattern II for many verbs, so that pattern I has a partitive meaning, as in (224), whereas pattern II, as in (225), means that the boy ate all of the fish (Clark 1973: 600).

(224) Na'e kai 'a e tamasi'i 'i he ika
 TAM eat ABS the child DO the fish
 'the boy ate some of the fish/partook of the fish'

(225) Na'e kaa 'a e ika 'e he tamasi'i
 TAM eat.Cia ABS the fish ERG the child
 'the boy ate the fish' (Clark 1973: 49)

Clark suggests that this imperfective use of pattern I existed in PPN and was the model for the extension of pattern I to type A verbs in the Eastern Polynesian languages (Clark 1973: 589). As a result, pattern II was increasingly only used with type A verbs to indicate perfect aspect.

According to Clark, the basis of stage (iii), the reinterpretation of pattern II as passive, was the contrast in sentences like the following, where either O (as in (226)) or A (as in (227)) is unspecified:

(226) PPN *e kai te ika
 TAM eat the fish
 'the fish is eating'

(227) *e kaina te ika
 TAM eat.Cia the fish
 'the fish is being eaten/someone is eating the fish'
 (Clark 1973: 589)

Clark suggests that a by-product of the transitive marker **-Cia* in sentences such as (227), with no A, was as an indicator of the grammatical relation of the unmarked noun phrase (i.e., object), which also represented the “point-of-view” of the sentence. He does not explain precisely how sentences such as (227) were reinterpreted as passive, only noting that “this type of sentence may have been the pivot around which the whole system swung from perfective-imperfective to passive-active” (Clark 1973: 589).

Clark provides two bases for the reinterpretation of pattern II as passive, but does not suggest their relationship. The first is the spread of pattern I, as an imperfective construction. The second is the fact that sentences frequently appeared without their subject or object in PPN. However, the example of a clause with no A that he gives (227) has an imperfective TAM marker. This suggests that there must have been a stage when pattern II was used to mark perfectivity, as in (225), *and* transitivity and the object case relation, as in (227). Pattern II, therefore, had two functions. To reduce the ambiguity, pattern II was reinterpreted as passive, and its use with imperfective tense/aspect markers continued.

There is an often noted functional overlap between passives and perfectives; both “generally present a state resulting from a completed action” (Anderson 1977: 336). However, the association of passive with perfectivity is normally used to account for a passive-to-ergative reanalysis (as happened in Iranian languages, see Anderson 1977: 329-335). Chung questions whether a shift in the opposite direction, a perfect-to-passive change, is a possible change (Chung 1978: 254). It has, so far, not been suggested for any language or language group.

Clark may simply be focussing on the wrong clause type as the basis of the reinterpretation. Languages that change from ergative-to-accusative alignment normally do so through a reanalysis of antipassive clauses (for example, in Kartvelian languages, see Harris & Campbell 1995: 245-246). Both this reanalysis and the passive-to-ergative reanalysis are due to the association of passive with perfectivity, and of object demotion with imperfectivity (Harris & Campbell 1995: 246). It seems that, rather than pattern II being the basis for the reanalysis, it was pattern I. Pattern I was an imperfective construction with a demoted object, in other words, an antipassive. Once pattern I had spread to all transitive verbs as an imperfective, it was reanalysed as the basic transitive clause type. Positing pattern I as the basis for the

reanalysis is similar in spirit to Clark's hypothesis, however, the advantage is that it is consistent with the literature on directionality of alignment shifts.

Chung criticises Clark's hypothesis because his conclusions are primarily based on distributional evidence, and because he avoids positing parallel development in separate languages (Chung 1978: 251-255). She claims that reconstructions such as Clark's should be supported by more reliable evidence, such as morphological relics (Chung 1978: 253). However, it is unclear why avoiding parallel development in separated languages would be a disadvantage. This is, in fact, the major advantage of Clark's analysis. Furthermore, the existence of pattern III in Māori (in *me* imperatives) may be the morphological evidence necessary to support the view that pattern III was productive in PPN, but lost in the Eastern Polynesian group.

4.4 Māori: from ergative to split-ergative

Although I have chosen to focus on the synchronic aspects of ergative alignment in Māori in this thesis, it seems that some consideration of its diachronic source is useful. In this section, I will suggest an historical explanation of how Māori became a split-ergative language.

The “funny” passive in Māori (Clark 1973: 598) is somehow considered to be a relic of PPN, whether it was ergative or accusative. Clark claims that Māori preserves a “transitional” transitive verb system (Clark 1973: 589). “Transitional” implies an unstable system, changing towards a more stable state. I have argued that Māori can be described as split-ergative and stable. Split-ergativity does not necessarily imply that Māori is in the process of change to a fully accusative system. However, it does seem that evidence from Māori provides some support for Clark's claim of how the ergative-to-passive change happened in the Eastern Polynesian languages.

Both the accusative and the ergative hypotheses of PPN are problematic. However, the ergative analysis is generally accepted today, largely because it avoids having to justify parallel developments in separated languages. I will, therefore, base my discussion on the assumption that PPN was ergative. It is, of course, equally possible that split-ergativity could arise when a language changes from a fully accusative alignment. The main point is that a mixed system can seem natural in light of the historical development found in the Polynesian languages.

Under the ergative analysis, patterns II and III were used with transitive verbs, and pattern I was the construction used for intransitive verbs. As suggested by Clark, pattern I spread to more transitive verbs as a partitive, imperfective construction. This resulted in a perfective-imperfective contrast between patterns I and II in the Eastern Polynesian languages.

The extension of pattern I to transitive verbs must have proceeded gradually, from the less transitive verbs to the more canonically transitive verbs. Givón notes that,

split ergativity along the perfectivity, compactness and realis lines as predicted on general grounds seldom works mechanically across the entire verbal lexicon. Rather one would expect it to be sensitive to the *degree of transitivity* of specific verbs [...] The *lower* a verb is on the transitivity scale, the wider is the range of environments where its subject will be marked as nominative rather than ergative. (Givón 1985: 94).

As Clark suggests, the extension of pattern I to more transitive verbs would have been aided by the variety of functions that **i* and **ki* had in PPN (Clark 1973: 592).

The Eastern Polynesian languages (except Māori) then reanalysed the imperfective, pattern I clauses as the basic transitive construction, as described above (section 4.3). Pattern II was then reanalysed as passive, and the **-Cia* suffix as a passive marker.

The reinterpretation of pattern I as the basic clause type and pattern II as passive did not happen in Māori because pattern I did not extend to all transitive clauses. It has been noted that most *verbs* in Māori can occur in either pattern I or II (Clark 1976: 68). This thesis has shown that the most transitive *clauses* are, nevertheless, still more likely to be in pattern II than I. We have, furthermore, seen that aspect is only one factor of transitivity in Māori. A pattern II clause is also more likely to contain an affected direct object, a dynamic event and two necessary participants. In other words, because the contrast between patterns I and II is not based solely on perfectivity, but also other aspects of transitivity, pattern I could not be reinterpreted as the basic clause type. The result is the split-ergative system described in chapter 3.

The evidence from Māori, which was presented in chapter 3, provides support for the claim that syntactic change is gradual (see for example, Harris & Campbell

1995). The fact that the most transitive clauses in Māori still have ergative morphology and alignment suggests that pattern I extended gradually from the least transitive to the most transitive clauses. Although all verbs in the Eastern Polynesian languages were eventually affected, this extension cannot have happened all at once.

It is debatable whether this proposal is support for Clark's intuition, repeated in Ota, that there may have been an earlier split between Māori and other Eastern Polynesian languages (Clark 1973: 589, Ota 1999: 81). Clark notes that the strange passive in Maori might have supported his other, morphological, evidence. It may indeed be the case that Māori split from the other Eastern Polynesian languages before pattern I had extended to all verbs, and that this accounts for the present system. However, it seems equally likely that the extension of pattern I to all transitive verbs occurred simultaneously in all Eastern Polynesian languages (except Māori) after the split. The matter is, however, beyond the scope of this thesis.

4.5 Conclusion

In this chapter, I have attempted to place the present hypothesis of Māori syntax - that it is a split-ergative language - into its Polynesian context. Although the issue has not been totally resolved, PPN was most likely an ergative language; pattern I was used with intransitive verbs, and patterns II and III were used with transitive verbs.

Clark claims that in Eastern Polynesian languages, pattern I extended to all transitive verbs as an imperfective construction. The result was an imperfective-perfective contrast between pattern I and II, which was subsequently reanalysed as an active-passive contrast. If we view pattern I, with its demoted object, as a kind of antipassive, then this analysis accords with other proposals of how ergative languages become accusative.

I proposed that Māori did not reanalyse patterns I and II as active and passive because pattern I did not extend to all transitive clauses. Aspects of transitivity other than perfectivity, such as the affectedness of O, the dynamism of the verb, and the number of participants continue to be important factors that mark the difference between a pattern I and a pattern II clause. The result is split-ergative alignment. Split-ergative alignment in Māori provides evidence that pattern I extended gradually from the least transitive to the most transitive verbs in Eastern Polynesian languages.

5

Conclusion

The so-called passive in Māori has long been a puzzle to linguists working on both Māori and Polynesian linguistics. This thesis presented a possible solution to that problem. There is an on-going debate about whether Māori should be classified as an accusative or an ergative language. Each side has presented convincing arguments to support its hypothesis. The fact that there is evidence for both analyses is immediately problematic for either view. This was discussed in chapter 2, where we also saw that neither the traditional accusative analysis, nor the ergative analysis can fully account for the distribution of pattern I and II clauses. Under the accusative analysis, the passive is a strange and frequent construction, and under the ergative analysis, pattern II, the basic clause type, is more morphologically complex than the derived antipassive. Furthermore, just as the passive has a strange distribution under the accusative analysis, so the antipassive (pattern I) has a strange distribution under the ergative analysis. In summary, there are serious problems with both the analysis of Māori as an accusative language and the analysis of Māori as an ergative language.

I proposed, in chapter 3, that Māori is a split-ergative language: Māori has both accusative and ergative constructions. Pattern II is ergative, and pattern I is accusative. Split-ergativity is usually described in terms of a split based on either the tense or aspect of a clause, or on the semantics of the NPs. However, neither of the traditional splits accounts for split-ergativity in Māori. Rather, the Māori split is based on the transitivity of a clause. According to Hopper and Thompson's Transitivity Hypothesis (1980), high transitivity correlates with ergative marking in an ergative language. Hopper and Thompson define transitivity as a property of an entire clause, which is composed of various factors. They list ten such factors, and those that trigger ergative marking in Māori are: PARTICIPANTS, ASPECT, DYNAMISM (as opposed to stativity), AFFECTEDNESS OF O and INDIVIDUATION OF O. Clauses that contain a canonical transitive verb describing a dynamic event, in perfective aspect, with a referential, affected O occur with ergative marking, that is, in pattern II. These features often co-occur but a single high transitivity feature can trigger ergative marking.

Under the split-ergative hypothesis, the *-Cia* suffix is attached to ergative clauses. Given that ergative clauses are also highly transitive clauses, the suffix may be seen as an ergative marker, or as a transitivity marker. Historically, it was a kind of transitivity marker.

Hopper and Thompson's Transitivity Hypothesis accounts for patterns I and II in basic clauses in Māori. However, Māori still has some syntactic accusativity in highly transitive clauses. For example, control is always accusatively aligned. In the second part of chapter 3, I argued that accusative alignment follows naturally from Manning's (1996) Inverse Grammatical Relations Hypothesis. Manning proposes that there are two levels of syntactic structure, grammatical relations structure and argument structure. Each level has a privileged entity called "subject". At argument structure, where all languages are the same, the a-subject represents a semantic notion of "subject" and is an alignment of A and S. Syntactic constructions such as control, binding and imperative addressee are restricted at a-structure, so that only a-subjects may be controllees, binders and imperative addressees in all languages. In Māori, control and imperative addressee are restricted to S and A, in an accusative pattern. It is not clear whether the anaphoric binding patterns in Māori confirm Manning's hypothesis that binding is universally restricted to a-subjects in Māori.

Manning further proposes that ergativity is only apparent at the level of grammatical relations structure. Languages therefore only have syntactic ergative alignment with regard to constructions such as topicalisation, question formation, relative clauses and raising.

When extending Manning's proposal to Māori, we have to take into account the fact that Māori is a split-ergative language: we only expect to find evidence of ergativity in highly transitive clauses. Chapter 3 showed that Māori does indeed have ergative alignment at gr-structure in the most transitive clauses. This means, for example, that questions of S and O are formed in the same way in highly transitive clauses, and those on S and A are similarly formed in less transitive clauses. Questions on highly transitive A and less transitive O both use different strategies. In fact, all the constructions that Manning predicts will have ergative alignment are ergative in Māori, but only if the clause is high in transitivity. This is expected under the split-ergative analysis of Māori proposed in this thesis.

Manning claims that restrictions on specificity and definiteness occur at *gr*-structure so that, in an ergative language, S and O have a “special” discourse status. Manning’s predictions are confirmed by the restrictions on definiteness in Māori. Māori preferentially introduces new information in S or O position, and only S and O can be modified by *he*, the indefinite article. This was discussed in chapter 3, where we also saw that the restrictions on definiteness in Māori are consistently ergative. They do not change depending on the transitivity of the clause, as we might expect under the split-ergative hypothesis. Previous studies on universals in discourse structure and definiteness reveal an ergative bias in all languages (DuBois 1987, Chung & Ladusaw 2004). Manning’s hypothesis has no place for universal ergative alignment, and so I suggested that his theory needs discourse structure as a third level of structure, where all languages are ergative.

Modern Māori sheds some light on the ergative to accusative shift in the Eastern Polynesian group of languages. In chapter four, I reviewed both the accusative and the ergative analyses of Proto-Polynesian, and offered an hypothesis for why Māori did not complete a shift to full accusativity, like the other Eastern Polynesian languages did. The ergative analysis of Proto-Polynesian is the preferred one in the literature, largely because it does not need to justify parallel developments in separated languages. Clark (1976) argues that an intransitive pattern, pattern I, spread to more transitive verbs as an imperfective construction in the Eastern Polynesian subgroup. A subsequent reanalysis of imperfective clauses as basic active clauses completed the shift to accusativity. I suggested that pattern I was not reanalysed as active in Māori, because pattern I did not spread to all clause types. It remains as the preferred pattern in the most transitive clauses. The fact that pattern II does not exclusively mark perfectivity indicates that Māori could not undergo the imperfective-to-active reanalysis that occurred in the other Eastern Polynesian languages, such as Hawaiian or Tahitian.

As mentioned in chapter 1, I chose to focus on older, written Māori in this thesis for two reasons. The first reason was the availability of the data. Most contributions to the debate on the Māori passive were made in the 1970s. Chung (1977, 1978), Clark (1973, 1976) and others took their data from older written narratives and from older informants. Where there were gaps in these data, I used Bauer (1993, 1997). Although these grammars were published recently, Bauer

consulted older speakers of Māori as informants. The second reason is that Māori spoken by younger people today is noticeably different from the Māori of the older generation. It was important to resolve the existing debate before looking at any changes in modern Māori. It is, therefore, possible that younger speakers of Māori do not have the split-ergative system, but rather an accusative one. This may be because pattern I clauses have been reanalysed as active and pattern II as passive, but it seems just as likely that English has a strong influence on the Māori of younger (bilingual) speakers, and they use an accusative system as a result. It is an interesting question, but one I will leave to a future study.

In this thesis, I have surveyed a range of structures in Māori, looking for evidence of ergativity. However, it is clear that many areas of Māori syntax require much more research. As already mentioned, binding is one understudied area, in Māori as well as in many other Austronesian languages. We also saw, in chapter 3, that quantifier float has received very little attention. It is a rare construction, but, nevertheless, one that could be relevant to the issue of ergative alignment in Māori.

In chapter 3, I suggested that Hopper and Thompson's Transitivity Hypothesis could account for all languages that are split-ergative. Rather than describing a language as split-ergative based on tense, or aspect, or the animacy hierarchy, it might be more efficient to say that split-ergativity is always dependent on the transitivity of a clause. One or more of the transitivity features will be significant in causing ergative alignment. In Māori, it is a number of features, including aspect. In other languages, it may be something else. Further research on other split-ergative languages would reveal whether the Transitivity Hypothesis can be extended in this way.

Under Manning's IGRH, a lot of apparent split-ergativity is, in fact, a-structure accusativity in an otherwise ergative language. However, I have argued that Māori is a true split-ergative language, where only highly transitive clauses display any ergativity at all. Additional research would reveal whether other alleged split-ergative languages, such as Hindi and Georgian, involve a similar true split. A cross-linguistic study such as this would also allow us to refine Manning's hypothesis in areas like binding and discourse.

In conclusion, this thesis has presented an analysis of Māori that accounts for much of the strange behaviour of, not only patterns I and II, but many syntactic

constructions, such as relative clauses and topicalisation. The split-ergative analysis is, therefore, superior to both the ergative and the accusative analyses.

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Acknowledgements

Firstly, and most importantly, I want to thank Ida Toivonen, for all her patient supervision and guidance throughout the last year.

I would like to thank Emma Parnell and everyone in the Linguistics department for their interest and support. I am particularly grateful to Heidi Quinn, who enthusiastically read my thesis and gave many valuable comments and suggestions. I am also grateful to Jeanette King in the Māori department who was always so helpful and interested in my research.

Thank you to Hapimana Toby Rikihana, Tom Roa and Waldo Huia for their time and insights into the Māori language.

Lastly, thanks to my friends and family for all their support and encouragement.