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DETERMINERS AND COMPLEMENTIZERS IN COOK ISLANDS MAORI

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**A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF PHILOSOPHY**

DEPARTMENT OF LINGUISTICS

UNIVERSITY OF SYDNEY

MARCH, 2000

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Acknowledgements

My interest in the syntax of Polynesian languages, and particularly in the syntax of the DP, has its roots in my honours year at Victoria University of Wellington in 1996. As part of the assessment for the honours course, I studied the DP in New Zealand Maori. My supervisor for this course was Liz Pearce, and I am indebted to her for providing me with encouragement, support, and interest in my research, both during that time and in the subsequent two years of my masters course.

My understanding of the Cook Islands Maori language would not have been possible without my enthusiastic tutor, Parei Joseph. Not only did Parei teach me many things about his language and patiently endure my endless elicitation sessions, he also gave me an interesting and valuable insight into the culture of the Cook Islands. Meitaki maata, e Parei!

Equally encouraging and supportive have been my supervisors in the Department of Linguistics, University of Sydney: Chris Manning (March 1998 – June 1999), and Jane Simpson (June 1999 – March 2000). I am grateful to them for their feedback and for many stimulating discussions. Other members of the Department have also given me useful leads and ideas, in particular Bill Foley, Jason Johnston, and Mark Donohue. I would further like to thank the University of Sydney for granting me a University Postgraduate Award.

I also thank our small community of postgraduate students in the Department, especially my wonderful office-mate, Nicoletta Romeo. Our discussions and occasional seminars have been a great source of encouragement and reassurance. Finally, thank-you to my family and friends for their support and patience.

I am grateful to the many people whose feedback and ideas have made a valuable contribution to this thesis. Any omissions, mistakes or misunderstandings are my own.

Chapter One: Introduction

This thesis offers a syntactic analysis of the left periphery of nominal and clausal phrases. It is shown that the nominal phrase is introduced by a determiner which plays the role of subordinator, so that its complement may be the argument of a predicate head. The syntactic structure of the clausal constituent on the other hand makes reference not only to grammatical factors, such as subordination, but also to discourse factors, such as topic and focus.

The thesis takes as its starting point the idea that nominal phrases and clausal phrases in Cook Islands Maori share an analogous syntax. The study of the nominal phrase reveals many syntactic features which find their correlate within the clausal phrase. Both nominal phrases and clausal phrases can be lexically headed by underived nouns, verbs, or adjectives. It is found that two functional projections are relevant within the syntax of nominal phrases. These two levels parallel the two functional levels within clausal phrases, the inflectional level (IP) and the complementizer level (CP). Furthermore, the case marking of genitive arguments in the nominal phrase parallels the case marking of nominative arguments within the clausal phrase.

It is well accepted that clausal constituents have a complementizer level which functions primarily to indicate the grammatical and semantic relationship between a matrix and a subordinate clause. It is less well established that nominal constituents also have this function, and an important conclusion of this thesis is the recognition that the determiner in Cook Islands Maori acts primarily to allow a nominal constituent to act as the argument of a predicate.

This has interesting implications for the internal syntax of the nominal phrase, and these are discussed in some detail. However another interesting feature is the role that this subordinating determiner may play externally within the clause. Much of the discussion within the thesis concentrates on the syntax of relative clauses, as it is found that one type of relative clause contains a determiner initially in the clause. I examine whether this determiner could be the relative clause complementizer. The argument that the CI Maori determiner is a complementizer-type function would be considerably strengthened by its

functioning as an actual complementizer. While it is established that in fact this relative clause initial determiner is not a complementizer, I nonetheless find that the determiner's subordinating function allows a nominal phrase to occur in a configuration where normally an additional subordinating particle would be required.

A fascinating and somewhat unexpected result of this study is the relevance of the discourse functions of topic and focus within the syntax. These functions are considered to have a strong relevance in the syntactic representation of several clause types considered here. I argue that relative clauses and topicalizations share syntactic features which relate to the discourse function of topic, while equative and interrogative clauses share features corresponding to the discourse function of focus. It is shown that the identification of a Topic Phrase and a Focus Phrase which occur initially in the clause, allows a unified account of these various clause types, and predicts ways in which they may co-occur.

The conclusion of this thesis is that the syntactic interpretation of the left-periphery of Cook Islands Maori nominal and clausal constituents is well accounted for within a framework that specifies multiple functional projections. This thesis supports proposals in the literature that feature checking plays a vital role in the syntax, and accounts for the interpretation and structure of a varied array of structures.

1. Chapter Outlines

The thesis is written within the Government and Binding framework. As a very general overview, I adopt the view that there are three levels of syntactic representation, D-Structure, S-Structure and Logical Form. The syntactic structure is represented within X-bar theory, and recognizes as primary the relations of head, specifier and complement. Syntactic movement of constituents is motivated by the requirement to check morpho-syntactic, semantic, and discourse-related features in a specifier-head agreement relationship within a functional phrase. The approach adopted here relies heavily on the use of functional projections in which these various features are checked. More specific theories and assumptions are indicated within the text.

In chapter two, CI Maori nominal phrases are analyzed within the DP analysis (Abney (1987)). Two functional projections are relevant in the analysis, DP and NumP. D is usually filled by te, and it appears that te serves to enable a nominal proposition to act as the argument of a predicate. I argue, following Szabolcsi (1994) for Hungarian, that D is analogous to a complementizer, in subordinating its complement to a predicate. D does not however identify the deictic and quantificational features of the nominal phrase. These features instead are syntactically located within the Number Phrase, which is immediately dominated by DP, and which in turn dominates the lexical phrase, NP, VP or AP. I propose that nominal functional projections DP and NumP are syntactically analogous to CP and IP.

The discussion of chapters three and four examines the role of te in a commonly occurring relative clause construction. On face value, CI Maori appears to have a single relative clause construction which allows for the inclusion or omission of a relative clause-initial te. Given that te the determiner subordinates its nominal complement to a predicate, an interesting issue is whether te might also subordinate a clausal complement in relative clauses. A detailed examination of relative clauses both with and without te shows that this is not the case. Relative clauses containing clause-initial te are shown to be a form of equative relative clause, with the te constituent as the determiner of a DP without a lexical head.

Equative clauses in CI Maori contain a null copular verb, and the relationship between the equative DPs is indicated by a focal particle ko. Equative relative clauses are introduced by this focal ko, however in these te relative clauses, I argue that ko is omitted. Given that ko is the only indicator of the relationship of the equative relative clause to the relative head, it is surprising that it may be omitted. I argue that its omission is due to the nature of te as a subordinator. I propose that ko can be omitted in this case because te, which comes initially in the relative clause once ko is deleted, always marks subordination. The presence of te thus indicates to the interlocutor that the relative clause is subordinate to the relative noun.

An interesting issue that arises from the discussion of relative clauses is the syntax of the left-periphery in CI Maori clauses. I find that the relative clause operator shares certain interpretive and syntactic qualities with topicalized DPs. I propose relative operators and

topicalized DPs raise to the specifier of a Topic Phrase, following the typology of clause-initial functional projections of Rizzi (1997). In chapter five, I examine the role of left-peripheral functional phrases in more detail. I find that the syntax of interrogative clauses and declarative clauses with preposed focal agents (the Actor Emphatic construction) is concisely accounted for by positing a Focus Phrase. This Focus Phrase is also relevant in the syntactic representation of equative clauses. The identification of these two functional phrases with their differing interpretive values allows the syntax of several clause types to be unified.

Another aspect of the left-periphery is the role of complementizers in clausal arguments. I argue that the determiner D in a nominal phrase is analogous to the complementizer of a subordinate clausal phrase. However, the analogy is only valid if it can be shown that clausal phrases contain a complementizer node. I show in chapter five that there is a lexical class of adjunct complementizers (complementizers that introduce a clausal adjunct), while there does not appear to be a class of argument complementizers. However, the DP/CP analogy can be maintained as it is shown that some types of clause-initial element license subject raising to the specifier of IP. I argue in chapter two that the specifier of IP and the specifier of NumP are syntactically parallel. Subject preposing to SpecIP in the presence of a clause-initial particle is reflected within the DP where possessors can raise to SpecNumP. Thus, the clause-initial position is still syntactically detectable in subject raising, even if it is not lexically filled by a complementizer.

A factor arising from the discussion in the thesis is the close typology between New Zealand Maori and Cook Islands Maori in many of the constructions considered here. While aspects of the syntactic structure of NZ Maori are actively studied, CI Maori has not been examined to the same extent. To my knowledge, a series of articles by Jasper Buse published in the 1960s represents the most complete descriptive account of CI Maori available at this time.¹ I hope that the data and discussion in this thesis will not only contribute to the lively debate of NZ Maori syntax, but more importantly raise interest in the study of CI Maori itself. The comparison between the languages contributes much to the understanding of both languages.

Obviously I hope that the thesis presents opportunities for cross-linguistic comparison in the wider domain as well. I have identified aspects of the syntax that correlate to phenomena also recognized for diverse languages. In particular, the typology of functional projections within nominal phrases contributes to the current interest in the DP analysis, as proposed by Abney (1986). My identification of the DP as a CP-type category reflects similar conclusions from the study of Hungarian, Szabolcsi (1994); NZ Maori, Pearce (1998d); French, Valois (1991); and Hebrew, Siloni (1995). My discussion of the Topic Phrase and Focus Phrase draws heavily on the analysis of these categories by Rizzi (1997), and more specifically, the interpretation of Rizzi's proposal's into NZ Maori by Pearce (1999). My conclusions largely match those of Pearce and provide support for the articulated CP structure proposed by Rizzi. However, the identification of a syntactic correlate to the discourse functions of topic and focus reflects a more general interest in the discourse/syntax interface. Although the discussion of these considerations concentrates more on the syntactic component, it is nonetheless interesting that the syntactic reflection of these discourse functions has relevance in the analysis of the subordinate clauses considered here.

2. Introduction to Cook Islands Maori

Cook Islands Maori is a member of the Polynesian language family. The family is split into three subgroups, Tongic, Samoic-Outlier, and East Polynesian. Cook Islands Maori is a subgroup of the Tahitic family of East-Polynesian. Biggs (1971) and Green (1966) both suggest a close relationship with New Zealand Maori, and this is certainly borne out by the structures considered in this thesis. Within the Cook Islands, several Polynesian languages and dialects are spoken. Pukapukan, spoken on Pukapuka and Nassau islands, is a Samoic-Outlier language that is not intelligible with Cook Islands Maori². Penrhyn is spoken on Penrhyn (Tongareva) island. Although it is Tahitic language, it is only somewhat intelligible with Cook Islands Maori, and is thus treated as a language in its own right (although Biggs (1971: 487) includes it as a dialect of Cook Islands Maori). Similarly the language of the islands of Rakahanga and Manihiki has only limited intelligibility with Cook Islands Maori. Cook Islands Maori includes the dialects of

¹ Buse (1960); Buse (1963b); Buse (1963c); Buse (1963a) Buse (1965)

² Intelligibly judgements given in this paragraph are from information contained in the Ethnologue database of languages (<http://www.sil.org/ethnologue>).

Rarotonga, Mitiaro, Mauke, Atiu, Mangaia, and Aitutaki islands. These dialects are all closely related (Dyen (1965:35)) and are completely intelligible with each other. Unfortunately detailed studies of dialectal differences between the islands are not available.

CI Maori is a VSO language, where the initial element in the clause is most commonly the tense/aspect marker. There is very little inflectional or derivational morphology in CI Maori. There is no argument agreement on verbs; nouns do not compulsorily inflect for number (although there are two clitic number markers), and there is no grammatical gender. There is however a causative prefix, and a passivizing and nominalizing affix. The word order within nominal and clausal phrases is reasonably fixed, however nominal phrases may be preposed. This preposing usually correlates to a topicalizing or focusing of the nominal phrase.

The case-marking system is nominative-accusative, and there is in addition a productive passive voice. Unlike New Zealand Maori, where the high percentage of passive in texts raises the issue of ergativity within the case marking system, CI Maori does not display any ergative features. An example is the Actor Emphatic construction, which in NZ Maori marks the agent of a transitive verb with a preposition, while the theme receives nominative case. In CI Maori, the Actor Emphatic has undergone diachronic change such that the theme now receives the accusative case marking.

CI Maori shares with other Austronesian languages a considerable freedom in the choice of lexical head for clausal and nominal phrases. An underived verb can head a noun phrase, and an underived noun can head a clausal constituent. The primary indication of a lexical item's function within the clause thus comes from the preceding functional word. This type of grammatical system lends itself particularly well to a syntactic analysis where functional projections play a crucial role, as Waite (1994) points out for NZ Maori. By positing that the nominal phrase is maximally a Determiner Phrase, the ability of underived lexical items of any word class to occur within the DP can be captured. It only need be stated that D does not restrict its complement to a particular lexical category.

3. Language Data

The main form of investigation has been the detailed analysis of written texts. The following paragraphs provide specific details of the corpus. In addition, several elicitation sessions were conducted with Parei Joseph, a native speaker of CI Maori. Any example within the corpus with no other indication of its source derives from the elicitation sessions.

The primary corpus consists of approximately 45,000 words (47.5 A4 pages, single spaced). There are two sources for the primary corpus:

- (i) 17,527 words of children's stories. Three of the 23 stories (1507 words) were published by the Cook Islands Department of Education. The remaining 20 stories were published by Learning Media Limited for the New Zealand Ministry of Education. Of these, only four stories (2916 words) are written in CI Maori; the majority are translated from English or more commonly another Polynesian language. Thus only 25% of the corpus from this section is untranslated.
- (ii) The Book of Mark (27,211 words). This translation by the Bible Translation Committee of the Cook Islands, published by the Bible Society of the South Pacific (1978; Suva, Fiji), is specifically intended to be written in contemporary Cook Islands Maori (*te Reo Maori o teia tuatahi nei* 'the Maori language of this time'). It should not be confused with the Bibilia Tapu – the Holy Bible in Cook Islands Maori (1888 translation, published by the Bible Society). There are considerable differences in style and language between the two.

I have also consulted other sources which are not included as part of the primary corpus. I draw a distinction because the most detailed textual analysis was carried out on the primary corpus, and the secondary corpus was consulted to check for additional data or patterns that may not have appeared, or that contradict conclusions drawn from the primary corpus. This should not be taken to reflect any qualitative difference between the two corpora, rather the material in the secondary corpus was obtained at a later stage in the research, and thus time constraints prevented me from a more fine-grained analysis.

The secondary corpus consists of:

- (i) A collection of creation myths, genealogies, and historical stories written by Te Ariki-Tara-Are, published in the Journal of the Polynesian Society between 1899 and 1921. The introduction to these stories states that Te Ariki-Tara-Are was

“the last of the high priests of Rarotonga”, and was taught these scared stories by his father.³ The stories printed here are a copy of the original manuscripts written by Te Ariki-Tara-Are, which were obtained in Rarotonga in 1897. The year that the manuscripts were written is not specified.

- (ii) Editions of “Nuti Evangeria”, the monthly newsletter of the Cook Islands Christian Church.

Within the thesis, these sources are indicated by an index in braces, as shown below. Full bibliographic details are given in Appendix two.

- {EDU1-23} - denotes texts from the children’s stories.
- {MARK ch:vs} - denotes text from the Book Of Mark, chapter:verse
- {HTR1-13} - denotes text from the History and Traditions of Rarotonga
- {NEV1-4} - denotes text from Nuti Evangeria

Written Cook Islands Maori does not consistently mark vowel length, which is phonemic, or the glottal stop. While the Learning Media stories mark these phonemes, the other sources do not. In the thesis, I have indicate glottal stops by an apostrophe (‘) and vowel by a macron (ā, ē, ī, ō, ū). I have added these indications to texts which did not contain them in the original, in order that the examples are consistent throughout. I have largely relied on the Cook Island Maori dictionary (Buse and Taringa (1996)) as my guide in this. I have also relied on the Buse and Taringa dictionary as my guide in translations. The abbreviations for glosses used in the CI Maori examples are given in Appendix One.

³ S. Percy Smith, Journal of the Polynesian Society 1899, Vol 8, p61. See Appendix two for bibliographical details of these publications.

Chapter Two: The Structure of the Determiner Phrase

The nominal phrase in CI Maori has certain syntactic and semantic features that suggest that referential and quantificational roles are divided between two functional phrases, Number Phrase (NumP) and Determiner Phrase (DP). D enables a nominal phrase to act as the argument of a predicate, but it has very little semantic content. A second functional phrase, NumP, provides the main identificational features of the nominal phrase. These factors lead to an analysis where DP is considered to be the nominal equivalent of CP, while NumP acts as an IP equivalent. The chapter addresses the syntactic and semantic features of the nominal phrase, and compares these to analogous features of the clausal phrase. Section 1 provides an introduction to analyses of nominal phrases. In sections 2 and 3, I consider head movement, and find ample evidence that the lexical head must move to the head of NumP. Section 4 discusses case marking, particularly the assignment of genitive case. In section 5, the specifier of NumP is considered in detail. The discussion shows that determiners and genitive phrases compete for this position, and furthermore that there is evidence to compare SpecNumP to SpecIP, which correlates with the suggested typology of D as equivalent to C. The discussion concludes by comparing the syntactic features of NumP to the common semantic roles of nominal phrase articles, as suggested by Jackendoff (1977).

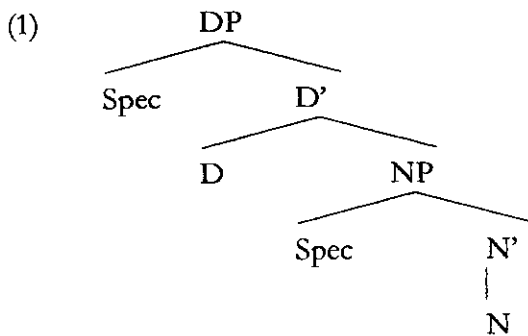
1. *DP is Analogous to CP*

In this chapter, I analyze nominal phrases in CI Maori under the assumption that nominal phrases are maximally Determiner Phrases. The central focus of the chapter however is to provide evidence that the category DP is analogous to the clausal CP (Complementizer Phrase).⁴ In this section, I review the theoretical assumptions behind this claim.

The nominal arguments of a predicate have traditionally been analyzed as NPs, that is, maximal projections of the category N. However in the dozen years since the

⁴ Reference to the CP in this chapter is specifically refers to the functional projection of clausal argument complementizers, e.g. 'that', 'for', rather than the complementizers of clausal adjuncts, 'because', 'if' etc.

emergence of the so-called “DP analysis” (commonly credited to Abney (1987)⁵), analyses of nominal phrases have altered considerably. It is now standard in the Government and Binding, and Minimalist Program frameworks, to treat all nominal phrases as maximal projections of the category D, where D takes an NP as its complement (1). At the most basic level, the DP analysis allows a standard treatment of phrases in X-bar theory, by stating that all lexical items, including determiners, project maximally; and all predicate and argument lexical heads are contained within an extended functional projection: IP and DP respectively.



The DP proposal has been widely accepted because it provides a syntactic account for the numerous correspondences between nominal phrases and sentences, especially with respect to lexical head movement and case assignment. For example, Fassi Fehri (1989) shows that IP and DP in Standard Arabic are parallel structures for case assignment. Nominative case is assigned by I under government to the subject of IP located in SpecVP (where VP is complement to I); and genitive case is similarly assigned by D to the subject of DP located in SpecNP (where NP is complement to D). He argues that the DP analysis extends neatly to *Masdar* gerundive constructions. These phrases are lexically headed by a verb, but functionally headed by D. Hence the subject receives genitive case under government from D, even though it is located in SpecVP.

The correspondence between functional projections in nominal (DP) and clausal (IP/CP) constituents has led other researchers to compare DP with CP. Szabolcsi (1994) notes that the Hungarian nominal phrase may be “doubly” determined. She argues that determiners may actually belong to two separate functional heads: D and Det. Both D and Det can be lexically filled if some constituent intervenes between them, for example

⁵ Abney himself (1987:77-8) credits a number of authors who make similar claims to his (viz. the existence of a functional head of the noun phrase).

a genitive phrase. This raises the question of the role that D and Det play within the syntax. Szabolcsi proposes (p. 218) that determiners in general play two roles: they establish the referential properties of a noun phrase, and they enable the noun phrase to act as the argument of a predicate. She argues (following Bhatt and Yoon (1992), see below) that in some languages, these functions are expressed on a single morpheme, while other languages allow for each function to be assigned to an individual functional head. She claims that the Hungarian D enables a noun phrase to act as the argument of a predicate, while Det indicates the extensional properties of the noun phrase. The analogy between DP and CP becomes clear when the function of D (as opposed to Det) is compared to C. Just as determiners allow a noun phrase to act as the argument of a predicate, complementizers enable a clausal constituent to act as the argument of a matrix verb.⁶

Stowell (1991) makes a similar claim.⁷ He argues that nouns, verbs, and adjectives are predicates, because they can assign theta roles and hence can take arguments. According to X-bar theory, all lexical heads project maximally, hence NP, VP, and AP are predicative categories. When an NP acts as an argument instead of a predicate, it becomes a referential expression. The lexical items that enable a noun to refer are determiners. Hence Stowell argues that in order for an NP to be an argument it must be embedded under a DP. Stowell assumes that a single D head carries out both these functions, as he discusses English where these functions are apparently merged into a single lexical item. However, he shares with Szabolcsi the assumption that D enables an NP to act as an argument.

Thus functional categories in nominal phrases allow an NP to become a referential expression, and to act as an argument. In some languages these functions are merged, while in others they appear to be allocated to two functional projections. I argue that the CI Maori nominal phrase is similar to Hungarian in having two functional projections. I compare the highest functional projection to CP, while the lower functional projection appears to be analogous to IP. Bhatt and Yoon (1992:42) state that the canonical roles of CP are to indicate clause type and to indicate subordination. The role of IP must then

⁶ Other authors who assume DP to be analogous to CP are Siloni (1995) for Hebrew; Valois (1991) for French and English. Pearce (1997b) agrees with Szabolcsi (1994) in projecting two functional projections in NZ Maori DPs, where the higher head enables its complement to act as an argument.

det search.for acc det word new
 "The search for new words" {ibid. 11c}

(4) te tere ki te whakahoki mai
 det rapid dat det caus.go back dir
 "The speed of reply" {ibid. 11b}

Waite argues that nominal phrases, such as those in (4) and (3), present problems for an analysis where all nominal phrases are maximally NPs. If such phrases are headed by an A or V that maximally projects to NP, the requirement of X-bar theory that all phrases be endocentric is violated. Alternatively, to satisfy X-bar theory, these non-noun heads must be morphologically derived to enable them to project an N node at the lowest (X^0) level of structure. For NZ Maori this involves positing a set of nominalizing rules that have no motivation other than to satisfy X-bar theoretical requirements in the syntax. Furthermore it is not the case, Waite maintains, that the V or A head in nominal phrases is either semantically or syntactically nominal. For instance, the case marking of the complements of V and A is the same accusative (*i*) or dative (*ki*) found in predicate clauses, while complements of morphologically nominalized verbs (with the morpheme *Canga*⁹) take genitive case.

The DP analysis developed by Waite (1994) enables the phrase structure of IPs and DPs to be unified with respect to lexical heads, head movement, and case assignment. The central thesis of Waite's account is that D (and I) can select an NP, VP or AP complement:

(5) [_{DP} D [_{XP} X]] where XP = NP, VP, AP

(6) [_{IP} I [_{XP} X]] where XP = NP, VP, AP

This analysis immediately renders unnecessary the nominalizing rules alluded to above. It also captures the parallels between DP and IP with respect to lexical head movement and case checking, as will be discussed further in this chapter. Nominal phrases in CI Maori can also be headed by underived nouns (7), verbs (8), and adjectives (9), as well as nominalized verbs (10):

⁹ *Canga* is commonly used in Polynesian linguistics to indicate the nominalization suffix which has several allomorphs: *anga*, *nga* or *Canga*, where *C* refers to a lexically determined consonant.

CI Maori:

- (7) Kua 'oro mai [tēta'i manu ma'atama'ata]
 TAM run dir det creature big
 "Some very big creature was running towards [them]" {EDU6}
- (8) ko [te 'ōronga atu ki te aronga te ka tatau i
 eq det give dir prep det group rel TAM read acc
 te Puka Tapu Reo Maori]
 det book sacred language Maori
 "It is a gift to the people who will read the Maori language Bible"
 {Intro to Mark}
- (9) te ma'an rāi o te moana
 a
 det warm adv O det sea
 "the real warmth of the sea"
- (10) Ko tē'ea [DPte 'akaue'anga pu'apinga ma'ata rava atu i
 Eq which det command.nom value big adv dir prep
 te au 'akaue'anga katoatoa?]
 det num command.nom all
 "Which is the most important command of all commands?"
 {Mark 12:28}

I propose that the analysis in Waite (1994) is essentially correct in allowing nouns, verbs, and adjectives to lexically head DPs. However, my analysis for CI Maori differs from his in positing a further functional projection between DP and NP/AP/VP. I do not retain the analogy between DP and IP, rather between DP and CP. In this section, I identify elements in the nominal phrase that indicate that the lexical head moves to a higher functional projection in the syntax. These are: the relative order of the lexical head with respect to adjectival and adverbial modifiers, to passive and nominalizing clitics, and to genitive arguments. The scheme in (11) gives the usual word order of nominal phrases.

- (11) determiner > demonstrative/genitive pronoun > number marker > lexical head
 > adjective(s) > adverb(s)/clitic(s) > genitive argument(s) > adjunct(s)

CI Maori is a head initial language in both predicate and nominal phrases. Following Pollock (1989), it is common to use modifying elements such as adverbs and adjectives as an indicator of head movement out of the lowest (lexical) maximal projection. He shows that in French, adverbs usually follow the tensed verb, while in English adverbs generally precede the tensed verb. He assumes that adverbs are adjoined to the left of VP in both languages. The French tensed verb must move out of VP to an inflectional

head, in order to precede an adverb. However, the English tensed verb usually follows an adverb, thus it does not raise out of the VP so it is hierarchically lower than the left-adjoined adverbs.

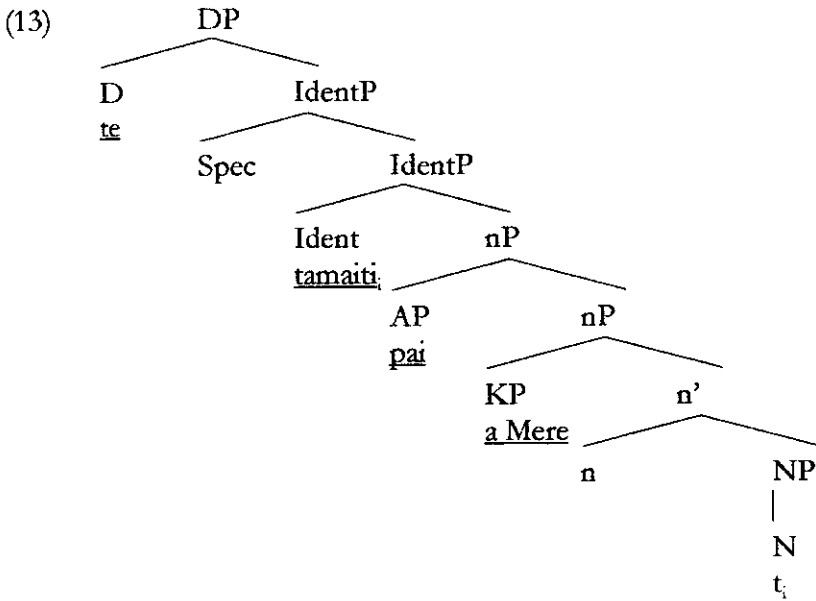
Valois (1991) uses adjective placement in French and English to compare the scope of noun movement in these languages. He assumes a DP structure with three functional phrases: DP > Num(ber)P > Ca(se)P > NP. Adjectives are adjoined to either CaP or NP, and their distribution is determined by their meaning. In French, many adjectives follow the noun, while in English adjectives usually precede the noun. If adjectives are left-adjoined at least to NP, then the French word order arises through movement of the head to a higher functional projection, which Valois proposes is Num. In this way, the noun moves to a position that is hierarchically higher than the adjectives, and thus linearly precedes them. In English, on the other hand, the noun follows the adjective, hence it must be hierarchically lower than the adjective. If a particular adjective is left-adjoined to NP, and the noun follows this adjective, then the noun must be lower than the adjective, and hence must still be within NP.

Pearce (1998d) uses a similar argument to motivate lexical head movement in NZ Maori. She argues that the adjective pai in (12) below is adjoined to the extended maximal projection of NP.¹⁰ The linear precedence of the head noun tamaiti indicates that the noun has moved out of NP (tree adapted from Pearce (1998d:11))

NZ Maori:

- (12) te tamaiti pai a Mere
det child good A Mere
“Mere's good child” {Pearce (1998d: ex 15a)}

¹⁰ Pearce (1998d) projects arguments within the NP following the extended VP approach of Hale and Keyser (1993).



In CI Maori, the location of the lexical head relative to modifying elements also indicates head movement. However there are two points which suggest the analysis in Pearce (1998d) must be altered slightly with respect to the CI Maori data. As I will show, my modifications do not contradict Pearce's analysis, as they still support the assertion that the noun in a structure like (13) must move out of its underlying location.

The nominal phrase in CI Maori allows a variety of modifying elements. A head noun can be modified by an adjective (14), or by an adverbial element (15); adjectives themselves can be modified by adverbials (16); a verbal head can incorporate its object (17). It is not unusual for a head to be modified by several lexical items, as Buse (1963b: 410) points out. In (18), the noun head is modified by nouns, a verb, and an adjective. In these examples, the head is in boldface, while the modifiers are italicized.

- (14) Kua 'oro mai [DPtēta'i **manu** *ma'atama'ata*]
 TAM run dir det creature big
 "Some very big creature was running towards [them]" {EDU6}
- (15) Ka mākitakita [DPte **kātoatoa** *rava*] i a kotou
 TAM hate det everyone adv acc pers IIpl
 "Absolutely everyone will hate you" {Mark 13:13}
- (16) Ko tē'ea [DPte '**akaue'anga** *pu'apinga* *ma'ata* *rava* *atu*] i
 Eq which det command.nom value big adv dir prep
 te au 'akaue'anga kātoatoa?
 det num command.nom all

“Which is the most important command of all commands?”
 {Mark 12:28}

(17) ...tē ka inangaro 'ia nō [DPte ma'ani pā'ua]
 rel TAM want pass.cl prep det make clam
 “...[those things] which are needed for preparing clams” {EDU5}

(18) [DPte putunga kāka'u tu'e pōro piro]
 det heap (N) cloth (N) kick (V) ball (N) worn (A)
 “A heap of old football-jerseys” {Buse (1963b:410)}

Furthermore, the entire nominal head can be modified by any of a set of adverbial particles. The semantics of these particles vary greatly according to context, for example *nei* varies between a deictic/locational interpretation (close to speaker) and a temporal interpretation (now). The particles themselves modify within both nominal and clausal phrases, and they usually follow the lexical head and any of its adjectival, verbal, or nominal modifiers. They display a consistent ordering with respect to each other. Table (1) shows their form, common meanings, and ordering (top-to-bottom on the table is left-to-right in the phrase; table adapted from Buse (1963b: 393)):

TABLE (1):

Adverbial	'ua roa rava tikāi	'just, barely, solely, alone, merely' 'very, too' 'completely, absolutely' 'truly, really undoubtedly'
Passive clitic¹¹	'ia	
Directional	mai atu ake a'o i'o	towards speaker, approaching present time moving away from speakers, receding from present time, 'also, in addition' 'a little removed from, a little further, a little more' 'beside, right next to' 'just behind, just after'
Nominalizing clitic	'anga	
Location	nei na ra ana	proximate to speaker; now proximate to addressee distant from speaker and addressee; then (not now) occurring at some time in the past
Modifying	rāi ra oki pa'a ia	'just, exactly, the very (one), truly, definitely' 'but, however' 'also, besides' 'perhaps' 'then, in that case'

The relative ordering of lexical modifiers (nouns, verbs, and adjectives), and adverbial modifiers requires further comment. The compound formed by the head and lexical modifiers is left-headed and precedes any adverbial particles. My hypothesis is that these compounds of words form a multi-word head, which is located in a single functional head position at S-Structure.¹² The adverbial elements on the other hand, are adjoined to maximal projections. Hence the relative ordering of head, modifiers, and adverbs all conspire to indicate head movement.

Further support for head movement comes from the location of passive and nominalizing clitics. In table (1), it is shown that adverbs can either precede or follow the clitics, while examples (14) - (18) show that the head precedes all adverbs.¹³ Pearce (1998d) proposes that passive and nominalizing morphemes in NZ Maori are syntactically projected within their own functional projection. The verb passes through these functional heads and merges with the phonetic material contained therein in order to surface with the appropriate suffix. CI Maori has both suffixes and clitics for passivization and nominalization.¹⁴ Buse (1965) states that a verb can be passivized either by the suffix, the clitic or both. The passive suffix and clitic co-occur in only those instances where the verbal phrase contains a verb and a modifying adverb, as shown in the examples in (19) - (21). Buse does not claim that the *nominalizing* clitic and suffix can co-occur within a nominal phrase, and I have not found any such examples. It is however possible for a single lexical head to be both nominalized and passivized (20), (21).¹⁵

(19) kua 'aka'oro-a maarie 'ia te 'oro'enua

¹¹ The passive and nominalizing clitics are discussed below.

¹² I assume that that compound ends up in a single functional head, however I do not wish to comment on its derivation. Pearce (1998c) discusses this issue for NZ Maori; Massam (1998) proposes an analysis for Niuean noun incorporation.

¹³ Buse (1965:42) states that the location given here for the nominalizing clitic is the rightmost position it may occupy. It may occur earlier in the string, and this accounts for its ability to precede the passive clitic. I assume in addition that the adverbs have positional freedom with respect to the clitics (while retaining their internal ordering, as shown in Table (1)). However it is necessary to allow variable ordering of PassP (for the passive clitic) and NmzP (for the nominalizing clitic). Chung (1973:648) (referred to in Pearce (1998d:21, footnote 13) as cited by Reedy (1979:301, footnote 12)) identifies two ordering patterns for the passive and nominalizing suffixes within the Eastern Polynesian language family. Thus the variable order of the CI Maori clitics may indicate that the ordering patterns vary both across and within the language family.

¹⁴ The suffixes can be distinguished from the clitics by their form: while the clitics have only one allomorph, the suffixes have several lexically conditioned allomorphs.

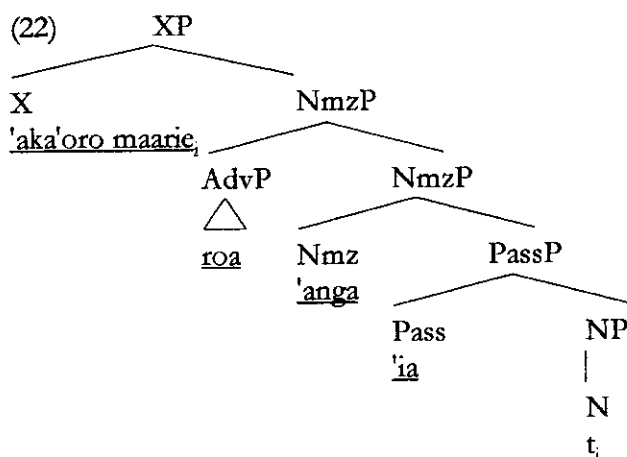
¹⁵ Buse (1965) does not mention any meaning difference between the variable clitic orders in (20) and (21). I am not aware of any difference.

TAM caus.run.pass slow pass det horse
“the horse has been ridden slowly” {Buse (1965:42)}

(20) 'aka'oro maarie roa 'ia 'anga
caus.run slow adv pass nom
“being ridden very slowly” {ibid}

(21) 'aka'oro maarie roa 'ang 'ia
 a
caus.run slow adv nom pass
“being ridden very slowly” {ibid}

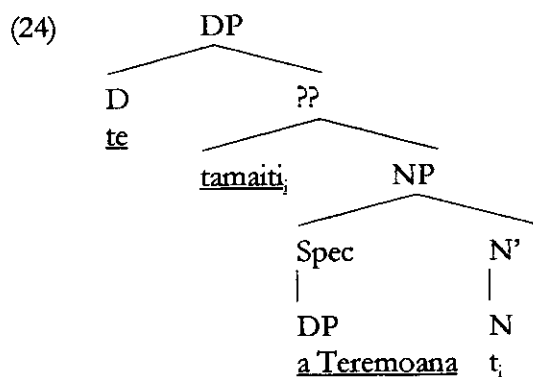
If we assume, as Pearce does, that there is a nominalization (NmzP) and a passive functional projection (PassP), and furthermore that the clitics represent the phonetic realization of these functional heads, we can then assume that the lexical head must pass through these functional projections in order to precede them in the syntax.¹⁶ This provides further evidence of the scope of head movement in the CI Maori nominal phrase. The tree below shows that the head and its modifier must raise to some head position above NmzP. The adverbial elements are left-adjoined either above or below them in the phrase structure.



¹⁶ The lexical head passes through the functional heads without incorporating with their phonetic content, which emerge as clitics, rather than suffixes. This movement should be ungrammatical according to the usual constraints of head movement, such as Relativized Minimality (Rizzi (1990)). Under this principle, head movement is blocked whenever a potential head governor intervenes between the moved lexical head and any of its traces of movement. The lexical head should not be permitted to precede the clitics then, as the clitics are potential head governors, and thereby block government of the head to its traces below the clitic. I assume that as the head passes through the functional head, it becomes co-indexed with the clitics. Even though the clitics are not phonologically bound directly to their head (as modifiers may intervene), they still carry out the same function as their affixed equivalents. Hence I suggest that, due to coindexation, the clitics can govern traces of head movement.

A final piece of evidence for head movement is the head's position relative to its arguments and adjuncts. Arguments and adjuncts follow the lexical head and adverbs. It is generally accepted in recent syntactic work in the Government and Binding, and Minimalist frameworks, that arguments of a lexical head are base generated within the maximal projection of the head, and must move at some stage in the derivation to be Case checked. Case checking requires the argument to move to the Specifier position of a functional head containing an appropriate Case checking feature. Arguments (including possessors) are generated in the maximal projection of NP, VP or AP in CI Maori (this is discussed further in section 4). I assume that the genitive case argument a Teremoana 'Teremoana's' in example (23), is located in SpecNP at D-Structure (see section 4). However, (24) shows that in the surface word order, the genitive argument *follows* the head tamaiti 'child'. This S-Structure word order results from the head moving to a higher location than the possessor. This again supports the assertion that the head moves out of its D-Structure location.

- (23) te tamaiti a Teremoana
 det child A Teremoana
 "Teremoana's child"



Thus we have evidence from three sources that the head must move out of its D-Structure position as head of the lexical maximal projection, NP, AP, or VP. The head precedes its adverbial modifiers, the nominalizing and passivizing clitics, and the genitive case argument located in SpecNP. The sentences below indicate that the lexical head (in bold) of a clausal constituent has a similar word order with respect to the subject (italicized), adverbial modifiers, and the passivizing clitic. I assume that the subject is located in SpecVP at D- and S-Structure:

(25) Kua tā'anga'anga'ia te au vāito tapa (e rātou)
 TAM use.pass det num pattern tapa cloth (agt IIIpl)
 "Tapa cloth patterns were being used (by them)"

(26) E 'inangar 'ua ana rāi 'aia i te 'akarongo i
 o
 TAM want adv TAM adv pers.IIIsg to hear acc
 tā Ioane au tuatua
 det.A John num word
 "He really only wanted to hear John's words" {Mark 6:20}

In clausal constituents, it is usually argued that the verb initial ordering arises by movement of the verb from V to the head of IP, or from V to I to C (as is assumed for Germanic V2 languages). Pearce (1998a) assumes the verb raises to Tense (an I category) in NZ Maori. She rejects the proposal that V and I further move to C, taking as evidence an alternative location for the nominative subject. When some XP is initial in the clause (such as a time adverbial (27)), a SVO ordering is possible. She argues that the varying subject positions are best accounted for if the subject raises to SpecIP in the XP-SVO ordering. This means that the verb cannot raise to C, because it would then precede the subject. As the relevant data is analogous in CI and NZ Maori, I assume that the verb in CI Maori raises to I (equivalent to Pearce's Tense).

CI Maori:

(27) I te Rui'rua [_{IP} māua i tae mai ei mei Tūpapa]
 prep det Tuesday lex.dl TAM arrive dir part. from Tūpapa
 "We arrived here from Tūpapa on Tuesday" {Buse and Taringa (1996:405)}

Thus there are many word order parallels between DPs and clauses. Following our analogy of DP to CP, there may be some category parallel to IP within the DP. This is the functional head that the lexical head in DPs moves to, just as verbs move to I. In section 3, I consider the nature of this functional head.

3. Scope of Head Movement: the Number Markers

While there is ample evidence of head movement, the functional head to which the lexical head moves must be considered. If, following Abney (1987), all nominal phrases consist of at least DP and NP (or VP, AP), then the linear order of the head with respect

to the left-adjoined adverbial rāi in (28) entails that the lexical head moves, if not to D, then to some intermediate functional head:

- (28) te **ma'an** *rāi* o te moana
 a
 det warm adv O det sea
 “the real warmth of the sea”

There is reason to believe that the head moves to a functional head between D and N, V or A. This head is also the location of two number markers in CI Maori. I assume that the number markers ngā and au are the phonetic realization of a “Number” functional head. Ritter (1991) argues that Modern Hebrew noun phrases consist of a DP, Num(ber)P and NP. She assumes that Num is the location of the number specification for nouns, and hence nouns must move at least to Num in order to inflect for number. She provides evidence for the existence of NumP by considering word order in nominal phrases with two types of genitive case marking. In one type, the Construct State Genitive (29), the genitive argument must be immediately adjacent to the lexical head, but it is not overtly marked for genitive case. An overt determiner is not permitted. In the other type of case marking, the Free Genitive construction (30), genitive case is marked by shel, and the genitive argument does not need to be immediately adjacent to its head: an adjective can intervene, such as ha-menumeset ‘polite’ in (30). An overt determiner ha is allowed in this construction.

- (29) **axilat** Dan ha-menumeset et ha-uga
 eating Dan the-polite ACC the-cake
 “Dan’s polite eating of the cake” {Ritter 1991: ex 14a}
- (30) **ha-axila** ha-menumeset shel Dan et ha-uga
 the-eating the-polite of Dan ACC the-cake
 “Dan’s polite eating of the cake” {ibid: ex 15a}

Ritter claims that the differing markings of genitive case in Hebrew arise through two mechanisms for case assignment, which crucially require two Specifier positions below D: SpecNumP and SpecNP. In the Construct State, genitive is assigned to the argument in SpecNumP by D_{gen} . D_{gen} is an empty head that requires identification by the movement of N to D, via Num. Because the Construct State does not permit an overt determiner, Ritter claims that D_{gen} and overt determiners are in complementary distribution. Furthermore, the genitive phrase must be adjacent to D in order to be

assigned case, hence must move out of its underlying position in SpecNP. The Free Genitive, on the other hand, permits an overt determiner, and the insertion of the genitive marker shel suggests that it is not D_{gen} that assigns genitive case in this instance. Rather shel is analyzed as a prepositional case marker, and its presence enables the genitive argument to remain in its D-Structure position in SpecNP. Thus adjectives, left-adjoined to NP, precede the genitive argument as they are hierarchically higher. In either case the head noun must move at least to Num.

Analyses since Ritter (1991) have assumed a NumP for a variety of Indo-European languages: Valois (1991) for French and English; Picallo (1991) for Catalan; Bernstein (1991) for French and Walloon. Pearce (1998d:15) claims that positing a NumP is unmotivated in NZ Maori due to the absence of number marking on the lexical head. However she assumes a functional phrase (IdentP) that carries out many of the identificational roles carried out in NumP in CI Maori. In the spirit of cross-linguistic comparison then, I assume that the CI Maori DP contains a NumP due to the presence of number marking morphology. However I consider that Pearce's IdentP and my NumP are analogous in terms of their syntax.

The CI Maori number markers ngā and au denote paucal number and plural number respectively. The examples below show that au follows te and the genitive pronoun tāku 'my' (32).

(31) 'E 'inangaro atu koe i [te **au** tangata katoa] ...
 TAM want dir Isg acc det num person all
 "You want all the people ..." {Mark 12:31}

(32) Kua oti 'oki [tāku **au** 'anga'anga ngutu'are
 TAM finish adv det.A.Isg num work household
 nō tēia pōpongi.]
 prep det.proxI morning
 "My housework for this morning is also finished." {EDU1}

Ngā is most often found modifying nouns that characteristically occur in pairs, (e.g. mata 'eye'; metua 'parent'), hence it has a strong bias towards a dual reading. But it also occurs in contexts where it marks a small plural, so cannot be analyzed simply as a dual marker. In (33) rapiti 'rabbit' which is modified by ngā, is later pronominalized with dual rāua 'they', however tamariki 'children' in (35) is pronominalized with plural rātou 'they'.

The number markers can be preceded by any overt determiner or genitive phrase. Au must be preceded, but ngā can occur with or without an overt preceding determiner (compare (33), (34) with (35), (36)).

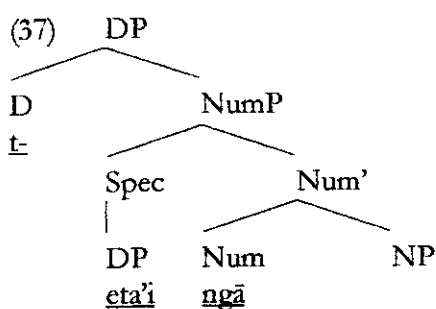
(33) Kua kite atu aia i [tēta'i ngā rapiti teatea]
 TAM see dir pers.IIIsg acc det num rabbit white
 "He saw a pair of white rabbits" {EDU6}

(34) Kua kapiki mai [tōna ngā metua]
 TAM call dir det.O.IIIsg num parent
 "Her parents called out..." {EDU7}

(35) Kua arataki 'a Pāpā Avito i [ngā tamariki] ki
 TAM lead pers Papa Avito acc num children prep
 te mato ko'e
 det stand bamboo
 "Papa Avito led the children to the bamboo stand" {EDU9}

(36) E i reira kua kite atu ra [ngā pipi tokotoru]
 and prep then TAM see dir dist num disciple part.three
 i a Eria rāua ko Mote i te tuatua'anga ki
 acc pers Elijah IIdl eq Moses prep det talk.nom prep
 a Ietu
 pers Jesus
 "And then the three disciples saw Elijah and Moses talking to Jesus"
 {Mark 9:4}

The D node in CI Maori is usually filled, either by te (or its allomorph t-) or by the personal article a, which precedes proper names and pronouns. Thus when ngā occurs without a preceding determiner as in (35), (36), there are two possible analyses for its S-Structure location. Either ngā and the lexical head remain in Num, and a null determiner fills D; or ngā and the lexical head move to fill the empty D. Syntactic evidence is difficult to find: the presence of some item in SpecNumP could potentially clarify this issue, as SpecNumP intervenes between D and Num. However the bi-morphemic determiners and genitive pronouns which occupy SpecNumP, such as tēta'i and tōna in (33) and (34) are simultaneously located in both D and SpecNumP (see section 5), so in these instances D is not empty.



Historical evidence supports either analysis. According to Clark (1973: 60) the Proto-Polynesian pattern for marking non-singular number was either *te + N (unmarked for number), or *te + naa + N. In the Samoic-Outlier (SO) and East Polynesian (EP) language families, the PPN *naa plural marker has become a determiner in some languages (e.g. Rennell-Bellona (SO) and NZ Maori (EP)), while it has remained a number marker occurring with a determiner in others (e.g. Nukuoro (SO) and Easter Island (EP)). He then states (p 62) that in some EP languages there has been a return to the determiner + number particle system, as seen in CI Maori. A factor bearing on this may be the plural number marker au. According to Harlow (1998), au is an areal innovation in Tahitian, Hawaiian, and CI Maori, but does not occur in NZ Maori. Thus at some point in the history of CI Maori (perhaps preceding the separation of CI Maori and NZ Maori) the ancestor of ngā was a non-singular determiner. But ngā in CI Maori appears to be in the process of reanalysis as a number marker in complementary distribution with au. The {HTR} texts (see Appendix two) were written in the latter part of the nineteenth century, and contain approximately 240 instances of ngā.¹⁷ In these, ngā may follow any of the bi-morphemic determiners such as tēta'i and tōna (see also Table (5), section 5), however it never co-occurs with tē. It might be deduced from this, that ngā is the nonsingular equivalent of tē. But when the D node is required by a bi-morphemic determiner, then ngā appears as a number marker.¹⁸

There is some morphological evidence to prefer an analysis whereby D is filled by a phonetically null determiner, and ngā is located in Num. Bi-morphemic determiners and genitive pronouns inflect for a plural lexical head by dropping their initial t̄-, for example, singular tēta'i 'a, some' becomes plural ēta'i. The initial t̄- is an allomorph of the

¹⁷ The texts also contain numerous examples of au, and its syntax appears unchanged from that of the contemporary corpus. It cannot occur without a preceding determiner.

determiner *te* (see section 5). Given the evidence from these complex determiners, it may be assumed that the D node can be occupied by a phonetically null nonsingular determiner. This determiner occurs in the plural form of the bi-morphemic determiners and genitive pronouns, and with *ngā*. Although the corpus does contain examples of *ngā* without a preceding determiner, there are no cases where the zero determiner occurs without a following number marker. By this I mean that there are no DPs that simply contain a lexical head without any form of overt determiner. The zero plural determiner is apparently restricted in its usage.

Returning to the issue of head movement, the D > Num > N word order must be accounted for. Given the presence of a NumP between DP and NP and ample evidence of head movement, it may be assumed that the head moves to Num. The number markers are phonologically weak and are supported by the lexical head. *Ngā* and *au* are unable to occur as independent words, suggesting that they are indeed inflectional.¹⁹ It appears that they are clitics rather than affixes. They do not display any of the qualities normally attributed to affixes (Zwicky and Pullum (1983); Zwicky (1985)). They do not cause unpredictable form changes in relation to certain lexical items (cf. *field/fields* vs. *child/children*); or semantic irregularities of the inflected word (cf. *brethren* vs. *brothers*); or any phonological effects, such as stress changes and phonemic variation (cf. *sign/signal*). Thus they are best analyzed as bound clitics requiring phonological support from a lexical item. The S-Structure of a DP with a number marker is illustrated in (38):

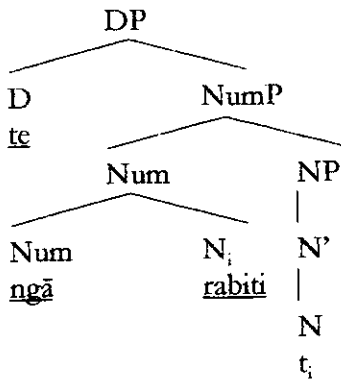
¹⁸ This is somewhat reminiscent of the Hawai'ian number marking pattern, as reported in Kahananui and Anthony (1970). In this language, *nā* is the plural determiner, however the number marker *mau* is used when *nā* is not available, for example when the noun is determined by a genitive phrase.

¹⁹ This contrasts with forms such as *ui* below, which can be used as collective markers and are translatable as plural.

- (i) Nā [tō mātou 'ui tupuna] i a'u i teia mataara
 prep det.O iexpl collective ancestors TAM build acc proxI road
 "It was our ancestors who build this road" {Buse and Taringa (1996:539)}
- (ii) [E 'ui] i te tamariki ki te ngā'i 'okota'i
 Eq collective acc det children prep det place one
 Get all the children together in one place {ibid:539}

Unlike the number markers, *ui* can lexically head a nominal or clausal phrase. The examples show *ui* functioning as the lexical head of a DP (i), and of a predicate nominal clause (ii). The normal order for modification in CI Maori is Head-Modifier.

(38)



In languages such as Modern Hebrew (Ritter 1991) and French (Valois 1991, Bernstein 1991) where plural number marking is compulsory in the syntax, a noun must always raise to Num in order to be specified for the number feature. A possible criticism for the analysis presented here is the fact that number marking is not compulsory in CI Maori. The majority of nouns do not have non-singular allomorphs. A subset of nouns denoting humans, especially those denoting familial relationships, do have a non-singular form, usually formed by lengthening of the antepenultimate vowel. However, this type of plural inflection is no longer productive, and thus should not be considered a synchronic inflectional process. The bi-morphemic determiners and genitive phrases have singular and non-singular forms to agree with the number of their head noun. However there are few examples of morphologically plural determiners or genitives in my corpus - where number *is* indicated, it is by a number marker. Even the inclusion of number markers is not compulsory. Representation of number appears to be dictated not by syntactic conditions, but rather by contextual factors, mainly the resolution of ambiguity. In (39), the noun māpū tāne 'male youth' is new to the story at this point, and new characters in a narrative are normally introduced by tēta'i 'a, some'. However as the determiner is not inflected for number, it is unclear whether the reference is to one youth or many, thus the number marker au resolves this ambiguity.

- (39) Kua 'akaunga'ia tēta'i au māpū tāne māro'iro'i
 TAM caus.errand.pass det num youth male strong
 "Some strong young men were sent on an errand" {EDU18}

There are two concerns to be addressed from the optional nature of number marking. First, there is the issue of whether a NumP can be projected within a nominal phrase that is unspecified for number. Given that there is no singular number marker, we must assume that all nominal phrases which are not overtly inflected for number are

unspecified for number. Second, there is the issue of whether a NumP can be justified within a language which does not compulsorily indicate inflectional number.

With regards to the second issue, I believe that a NumP can still be justified. The CI Maori morpho-syntax provides a mechanism for number inflection, however it is not a syntactic requirement that inflectional number be represented. This appears to be a different number inflection system from English, for example, where a plural referent would be misrepresented if it were inflected as a singular noun. In English, the lack of plural inflection is interpreted as singular. However in CI Maori, the lack of a number marker does not entail singular number, rather it simply indicates non-specified number. The different interpretation assigned to DPs in CI Maori and English where number is unmarked does not reduce the validity of a syntactic locus for number marking. It simply indicates that the lack of number marking leaves a DP unspecified for number.

The issue of whether a NumP can be projected within a DP which is not specified for number is more complex. There is syntactic evidence that the lexical head moves out of the DP in all cases, regardless of the lexical category of the head, and of whether number marking is present or absent. Section 2 argues that any lexical head which precedes a left-adjoined adverbial modifier must have moved out of its own maximal projection. The DPs below provide examples. (40) is lexically headed by a noun; (41) by an adjective; (42) by a verb.

- (40) Ka mākitakita [_{DP}te kātōatoa rava] i a kotou
 TAM hate det everyone adv acc pers Ipl
 “Absolutely everyone will hate you” {Mark 13:13}
- (41) te ma'an rāi o te moana
 a
 det warm adv O det sea
 “the real warmth of the sea”
- (42) ko [te 'ōronga atu ki te aronga te ka tatau i
 eq det give dir prep det group rel TAM read acc
 te Puka Tapu Reo Maori]
 det book sacred language Maori
 “It is a gift to the people who will read the Maori language Bible”
 {Intro to Mark}

Thus, the lexical head in these DPs must have moved to some functional projection above their own maximal projection. I assume that the lexical head always moves to Num, regardless of its number marking. In the following sections, I provide further evidence that there is some functional projection between DP and the lexical projection (NP, AP, VP). However the labeling of this projection as NumP is open to examination, given that in some cases number is not able to be morphologically expressed. A more accurate label for NumP may well be IdentP, as suggested for NZ Maori by Pearce (1998d). Bearing this uncertainty in mind, I will continue to use NumP, and posit that the head always moves to Num. Num is either specified for number by inclusion of the number markers, or unspecified for number when empty.

It was mentioned in section 2 that arguments are base generated within NP, AP or VP, but must have their case checked at some stage in the derivation. In the next section, I present an analysis of case marking, based on that given in Pearce (1998d) for NZ Maori. Given the typological closeness of CI Maori and NZ Maori, I assume that the mechanisms proposed by Pearce to account for case checking should apply equally to CI Maori.

4. Genitive Case Marking in the DP

Arguments of a nominal head in CI Maori are marked with the genitive case. As in many Polynesian languages, there are two genitive case markers: a and o. It is widely accepted in the literature that these markers denote a cultural/semantic relationship of dominance (a) or subordination (o) between the possessor and the possessed. For example, a mother is considered to be dominant over a child, hence a mother “a-possesses” her child (43), (44). A child, on the other hand, is subordinate to his/her mother, hence the child “o-possesses” the mother (45), (46). Table (2) outlines the principal categories of a- and o-possession.

(43) te tamaiti a te metua va'ine
 det child A det parent woman
 “the mother’s child”

(44) tāna tamaiti
 det.A.IIIsg child

“her child”

(45) te metua va'ine o te tamaiti
 det parent woman O det child
 “the child’s mother”

(46) tōna metua va'ine
 det.O.IIIsg parent woman
 “his/her mother”

TABLE (2): (FROM: CARPENTIER AND BEAUMONT (1995:61-63))

CATEGORIES OF NOUNS TAKING <u>A</u> -POSSESSORS	CATEGORIES OF NOUNS TAKING <u>O</u> -POSSESSORS
Animals (except horses)	Parts of the body
Tools	Personal property
Wives, husbands, children	Relatives (except wives, husbands, children)
Work	Friends
Food	Horses, and means of transport
	Land, water, and sea
	Trees and plants
	Other people (e.g. teacher, manager etc.)

Thus the genitive case is the morphological realization of the Possessor thematic role.²⁰ However it is not restricted to this role: it can also mark agents and themes/patients in nominal phrases. Recall that CI Maori nominal phrases can be lexically headed by verbs, and by nominalizations. In (47) below, the agent of 'akatangi ‘make noise’ receives the a-genitive allomorph, while in (48), the theme of 'ākara 'anga ‘appearance’ receives the o-genitive allomorph.

(47) Ka 'aere 'ia tēia 'are 'ura mē reka [tā kōtou
 TAM come pass proxI house dance TAM pleasant det.A IIpl
 'akatangi]
 caus.noise

This dance hall will be well attended if you play well {Buse and Taringa (1996:6)}

(48) [te 'ākara 'anga o tā'au pēni]
 det look nom O det.A.IIsg painting
 “The appearance of your painting”

{EDU14}

²⁰ I intend the “possessor thematic role” to indicate the thematic relationship of ownership.

Generally, the agent is associated with the a genitive marker, while the theme/patient is marked with o.²¹ Waite (1994) presents an analysis of the genitive case in NZ Maori, and the case marking patterns of this language are very similar to those of CI Maori. The table below outlines the case alternations considered by Waite (1994:67). These alternations are found in nominal phrases headed by varying verbal types (in brackets are the case markers assigned to corresponding arguments of a main clause):

TABLE (3): (\emptyset = NOMINATIVE (UNMARKED); I = ACCUSATIVE; E = PASSIVE AGENT; A/O = GENITIVE)

NZ MAORI:	AGENT	THEME/PATIENT
Active transitive	a (\emptyset)	i (i)
	-	o
Passive transitive	e (e)	o (\emptyset)
Unergative	a (\emptyset)	-
Unaccusative	-	o (\emptyset)

Waite uses the agent/theme distinction to argue that the choice of genitive marker given to a phrase is determined by its D-Structure position. A is assigned to the argument that originates in the specifier of NP, AP or VP at D-Structure (the agent), while o is assigned to the underlying complement (the theme/patient). Giorgi and Longobardi (1990) posit that the hierarchy of thematic roles within noun phrases is Possessor > Agent > Theme. It is the argument with the highest thematic role then that receives genitive case in complementary distribution with nominative case in main clauses. However the variant of genitive case marker (a or o) allocated to this argument is determined by its D-Structure position.

Waite extends this dichotomy to thematic possessors in simple noun phrases, assuming that phrases, such as those in (43) - (46) above, syntactically project their possessors in an analogous manner to the projection of subcategorized arguments in verb-headed DPs (and indeed in IPs). In effect, the Possessor theta role is reduced to either agentive or thematic/patientive. In NZ Maori and CI Maori, the distribution of the genitive case variants does not coincide with the thematic hierarchy proposed in Giorgi and Longobardi (1990), as shown below:

TABLE (4):

²¹ Though see Pearce (1998d) for exceptions in NZ Maori.

THEMATIC ROLE	POSSESSOR >	AGENT >	THEME/PATIENT
Variant of genitive	a/o	a	o

While it is not uncommon to find reduction of the Possessor role to Agent or Theme within the syntax, it is not the only approach. For example, Picallo (1991) base-generates Possessor arguments in Catalan noun phrases in the specifier of a functional projection Gender Phrase, thus implying that they are not subcategorized arguments. (Picallo's structure: DP > NumP > GenP > NP). This is reasonable, as possessors are as much modifiers as arguments. Szabolcsi (1994:193) points out that the potentially arbitrary relationship between a noun and its possessor cannot plausibly be a feature of the lexical conceptual structure of that noun. For CI Maori, it may well be argued that possessors should not be assigned to the D-Structure positions of subcategorized arguments. Instead, following Picallo, there may be a separate D-Structure location where the possessor thematic role is assigned. However this approach fails to explain the similarity in genitive case-marking between agents and dominant thematic possessors (e.g. in (43), (44)), which receive the *a* allomorph, and between patients/themes and non-dominant thematic possessors ((45), (46)), which receive the *o* genitive allomorph. I will follow Waite (1994) in locating thematic possessors in the specifier or complementizer of the lexical projection, just as subcategorized arguments. It appears that there is a genitive case checking location that is shared by both possessors and subcategorized arguments. I turn now to this issue.

We have accounted for the D-Structure location of agents and themes, and possessors. Waite argues that genitive case is the DP equivalent of nominative case. However, genitive case has two allomorphs which, following the discussion above, refer to thematic role in the case of agents and themes, and a grammaticalized notion of dominance for thematic possessors. Thus genitive case appears to have both structural and inherent properties. Pearce (1998d) captures this by arguing that genitive case in NZ Maori is licensed in Specifier-head agreement with a functional head, but also makes reference to thematic role. She suggests that genitive arguments in the DP contain a feature specifying their thematic role, and a feature specifying genitive case. For subcategorized arguments, the thematic role will correspond to the arguments' D-Structure location. The thematic role of agent, for example, is assigned to a DP in SpecVP. The agent DP contains a feature specifying [agent], which determines the

appropriate genitive allomorph. The feature specifying genitive case requires checking by a functional head within the syntax. In Pearce's analysis, genitive case is checked by Specifier-Head agreement with Ident^0 , the head of IdentP (Identification Phrase) situated immediately below DP. The requirement for Case checking in SpecIdentP means that only one genitive argument per phrase is licensed, as there is only one licensing head. This is indeed the case.²²

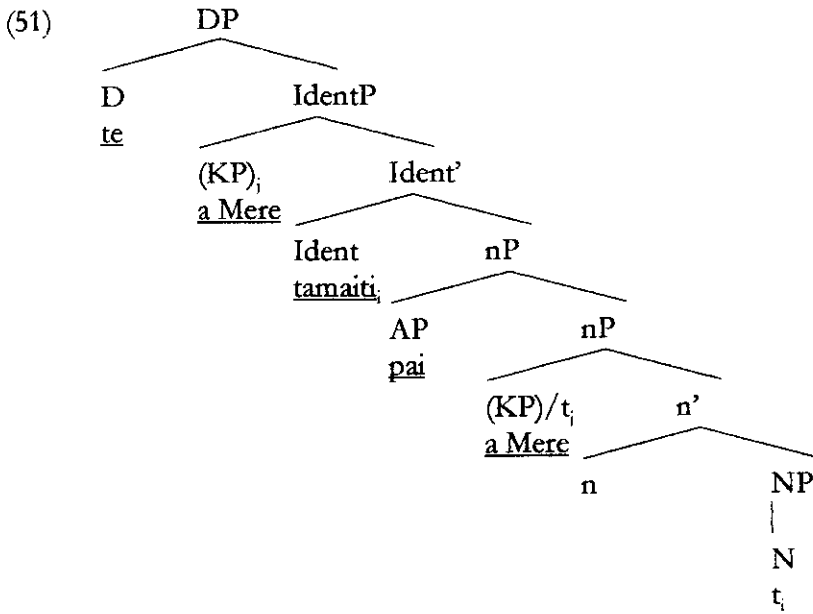
Pearce (1998d) proposes that case checking of the genitive (and indeed the case of nominative arguments) is normally covert in NZ Maori. Usually genitive phrases occur after the head (which raises to Ident , see (51) below) and hence cannot be in their Case checking location, SpecIdentP . However genitive phrases are one of the few elements in the NZ Maori nominal phrase that allow word order variability. The lexical head tamaiti 'child' in (49), (50) below occurs either before or after the genitive phrase a Mere 'Mary's'. The lexical head consistently raises to Ident , while the genitive phrase has two possible locations: either its underlying location adjoined to nP, or in its Case checking position in SpecIdentP .

NZ Maori:

(49) te tamaiti pai a Mere
 det child good A Mere
 "Mere's good child" {Pearce (1998d: ex 15a)}

(50) tā Mere tamaiti pai
 det.A Mere child good
 "Mere's good child" {[ibid: ex 15b]}

²² Note though that the inclusion of PassP/NmzP provides additional sites for genitive case checking, see Pearce (1998d).



A similar pattern is found in CI Maori. The examples below show genitive pronouns, and proper name and common noun genitive arguments. Genitive pronouns usually occur before the head, however non-pronominal genitive arguments can occur either pre- or post-head. The examples display a variety of lexical heads, and show that the pre- and post-head location of the genitive argument is not dependent on the lexical category of the head. (53) and (56) show noun headed DPs; (52) and (54) show verb headed DPs; (55) shows a DP headed by a nominalized verb.

- (52) E kimi koe ē, 'e a'a [tā māua kai] i
 TAM investigate IIsg sub det what det.A lex.dl eat prep
 tēia pō?]
 det.proxI night
 “You find out what we’re eating tonight” (you find out what is our food tonight)
 {EDU4}

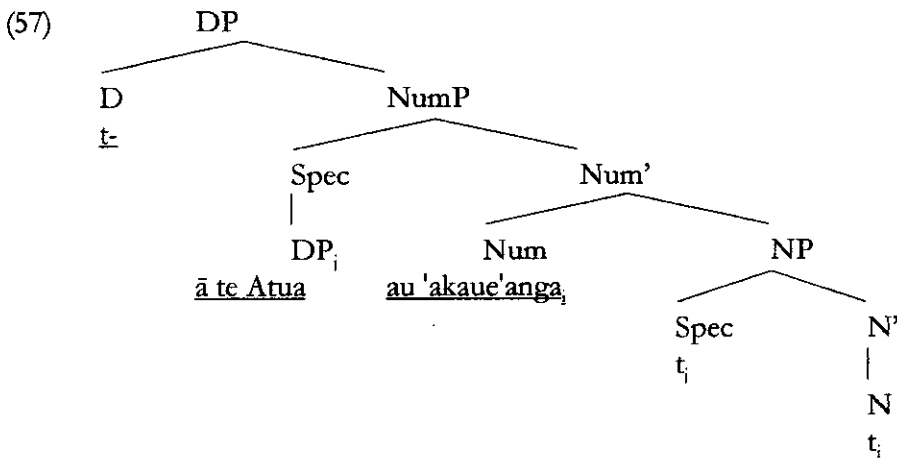
- (53) kua katakata 'ua [tō 'Aiani ngā metua]
 TAM laugh adv det.O 'Aiani num parent
 “‘Aiani’s parents just laughed”
 {EDU13}

- (54) kua tutuki [te rongo meitaki o Ietu] ki te au ngā'i
 TAM reach det hear well O Jesus prep det num place
 kātoatoa
 all
 “Jesus’ good reputation had reached all places”
 {Mark 6:14}

- (55) Kua 'akaruke atu kotou i [tā te Atua au 'akaue'anga]
 TAM leave dir IIpl acc det.A det Lord num command
 “You abandoned the Lord’s commandments”
 {Mark 7:8}

- (56) Kua kite au i [te 'are o te taote]
 TAM see Isg acc det house O det doctor
 "I saw the doctor's house"

In (55), the preposed genitive phrase ā te Atua 'the Lord's' comes immediately before the number marker au. I proposed above that the number markers are the phonetic realization of a Number functional head. The genitive phrase must be located in some position above the Num head node, in order to linearly precede it. However, it cannot be any higher than D, as it follows t (the reduced allomorph of t; see section 5). The genitive phrase in this example is a subcategorized agent argument of 'akaue 'command', and thus is located in SpecVP at D-Structure. Arguments that originate in a specifier position can only raise to another specifier position, thus it is reasonable to assume that the preposed genitive argument is located in SpecNumP.



Therefore for CI Maori, I agree with Pearce that the pre-head position for genitive arguments indicates movement to the specifier of NumP (equivalent to her IdentP). Pearce (1998d) argues that this movement is motivated by a requirement to check the genitive case feature. The examples below show that the nominative case subject of the IP also has two surface locations. Canonically, it occurs after the verb and tense/aspect marker (58). However, if some constituent occurs initially in the clause, the nominative case argument may raise to SpecIP. In example (59), the focused phrase nā Tere allows te tamaiti 'the child' to precede the tense/aspect marker;²³ in (60) the pre-verbal time

²³ The construction in (59) is referred to in the literature as the Actor Emphatic. It raises an agent to preverbal position. The theme argument is treated as the nominative case subject, thus lacking the i accusative marker. The Actor Emphatic is also discussed in chapter three (section 4,6), chapter four (section 4), chapter five (section 2).

phrase allows a raised subject. The negator *kāre* in (61) always requires the nominative case subject to raise. Pearce (1998a) argues that SpecIP (labeled Specifer of TenseP in her paper) is the case checking location for nominative case, however the nominative argument is only attracted to this position in the syntax when some clause initial constituent precedes.

(58) *kua 'aere mai ra [tāna au pipi] ki a ia*
 TAM go dir adv det.A.IIIsg num disciple prep pers IIIsg
 "His disciples came to him" {Mark 6:35}

(59) [Nā Tere] te tamaiti i moto
 prep.A Tere det child TAM punch
 "Tere punched the child" {Buse and Taringa (1996:263)}

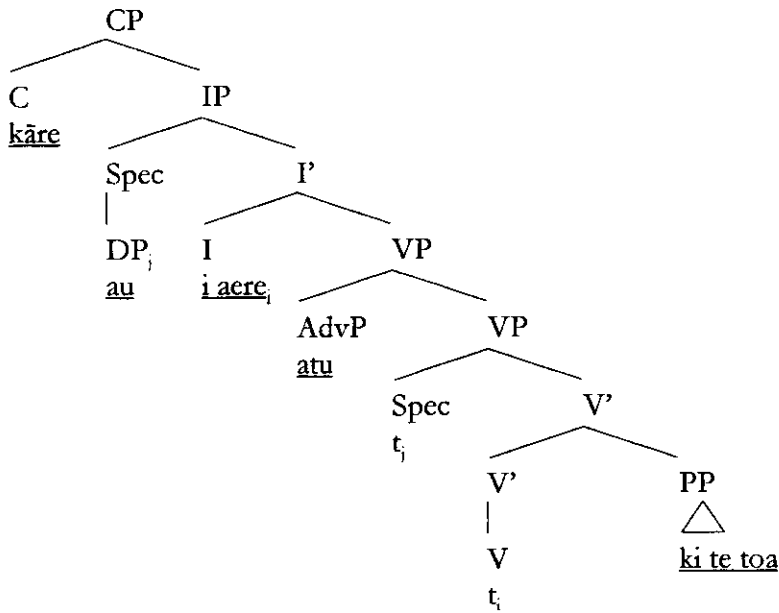
(60) [I te Rui'rua] māua i tae mai ei mei Tūpapa
 prep det Tuesday lex.dl TAM arrive dir part. prep Tūpapa
 "We arrived here from Tūpapa on Tuesday"
 {Buse and Taringa (1996:405)}

(61) Kāre au i 'aere atu ki te toa
 Neg Isg TAM go dir prep det store
 "I didn't go to the store"

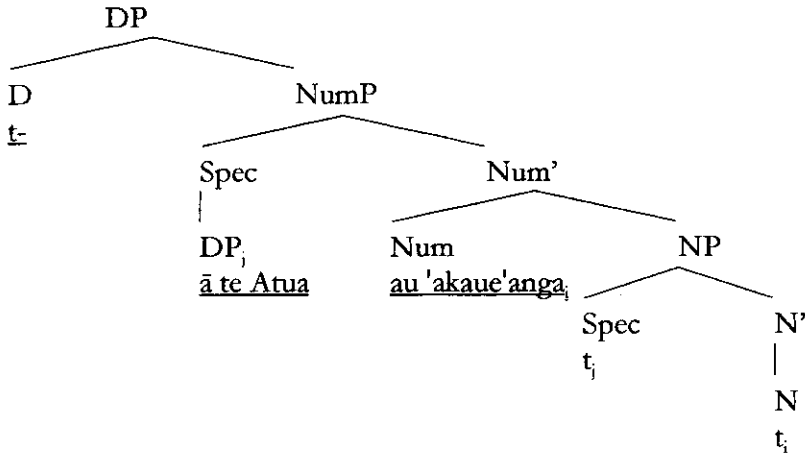
If the tense/aspect marker and verb occupy a functional head, I, then the pre-head position is most likely SpecIP. Thus we have a surface similarity between the two possible location of nominative case marked arguments within the IP, and genitive case marked phrases within NumP. This again provides support of the analogy between IP and NumP. It also suggests a parallel between DP and CP. The nominative case marked argument only raises in the presence of a CP constituent. The genitive case phrase always co-occurs with *te*, thus always has the option to raise. The trees below show the assumed structures of clauses (62) and nominal phrases (63).²⁴

²⁴ Raising to SpecIP is discussed further in chapter five (section 1). The tree in (62) is simplified to indicate the negator *kāre* as a complementizer, whereas I will treat it as the head of NegP in chapter five (section 1). However the point remains, that a clause-initial element licenses subject raising to SpecIP.

(62)



(63)



In the following section, I review some elements that compete for the SpecNumP position, and illustrate the semantic properties of these elements. This provides further evidence that there must be a functional projection intervening between DP and the lexical projection NP/AP/VP.

5. Specifier of NumP

Sections 2, 3 and 4 present data that support an analysis where the lexical head of a nominal phrase raises out of its maximal projection. The linear relationship of the head to the passive and nominalizing clitics, and to the adverbs suggests that the head moves out of its own maximal projection (NP, AP, VP) to a position assumed to be Num. It is

also shown that a genitive phrase may occur either before (in SpecNumP) or after the head. In this section, the pre-head position of the genitive phrase is examined in more detail. Other occupants of SpecNumP are also presented, and these items enable a detailed syntactic account of NumP. An underlying assumption is that NumP is crucial not only in the syntax, but also in the semantics of the nominal phrase (see section 5). This is due to the fact the D primarily allows a nominal constituent to act as an argument. However, NumP carries out the crucial referential roles in the syntax.

Potential occupants of the specifier of NumP can be identified by their location relative to the determiner in D and the number marker and/or lexical head in Num. There are several categories that compete for this position. We saw above that pronominal and phrasal genitive arguments can raise to this position. This section shows that determiners and demonstratives are also located in the Specifier of NumP

CI Maori nominal phrases always require a determiner, either 'a²⁵ when the lexical head is a proper name, place name or pronoun, or te in most other cases. A third determiner is 'e, which Buse (1963b) labels the indefinite article. This determiner is limited in its distribution: it usually cannot occur after prepositions, such as the accusative i, or the genitive a or o. It is more commonly found as the particle marking the head of a predicate nominal clause (see chapter five, section 2). The limitations placed on 'e's distribution mean that te, labeled the definite article by Buse (1963b), takes on much of the semantic load of expressing indefiniteness. The consequence of this is that te is somewhat generalized in its meaning. Commenting on a parallel phenomenon of the syntax and semantics of he (the cognate of 'e) in NZ Maori, Bauer (1997: 145) calls te the default determiner. She says "te is used to mark a phrase as an NP when the more semantically specific determiners are inappropriate".

²⁵ There is some variation in the presence of 'a according to syntactic environment: for example, pronouns do not have a determiner when they occur in grammatical subject (nominative) position. Because the conditions determining the presence of the determiner are largely syntactic, I presume that the D node is always present in all instances. Ritter (1995) argues that pronouns in Modern Hebrew are DPs consisting of DP and NumP. This analysis could extend to CI Maori, stating that pronouns underlyingly occupy Num. In the nominative case, where 'a is not required, pronouns raise to D, but in the accusative, the presence of 'a in D forces them to remain in Num. In either case, D is required to be filled. Liz Pearce (p.c.) suggests that the case marker dominating a personal marker may be relevant in its distribution. In Niuean, the case system distinguishes between common and proper nouns (Massam and Roberge (1997)). See also the discussion of teia 'this' later in this section.

There are in addition a number of bi-morphemic determiners that, as Bauer's quote implies, have a more defined semantic role. These are shown in Table (5). I assume that these particles contain a phonetically reduced allomorph of the determiner *te* as the leftmost morpheme in their bi-morphemic structure. This *te* is located in D, while the following morpheme is located in SpecNumP immediately below.

TABLE (5):

'a certain one, any, some'	tētā'i
'the or that (one in question or under discussion, but not present or in view)'	taua
Demonstrative: close to speaker	tēia
Demonstrative: close to hearer	tēnā
Demonstrative: distant from speaker and hearer	tērā

These forms contain a corresponding non-singular form marked by the absence of the initial *t-*. In the majority of examples in my corpus, the singular form is used even in the presence of an overtly plural marked noun. In the examples below, the plural noun *tamariki* 'children' is further pluralized by the addition of the number markers:

(64) tēia au tamariki
 det.proxI num children
 "these children"

(65) tēia ngā tamariki
 det.proxI num children
 "these few children/these two children"

Buse (1963b) considers the initial *t-* to be an allomorph of the determiner *te*. Cross-linguistic evidence from Tokelauan supports this. Tokelauan, as described in Hooper (1996), belongs to the Samoic-Outlier subgroup of the Polynesian language family. It contains two simple determiners which mark a following singular noun as specific (*te*) or nonspecific (*he*). These determiners are also found in complex determiners: *tētahi* 'the other, a certain', and *hetahi* 'another, any other'. Thus the alternation between specific and nonspecific in the simple determiners is retained in the complex determiners, providing a more transparent support of the bi-morphemic analysis posited for CI Maori.

The demonstrative determiners contain as their final constituent, morphemes that also appear as post-head adverbials: ia, nā, and rā (see Table (1), section 2). In some cases, nominal phrases contain the same adverbial particle occurring either as a demonstrative (66), or as a post-head adverbial (67), (68):

(66) **tērā** tumu rākau
 det.dist branch tree
 “that branch”

(67) te tumu rākau **rā**
 det branch tree dist
 “the branch there”

(68) taua tumu rākau **rā**
 det branch tree dist
 “the aforementioned branch there”

For NZ Maori, Pearce (1998d) proposes that demonstrative particles such as rā, move from the specifier of a Deict(ic)P to SpecIdentP (my SpecNumP) immediately below D. This provides a simple account of the homophony between the deictic constituent of bi-morphemic determiners and the locative particles. A comment is in order for the CI Maori speaker proximal bi-morphemic determiner. In the set of locative particles, the speaker proximal particle is nei. The speaker proximal determiner however is tēia, not tēnei as would be expected from the pattern of nā/tēnā and rā/tērā. The speaker proximal determiner in NZ Maori is tēnei, thus maintaining a transparent pattern which supports a movement analysis. However, I do not believe that this is sufficient grounds for rejecting Pearce’s analysis with respect to the CI Maori data. Ia can be a locative particle as well as the second morpheme in a deictic determiner, however nei can only be an adverbial particle. The grammar appears to distinguish ia, nā, and rā which may form deictic determiners from nei which cannot. We would expect then that nei will pattern differently in other contexts, however this deserves a more detailed study of the adverbial particles and demonstratives than is possible here.²⁶

Recall that the bi-morphemic determiners (taua, tētā’i and the demonstratives) contain an initial t̥ which is an allomorph of the default article te. I will show below that the complex determiners are principally located in the specifier of NumP. The

phonologically weak \underline{t} is syntactically located in D, but adjoins to SpecNumP in the phonological component. Crucial to my assertion that the complex determiners are located in SpecNumP is the location of genitive phrases. It has already been argued that genitive phrases can be located in SpecNumP. Genitive pronouns in CI Maori are also characterized by the presence or absence of an initial \underline{t} signifying the number of the head they modify. Each pronoun has two forms based on the $\underline{a}/\underline{o}$ distinction of the genitive case, discussed in section 4 above.

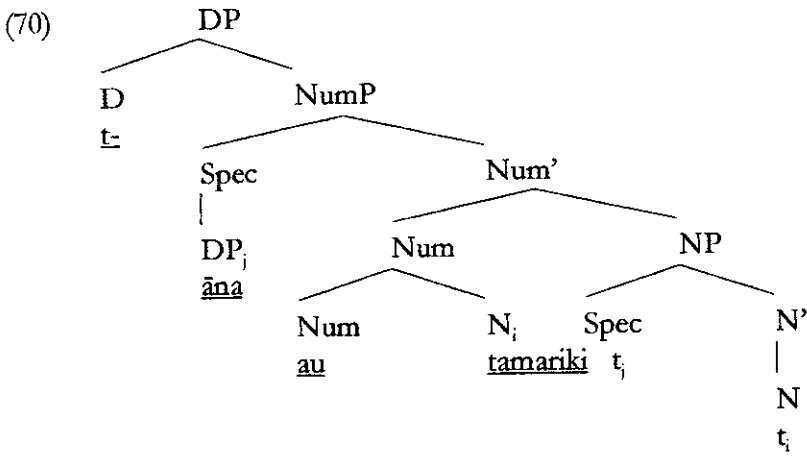
TABLE (6):

	SINGULAR	DUAL	PLURAL
1 st person exclusive	-	tā māua/tō māua	tā mātou/tō mātou
1 st person inclusive	tāku/tōku	tā tāua/tō tāua	tā tātou/tō tātou
2 nd person	tā'au/tō'ou	tā kōrua/tō kōrua	tā kātou/tō kātou
3 rd person	tāna/tōna	tā rāua/tō rāua	tā rātou/tō rātou

Recall that in the analysis here, genitive arguments are base generated within the maximal projection of the lexical head. The D-Structure location of the genitive case marked argument determines whether it surfaces with \underline{a} or \underline{o} genitive case. Genitive pronouns also demonstrate an $\underline{a}/\underline{o}$ genitive case alternation. Hence they are base generated in NP, VP, or AP, but raise to a higher position in the syntax where they precede both the lexical head, and the number markers (recall that these are the phonetic realization of Num). Unlike the genitive phrases which optionally move to SpecNumP, genitive pronouns must move to SpecNumP, unless it is already filled.

- (69) tāna au tamariki
 det.A.IIIsg num children
 ‘His/her children’

²⁶ In this regard, it is worth noting that the particle *ia* appears to have demonstrative and personal pronominal uses in *both* NZ and CI Maori.



If genitive pronouns and bi-morphemic determiners all function as determiners, their syntactic distribution should be analogous. Thus they should compete for the same specifier position, entailing that they cannot co-occur. Given that the genitive pronouns originate at the lowest functional projection, the lexical projection, and move to SpecNumP at S-Structure, then the occupation of SpecNumP by a demonstrative for example, forces the genitive pronouns to occupy a lower post-head position ((71) vs. (72)). In the post-head position, they occur without the initial \bar{t} regardless of the number of the lexical head, and this further demonstrates that the initial \bar{t} belongs syntactically to D rather than to SpecNumP. Genitive phrases are also blocked from SpecNumP when a bi-morphemic determiner is present (73), (75).

(71) *Kua 'u'una 'a ia i [tēta'i āna kiri]
 TAM hide pers IIIsg acc det A.IIIsg belt
 "He hid a belt of his"

(72) Kua 'u'una 'a ia i [tēta'i kiri āna]

(73) *Kua 'anga'anga [tēta'i o tōku mama taeake] ki te
 TAM work det O det.A.Isg mum friend prep det
 'are maki
 house sick
 "A friend of my mother's worked at the hospital"

(74) Kua 'anga'anga [tēta'i taeake o tōku mama] ki te 'are maki

(75) *E mānea tikāi [tēia a Moana puka]
 TAM excellent adv det.proxI A Moana book
 "This book of Moana's is excellent"

(76) E mānea tikāi [tēia puka a Moana]

In the analysis of case marking in NZ Maori proposed by Pearce (1998d), SpecIdentP (her equivalent of SpecNumP) is the case checking location of the genitive case feature. She notes (p. 12) that the competition between demonstratives and genitive pronouns indicates that these positions are licensed within the same functional projection. Pearce proposes that the checking of referential features takes place within IdentP in NZ Maori, while other languages locate this checking in DP. For example, Abney (1987) suggests that genitive case is licensed in SpecDP by agreement with a phonetically null genitive head (this is similar to Ritter's (1991) approach, as discussed in section 3). This null head is in complementary distribution with demonstratives and determiners, so that the latter do not co-occur with genitive case arguments. In CI and NZ Maori however, D (*te*) does co-occur with demonstratives and genitive case arguments. Hence D cannot be the licensing head for these elements, rather it is Num.

In section 1, I discuss the canonical roles of CP and IP type categories. I suggest, following Bhatt and Yoon (1992), Stowell (1991), and Szabolcsi (1994), that a CP category plays the grammatical role of enabling a proposition to act as the argument of a predicate. IP categories locate the predicate in time, by the expression of grammatical tense and aspect. When DPs are considered, there may be one functional category that subordinates its lexical complement to a predicate (a CP type function). This category makes a nominal proposition referential. Another functional category determines the extension of the nominal phrase. In the remainder of this section, I show that while the D head is referential, it is NumP that carries the identificational load of the nominal phrase.

Jackendoff (1977:103-4) identifies three semantic roles that noun phrase articles and quantifiers can play: a demonstrative role (i.e. *the, this, that, these, those, which, what, ?a, some* (singular)); a quantificational role (*each, every, any, all, no, many, few, much, little, some*); and a numeric role. CI Maori does not have the same variety of semantic quantifiers as English. However considering the meanings implied by the English terms, there are three forms of quantification: some of the set (*any, many, (a) few, some, much, little*), all of the set (*all, each, every*), none of the set (*none*). If the typology of functional phrases in the DP is correct, the features that represent these semantic roles should be checked in NumP rather than DP. The discussion following shows that this is indeed the case.

We have already seen that nominal referents can be deictically located by the bi-morphemic determiners *tēia*, *tēnā* and *tērā*. I suggested, following Pearce (1998d) that the deictic morpheme raises from a lower functional projection to the specifier of NumP. In this location, it precedes the lexical head, but follows *te*. The movement is motivated by a requirement to check a deictic feature in specifier head-agreement with Num. There is also an anaphoric particle *-aua* ‘the aforementioned, which forms a bi-morphemic determiner with *te* and precedes the lexical head. This is again a SpecNumP morpheme, and checks its anaphoric feature with the head of Num.

Many quantificational functions are not indicated by determiners in CI Maori. The examples below illustrate. ‘Some of the set’ is usually indicated by *tēta’i* (77) - (79). A number marker can be added to overtly specify a plural referent. Example (77) would otherwise be ambiguous between a singular or plural referent. *Tēta’i* can determine an empty lexical head to indicate ‘someone’ (78) or ‘something’ (79).

- (77) Kua kite au i **[tēta’i au tangata]** i kō i te
 TAM see Isg acc det num people prep there acc det
 makete
 market
 ‘I saw some people at the market’
- (78) Kua ngaropoina **[tēta’i]** i tō rātou tamaka ki ta’atai
 TAM forget det [one] acc det.O IIIpl shoe prep beach
 ‘Someone left their shoes at the beach’
- (79) Kua kite au e taravake **[tēta’i]**
 TAM see Isg TAM wrong det [thing]
 ‘I knew something was wrong.’

For *many* (80) and the negative *few* (81), (82), the predicate nominal construction is preferred. The predicate nominal construction predicates a class, ‘many ones’ in (80), while the subject describes the membership of the class, ‘the children...’.²⁷

- (80) ‘e ma’ata te au tamariki tāku i ‘apai ki ta’atai.
 det big det num children rel.A.Isg TAM take prep beach

²⁷ Predicate nominal clauses are also discussed in chapter five (section 2).

“I took many children to the beach.” (it’s many the children that I took to the beach)

(81) I te Ma'anakai e meangiti 'ua te motoka tē 'oko 'ia
 prep det Saturday det little adv det car rel.TAM sell pass
 “Few cars were sold on Saturday.” (it’s few the cars that were sold)

(82) Kāre ma'at te motoka tē 'oko 'ia
 a
 Neg big det car rel.TAM sell pass
 “Few cars were sold on Saturday.” (it’s not many the cars that were sold)

‘All of the set’ is usually indicated by inclusion of the plural marker au (83), (84), and/or the quantifier kātoatoa (85), (86). Kātoatoa means ‘every’ or ‘all’ and immediately follows the noun it modifies, hence may be part of a complex lexical head (see section 2). It can also stand alone as the lexical head of a DP (85).

(83) Kua kite 'a Tangaroa i [tōna au taeake] ki ta'atai.
 TAM see pers Tangaroa acc det.O.IIIsg num friend prep beach
 “Tangaroa saw all his friends at the beach.”

(84) Nā Tangaroa i taumi i [te au rē kātoatoa] i
 prep.A Tangaroa TAM score acc det num try all prep
 te tu'e pōro.
 det kick ball
 “Tangaroa scored all the tries at rugby.”

(85) Kua kite [te kātoatoa] ē, [e a'a 'a ia i 'inangaro
 TAM see det all sub eq why pers IIIsg TAM want
 ei i tēta'i ngā'i meitaki nōna
 part acc det place nice prep.O.IIIsg
 “Everyone saw why he wanted a nice place for himself” {EDU8}

(86) contains the paucal number marker ngā, but in this case the translation of ‘both’ indicates that of the set of two bananas, the whole set was eaten. The distributive meaning in (87) is indicated by 'okota'i ‘each one’. 'okota'i directly follows the noun, but precedes any adverbials.

(86) Kua pē [tēia ngā meika]
 TAM rotten proxI num banana
 “Both bananas were rotten.”

(87) Kua 'oake atu au 'e ta'i meika [ki te tamaiti okota'i]
 TAM give dir Isg det 1 banana prep det child distributive.one
 “I gave each child a banana.”

'None of the set' can be expressed within the nominal phrase by the negative verb *kore* (88); it is more commonly expressed by a negated predicate (89) - (91):

- (88) e mate atu ra ma [te kore āna tamariki]
 TAM die dir adv with det lack A.IIIsg children
 "[He] dies with no children (He dies with none of his (own) children)
 {Mark 12:20}
- (89) Kāre 'a Moana 'e Tere i kai i te meika
 Neg pers Moana and Tere TAM eat acc det banana
 "Neither Moana nor Tere ate the banana."
- (90) Kāre 'e tamariki api'i e rauka kia tatau i tērā puka
 Neg eq children school TAM can TAM read acc dist book
 "There is no schoolchild that could read that book."
- (91) Kāre āku meika toe i roto i te ngā'i tunu kai.
 Neg A.Isg banana rest prep in acc det place cook food
 "I don't have any bananas left in the kitchen."

Considering only the cases where quantification is expressed within the DP (as opposed to quantification by predication), we have three principal components: *tētā'i* to indicate some of the set, *au* or *ngā* to indicate all of the set, and modification by *kātoatoa* or *'okota'i*. None of the set can be expressed by the negative verb *kore*. Based on the syntactic study in the previous sections, these items all occupy NumP at S-Structure. An allomorph of *te* (either *t-*, or the plural zero form) co-occurs with all of the items in SpecNumP.

Thus it appears that the D node does not carry much of an informational role itself. As noted previously, Szabolcsi (1994) argues that the role of D in Hungarian is to enable a noun phrase to act as an argument, while (N+I)P, the phrase immediately below DP in her analysis, carries out the definiteness and quantificational functions within the noun phrase. Pearce (1998d) comes to a similar conclusion for NZ Maori. The discussion here supports a similar argumentation for CI Maori also.

Thus I propose that the CI Maori DP is principally a CP category. This provides a natural explanation for the co-occurrence of D with more specific referential determiners, as D enables the phrase to act as an argument by making that phrase referential.

6. Conclusion

This chapter provides an analysis of nominal phrases in CI Maori within the 'DP analysis'. It is shown that many features of the syntax of DPs are concisely accounted for if a parallel is assumed between DP and CP, and between NumP and IP. I propose that NumP plays the most important role in identifying the referent of a nominal phrase, while DP plays a grammatical role. It allows its complement to act as the argument of a predicate.

Chapter three: Relative Clauses

In chapters three and four, I consider the structure of relative clauses in CI Maori. The point of interest is the presence of te initially in one type of relative clause construction. Te is canonically the determiner (D) of a nominal phrase. I examine the function and category of this relative clause initial te, and identify three possible analyses. One hypothesis, a conservative approach, argues that te heads a headless relative clause in apposition to the relative noun. The other analyses propose that te is either a relative clause complementizer or a relative clause operator in these constructions.

In this chapter, I focus on the syntactic representation of the relative clauses which lack this clause-initial te (non-te relative clauses). The chapter is divided as follows. In section 1, it is shown that relative clauses come finally in the DP. I further discuss the differing interpretations of te- and non-te relative clauses, and consider how this relates to the restrictive/non-restrictive distinction evidenced in relative clauses. In sections 2 and 3, I present the data from both non-te and te-relative clauses. Section 4 considers strategies for relativization on various grammatical functions within the relative clause. It is shown that relative clauses share syntactic features with clauses containing a topicalized DP. The syntactic structure of non-te relative clauses is illustrated in section 5. These are treated as a “control” structure against which the controversial te-relative clauses can be compared. The case-marking of the agent in non-te relative clauses is considered in section 6. The discussion of relative clauses continues in chapter four, where some alternative approaches to the function and category of te are considered.

1. *Relative Clauses in the Matrix DP*

There does not appear to be any restriction on the grammatical function of the relative noun. That is, a relative clause can modify the grammatical subject (1), object (2), adjunct (3), (4), or passive by-phrase of the matrix clause (5), as well as the possessive argument within a DP (6).²⁸

²⁸ The relative clause initial te in these examples is glossed as ‘rel’ for ‘relative clause marker’. Chapter four considers its category.

- (1) Kua tuatua tēta'i au pū'āpi'i o te Ture [_{RC}tei 'aere
TAM talk det num teacher O det law rel.TAM go
mai mei Ierutarema],
dir prep Jerusalem
“Some teachers of the law who had come from Jerusalem said...” {Mark 3:22}
- (2) Kua 'a'ao 'a Ioane i te kāka'u [_{RC}tei ma'ani'ia
TAM wear pers John acc det clothes rel.TAM make.pass
ki te 'uru'uru kamera]
prep det hair.redup camel
“John wore clothes which were made of camel hair” {Mark 1:6}
- (3) Kua 'oki atu 'a Ietu ki te kāinga [_{RC}tāna e
TAM return dir pers Jesus prep det home rel.A.IIIsg TAM
no'o ana i Kaperenauma]
stay TAM loc Capernaum
“Jesus returned to the house where he lived in Capernaum” {Mark 3:20}
- (4) Ka 'aere tātou ka ranga pā'ua nā tō tātou au
TAM go I.incl.pl TAM dive clam prep det.O I.incl.pl num
taeake [_{RC}tē ka 'aere atu ki Rarotonga]
friend rel TAM go dir prep Rarotonga
“We are going to dive for clams for our friends who are coming to
Rarotonga” {EDU5}
- (5) 'E ika ota tēta'i e tāpuru'iā ra i roto i te
det fish raw det TAM cover.pass dist prep in acc det
pā 'ē te taro [_{RC}tē ka orooro'ia].
bowl agt det taro rel TAM grate.pass
There is some raw fish which is covered in a bowl by taro which has
been grated” {EDU11}
- (6) kia 'akaipoipo te teina o taua tangata [_{RC}i mate
TAM marry det younger sibling O det man TAM die
ra] i te va'ine taka'ua ...
dist acc det woman widow
“If the younger brother of the (aforementioned) man who dies marries the
widow, ...” {Mark 12:19}

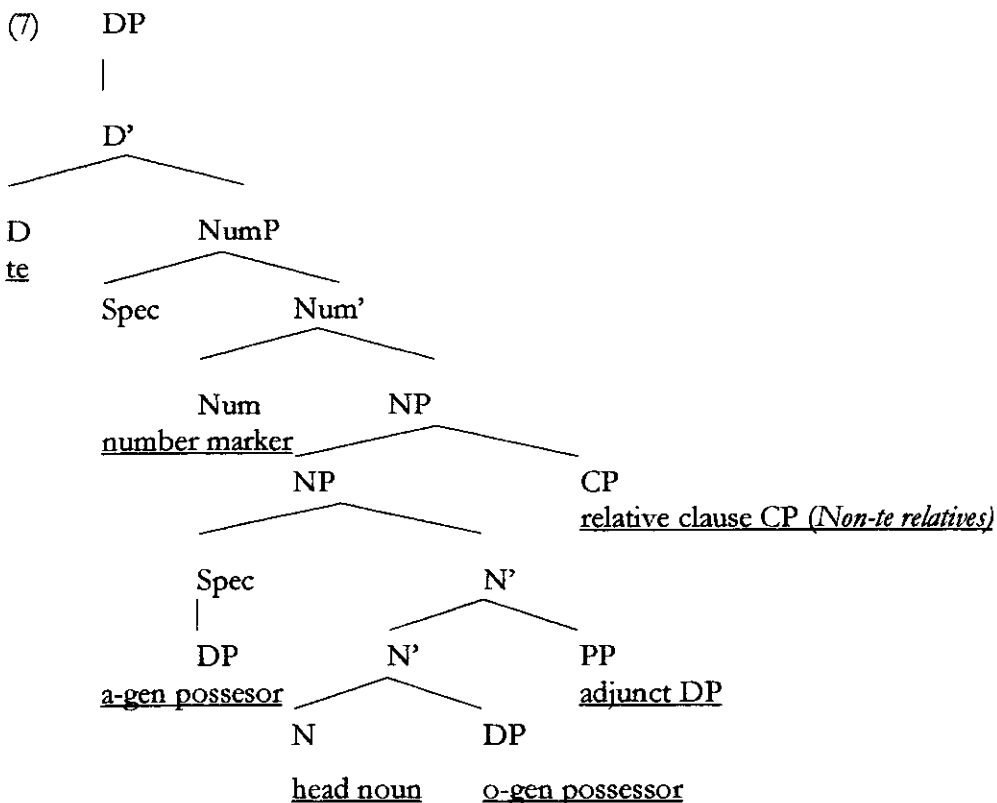
It is traditionally assumed (e.g. Radford (1988)) that relative clauses are adjoined to some N bar level above the N that they modify.²⁹ In CI Maori, relative clauses follow any complements or PP adjuncts to the relative noun.³⁰ (1) above shows a te-relative clause following an o-genitive complement. In chapter two (section 4), I argue that o-genitive

²⁹ The location of relative clauses within the matrix noun phrase is a matter of some controversy. I discuss some alternative approaches in chapter four (section 1).

³⁰ By PP adjunct, I mean a DP within an adjunct prepositional phrase. CI Maori alternatively indicates modification by placing a word-level modifier directly to the right of the lexical head. The phrase *ika ota* lit. ‘fish raw’ in (5) is an example: the head *ika* ‘fish’ is modified by *ota* ‘raw’.

complements are base-generated as complements to N. At S-Structure they may remain in their D-Structure position, or raise to SpecNumP, where they precede the head noun. In (1), the genitive complement has not raised to SpecNumP, as it follows the head noun. Rather it remains in its D-Structure position as complement to N. This example indicates that the relative clause must be adjoined to a higher level than that of N's complement.

As will be discussed in further detail in chapter four, there are various possible ways to account for the syntactic structure of *te*-relative clauses. Their location within the matrix DP is dependent on the analysis chosen for them. Thus, I will not account for their syntactic location here. The non-*te* relative clauses, on the other hand, are uncontroversial in their syntactic structure, as they do not contain the problematic *te*. I assume that as non-restrictive relative clauses, they are right-adjoined to the right of NP although nothing hinges on this assumption.³¹ I illustrate the underlying structure of the DP in (7) below.



³¹ In chapter four, I revise the level of attachment of non-*te* relative clauses.

Another important consideration in the typology of relative clauses is the relationship between the relative noun and the relative clause. Relative clauses can be restrictive or non-restrictive (also called ‘appositional’). A restrictive relative clause “restricts the potential reference of the phrase of which it is part” (Matthews (1997)). The restrictive relative clause is intrinsically involved in establishing the reference of the entire DP, both the relative noun and the restrictive relative clause equally define the reference of their DP. A non-restrictive relative clause, on the other hand, gives further information about the relative noun, but does not exclusively define it. It appears while te-relative clauses in CI Maori are consistently restrictive, non-te relative clauses may be interpreted as *either* non-restrictive or restrictive. In (8), a non-te relative clause modifies the head noun tupa ‘crab’. In this story, the reference of the crab has been established prior to the sentence in (8), and there is only one crab. Hence the relative clause describes the action of the crab, but crucially does not restrict the reference of the whole DP to a particular crab crawling out of its hole. Hence, this non-te relative clause is non-restrictive. However in (9), the te-relative clause defines the reference of the relative noun taeake ‘friend(s)’. The clams in this narrative are intended only for those friends who are coming to Rarotonga, and not for any other friends. This te-relative clause is thus restrictive.

Non-te relative: Non-restrictive:

- (8) kua kite atu 'a Teremoana i te tupa [_{RC} e totorō ra
 TAM see dir pers Teremoana acc det crab TAM crawl dist
 ki va'o i tōna va'arua]
 prep out acc det.O.IIIsg hole
 “Teremoana saw the crab which was crawling out of its hole.” {EDU4}

Te-relative: Restrictive:

- (9) Ka 'aere tātou ka ranga pā'ua nā tō tātou au
 TAM go I.incl.pl TAM dive clam prep det.O I.incl.pl num
 taeake [_{RC} te ka 'aere atu ki Rarotonga]
 friend rel TAM go dir prep Rarotonga
 “We are going to dive for clams for our friends who are coming to Rarotonga” {EDU5}

In this section, it has been established that te relative clauses are restrictive, while non-te relative clauses are non-restrictive, and are located rightmost in the DP. The following sections consider the internal syntax of subject and object relative clauses.³²

³² There is a strong possibility, as pointed out to me by an examiner of this thesis, that my characterisation of non-te relative clauses as non-restrictive understates the case. It may be that while te-relative clauses are consistently restrictive, non-te relatives may be interpreted as *either* restrictive *or* non-restrictive. I discuss this further in chapter four (sections 3, final paragraphs; section 4.1). This is clearly an issue requiring further research, however the issue of the interpretation of non-te relatives does not detract significantly

2. Subject Relative Clauses

Relativization on the grammatical subject of a relative clause is straightforward. Both non-*te* and *te*-relatives are available. Subject relative clauses (SRCs) do not distinguish between the differing thematic roles of the subject, rather they refer only to the grammatical function of the relative noun within the relative clause (I elaborate on “grammatical function” and “grammatical subject” in section 4). The examples below show non-*te* relative clauses where the relative noun corresponds to the nominative case-marked argument of a transitive (10), unaccusative (11), unergative (12) and a passivized verb (13). In each case the relative clause is introduced with a tense/aspect marker. Notice that there is no equivalent to the English complementizer *that*, or resumptive pronoun *who*.

Non-*te* relative SRCs:

- (10) Kua kite atu au i te tangata [_{RC} i rutu atu i
 TAM see dir Isg acc det man TAM hit dir acc
 te puakaaoa
 det dog
 “I saw the man who hit the dog”
- (11) kia 'akaipoipo te teina o taua tangata [_{RC} i mate
 TAM marry det younger sibling O det man TAM die
 ra] i te va'ine taka'ua ...
 dist acc det woman widow
 “If the younger brother of the man who died marries the widow, ...”
 {Mark 12:19}
- (12) Ka rongo mātou i te au riona [_{RC} e ngunguru māi
 TAM hear Ipl.ex acc det num lion TAM roar dir
 ra]
 dist
 “We hear the lions which roar” {EDU11}
- (13) 'ākara'ia mai ana te 'apinga [_{RC} i kitea mai 'e au]
 look.pass dir TAM det thing TAM see.pass dir agt Isg
 “Look at the thing I saw!” (lit: look at the thing which was seen by me!)
 {EDU1}

from the conclusions of this thesis which refer to the syntactic and semantic interpretation of *te*-relative clauses.

The SRCs of te-relatives differ from those of non-te relatives in the presence of te immediately before the tense/aspect marker of the relative clause. The examples again show that SRCs are possible with both agent (14), (15) and theme (16), (17) grammatical subjects. Notice that the theme argument of (17) is the grammatical subject of a passivized relative clause.

Te-relative SRCs:

(14) no te mea kāre tēta'i 'ua atu [RC tei rave i te
 prep.O det thing neg det adv dir rel.TAM do acc det
 'anga'anga ūmere i roto i tōku nei ingoa] e
 work amazing prep in acc det.O.Isg proxI name TAM
 rauka i te tuatua 'akakino mai iaku i muri 'ua ake
 can to speak malign dir acc.pers.Isg prep back adv adv
 i te reira
 acc det there
 “Because anyone who performs a miracle in my name cannot speak ill of me afterwards” {Mark 9:39}

(15) Kua 'ākara matariki atu te ariki, ngā mata'iaפו 'ē ngā
 TAM look intently dir det ariki num mata'iaפו and num
 rangatira i te tuna tūkē 'ua ake rāi [RC tei āru
 rangatira acc det eel strange adv adv adv rel.TAM follow
 mai i ā ia ki roto i te 'are 'uipā'anga]
 adv acc pers IIIsg prep in acc det house meeting
 The ariki, mata'iaפו and rangatira³³ watched closely the really very strange eel
 which followed her into the meeting house” {EDU1}

(16) Kua 'āite rātou mei te 'ua [RC tei topa ki rotopū
 TAM resemble III.pl prep det seed rel.TAM fall prep among
 i te au rākau taratara
 acc det num tree barbed
 “They are like the seeds that fall among the thorn bushes” {Mark4:18}

(17) 'e ma'ata te au tū kekē [RC tē ka ma'ani'ia
 det big det num image assorted rel TAM make.pass
 i runga i te au vāito tapa]
 prep top acc det num pattern tapa cloth
 “There are many assorted images that are drawn [by them] on the tapa cloth patterns” {EDU14}

The non-te and te-relative SRCs are shown in Table (1). They differ only in the absence or presence of te immediately before the relative clause tense/aspect marker.

TABLE (1):

SUBJECT RELATIVE CLAUSES: N = RELATIVE NOUN

Non- <u>te</u> Relatives	[_{DP} te N ... [_{RC} TAM V (DO) ...]]
<u>Te</u> -relatives	[_{DP} te N ... <u>te</u> [_{RC} TAM V (DO) ...]]

3. Object Relative Clauses

In the previous section, I show that CI Maori has two types of subject relative clause, which are characterized by the presence or absence of te. In this section, I consider relativization of the underlying object. A relative clause cannot be formed on the theme argument of a transitive verb if the agent of that verb is nominative case-marked. Transitive agent arguments are typically nominative case. There are three mechanisms used to form a relative clause on the theme. The relative clause can be passivized, hence the theme becomes the subject of the passive clause, and can be relativized using an SRC (18), (19). As was shown in section 2, passivized verbs occur in both non-te relatives and te-relative clauses.

SRC (Passive): Non-te relative:

- (18) 'ākara'ia mai ana te 'apinga [_{RC} i kitea mai 'e au]!
 look.pass dir TAM det thing TAM see.pass dir agt Isg
 "Look at the thing I saw!" (lit: look at the thing which was seen by me!)
 {EDU1}

SRC (Passive): Te-relative:

- (19) 'e ma'ata te au tū kekē [_{RC} tē ka ma'ani'ia
 det big det num image assorted rel TAM make.pass
 i runga i te au vāito tapa]
 prep top acc det num pattern tapa cloth
 "There are many assorted images that are drawn [by them] on the tapa cloth
 patterns"
 {EDU14}

A second option is the use of the Actor Emphatic construction. In this construction, the agent is initial in the relative clause, and is marked with the a-genitive case by the preposition nā (20).³⁴ (21) shows a Actor Emphatic main clause. Here the agent is

³³ An ariki is a paramount chief, who rules over a tribe; a mata'iapo is the head of a sub-tribe; rangatira is a hereditary title held by the members of an ariki or mata'iapo family (definitions from Buse and Taringa (1996)).

³⁴ I discuss the Actor Emphatic construction in more detail in section 4.

preposed, and is marked with the a-genitive case by the preposition nā. The theme is in the unmarked nominative case.

Actor Emphatic:

- (20) Kua kite au i te motokā [_{RC} nā Tioni i 'aka'oro]
 TAM see Isg acc det car prep.A Tioni TAM drive
 "I saw the car that Tioni drove"
- (21) Nā Tioni i 'aka'oro te motokā
 prep.A Tioni TAM drive det car
 "It was *Tioni* that drove the car"

A third option is a construction called the possessive relative, following Bauer (1997) for a cognate clause type in New Zealand Maori.³⁵ In the possessive relative construction, the relative clause agent is displaced from its usual post-verbal position, and is marked with the a-genitive case. Both non-te and te-relatives are available for this relative clause type. In non-te relatives, the agent of the relative clause is the a-genitive possessor of the relative noun (22). The relative clause is again introduced with a tense/aspect marker, just as in the SRCs. The main clause corresponding to (22) is given in (23); notice the nominative case-marked agent au. (24) demonstrates that a genitive case-marked subject is not possible in a main clause. Again there is no equivalent to the English relative pronoun or relative complementizer that.

Non-te Relatives:

- (22) 'E ma'ata tāku 'anga'anga [_{RC} kā rave i tēia rā]
 det big det.A.Isg work TAM do prep det.proxI day
 "I have a lot of work to do today" (lit: my work [that I am] going to do today)
 {EDU1}
- (23) Ka rave au i te 'anga'anga i tēia rā
 TAM do Isg acc det work prep det.proxI day
 "I am going to do the work today"
- (24) *Ka rave āku i te 'anga'anga i tēia rā
 TAM do Isg acc det work prep det.proxI day
 "I am going to do the work today"

Te-possessive relatives differ from non-te relatives in two ways. First is the presence of the particle te in front of the relative clause tense/aspect marker, as shown in (25). The

³⁵ According to Chapin (1974:266), this construction is found throughout the Polynesian language family. Donohue (1996) shows a similar construction for the Austronesian language Tukang Besi. Here the relative clause verb is inflected with an object prefix i, and the underlying subject emerges with possessive marking.

second difference is that the a-genitive agent is not treated as the possessor of the relative noun, as in non-te relatives. Instead the agent appears after the particle te, and in this configuration looks very similar to an Actor Emphatic relative clause, shown again in (27). In (26), the main clause corresponding to (25) is given.

Te-relatives:

(25) Nō reira ma'ata tā Mareko tuatua nō runga i te
 prep this big det.A Mark word prep top acc det
 au mea [_{RC} t_a Ietu i rave]
 num thing rel.A Jesus TAM do
 "That's why Mark's writings about the things that Jesus did are numerous"
 {Intro to Mark}

(26) Kua rave 'a Ietu i te au mea
 TAM do pers Jesus acc det num thing
 "Jesus did things"

(27) Kua kite au i te motokā [_{RC} nā Tioni i 'aka'oro]
 TAM see Isg acc det car prep.A Tioni TAM drive
 "I saw the car that Tioni drove"

The agent in te-possessive relatives is located after the relative clause initial te (25). However the agent of non-te possessive relative clauses (22) is the S-Structure possessor of the relative noun, as is clear from its pre-nominal position. It cannot be the S-Structure subject of the relative clause as it is located to the left of the relative noun. In section 6, I return to the status of the agent in non-te relative clauses. Te-relative clauses are considered in chapter four. Table (2) below summarizes the possessive relative constructions:

TABLE (2):

POSSESSIVE RELATIVES CLAUSES: N = RELATIVE NOUN

Non- <u>te</u> relatives:	[_{DP} t- <u>agent</u> N ... [_{RC} TAM V ...]]
<u>Te</u> -relatives:	[_{DP} te N ... [t- <u>agent</u> [_{RC} TAM V ...]]

Comparing the SRCs (Table 1) and the possessive relative clauses (Table 2), the most salient difference between the two relative clause types is the presence of te immediately to the left of the relative clause in te-relatives. Also, the possessive agent of the te-relative clause is separated from the relative noun by te. In the remainder of this chapter, I consider non-te relative clauses. Section 4 discusses the various relativization strategies

in more detail. Section 5 proposes a structure for the non-te relative clauses, and section 6 considers the genitive case-marked agent.

4. Relativization Strategies

The previous two sections present the relativization of various types of subcategorized arguments. I suggest that the relative clause formation refers to grammatical function rather than thematic role. SRCs may be formed on intransitive agent and theme arguments, and on agents of active transitive verbs and themes of passive transitive verbs. Furthermore the transitive theme can be relativized on by the Actor Emphatic construction or the possessive relative construction. Table (3) summarizes the data discussed so far.

TABLE (3):

	AGENT	THEME
INTRANSITIVE	Active SRC (<u>te</u> /non- <u>te</u>)	Active SRC (<u>te</u> /non- <u>te</u>)
TRANSITIVE	Active SRC (<u>te</u> /non- <u>te</u>)	Passive SRC (<u>te</u> /non- <u>te</u>) Possessive Relative (<u>te</u> /non- <u>te</u>) Actor Emphatic

The table shows that three clause types can express relative clauses formed on the theme argument of a transitive verb: passive, Actor Emphatic (AE), and possessive relative. These constructions share the feature of case-marking the agent with some case *other* than the nominative. The nominative is the canonical case for the agent of a transitive verb. The examples below show the three clause types again. In (28), the first person singular agent of the passivized verb *kitea* 'be seen' is marked by the passive agent marker 'e. (29) shows an AE relative clause. The agent *Tioni* is located to the left of the relative clause tense/aspect marker and verb *i akaoro* 'drove', and it is marked with a genitive case preposition *nā*. (30) shows a non-te possessive relative clause. Again the agent is located to the left of the tense/aspect marker and verb of the relative clause, and it is marked with the *a* allomorph of the genitive case.

Non-te Relative SRC (passive):

(28) 'ākara'ia mai ana te 'aping [RC i kitea mai 'e au]!
 a
 look.pass dir TAM det thing TAM see.pass dir agt 1sg

Actor Emphatic:

(35) Ko te motokā nā Tioni i 'aka'oro
top det car prep.A Tioni TAM drive
“The car it was Tioni who drove [it]”

(36) *Ko (nā) Tioni i 'aka'oro te motokā³⁶
top prep.A Tioni TAM drive det car

Topicalization on an active clause:

(37) Ko te tangata i kite mai i te 'apinga
top det man TAM see dir acc det thing
“The man saw the thing”

The examples show that the theme argument of passivized and AE clauses share a syntactic feature with other nominative case-marked arguments, such as the nominative agent in (37). Only nominative arguments, whether agent or theme, can topicalize with *ko*. Thus nominative arguments form a syntactic class for topicalization. In passivized and AE relative clauses, the relative noun corresponds to the nominative case argument of the relative clause. Therefore these relatives can be reduced to Subject Relative Clauses, which all involve relativization on a nominative case-marked argument. It is less clear how to treat the possessive relative clauses. Elsewhere in the grammar, we do not find a construction with a nominative case theme, and a genitive agent (aside from the AE). Bauer (1997:505) notes that the AE in NZ Maori enables a transitive verb's theme to participate in constructions that are normally restricted to nominative case arguments. It follows that the usage of the AE for object relative clauses is one such instance. Possessive relatives also enable a theme argument to be relativized on. By analogy with the AE, I assume that the theme of possessive relatives corresponds to a nominative case argument, while the agent receives a special case-marking. I discuss this further in section 6.

The evidence so far indicates that relativization refers to grammatical function, rather than thematic role. If grammatical classes are defined on the basis of shared behaviour in syntactic processes, such as topicalization, then nominative case-marked arguments constitute a grammatical class. It appears that relativization is sensitive to this grammatical class rather than thematic role, at least for subcategorized arguments. Keenan and Comrie (1977:66) propose that relativization refers to an Accessibility

Hierarchy (AH) of grammatical classes. They claim (p. 67) that a relativization strategy must “apply to a continuous segment of the AH”, but that a strategy applying at one point on the hierarchy can cease to apply at a lower point. CI Maori appears to have two strategies for indicating the role of the relative noun within a relative clause.³⁷ The examples seen so far lack a resumptive element within the relative clause that links the relative noun to its position in the relative clause. Regardless of the type of relative clause (transitive, intransitive, passive, AE, possessive relative), there is always an empty position within the relative clause. I will argue in section 5 that a phonetically null operator fills this empty position. On the other hand, when the relative noun corresponds instead to an adjunct phrase, an anaphoric element *ei* indicates the missing adjunct. In (38), the relative noun *te taimē tikāi* ‘the very moment’ is an adjunct phrase in the relative clause, and its absence is indicated by *ei*. Similarly, in (39) the goal of *tuku* ‘put’ corresponds to the relative noun *te ngā’i* ‘the place’. The absence of the indirect object within the relative clause is indicated by the anaphoric *ei*.

- (38) I *te taimē tikāi* [_{RC} *i uru atu ei te vaka nō*
 prep det time adv TAM enter dir part det canoe prep.O
Sālelologa ki uta i a 'Upolo], kua rere atu 'a
Sālelologa prep ashore acc pers 'Upolo TAM jump dir pers
'Ina ki va'o
'Ina prep out
 “At the very moment that the canoe from *Sālelologa* came ashore at *'Upolo*, *'Ina*
 jumped out” {EDU1}

- (39) E *'akara ana, tēia te ngā'i* [_{RC} *tuku ei rātou*
 TAM look TAM det.proxI det place TAM put part IIIpl
i a ia]
 acc pers IIIsg
 “Look, this is the place where they put him” {Mark 16:6}

Massam and Roberge (1997) argue that *ai*, the Niuean cognate of CI Maori *ei*, is an operator-bound clitic. As Niuean does not have person or number agreement in its inventory of verbal inflection, Massam and Roberge propose that a clitic in Niuean can potentially identify case features only. They state (p. 296) that a missing subcategorized argument within a clause will always be detected because of the Projection Principle and

³⁶ In this example, if *nā* is omitted, the clause is still ungrammatical, however it can be rescued by marking the theme argument with the accusative case-marker *i* (i.e. *Ko Tioni i 'akaoro i te motokā*). This is then an instance of topicalization on an active clause.

the Theta Criterion. The Projection Principle requires that all arguments of a predicate are projected in the syntax. The Theta Criterion states that each argument must be assigned a single thematic role, and that each thematic role must be assigned to a single argument. An interlocutor will notice a missing argument and will seek its referent within the discourse. However the Projection Principle and the Theta Criterion refer only to subcategorized arguments, and thus do not demand the syntactic representation of adjunct functions. Massam and Roberge propose that ai "serves the function of identifying the fact that a non-selected complement ... is missing" (p. 296).

This typology of Niuean ai appears to be consistent with CI Maori ei. In section 5, I argue that relative clauses contain an operator which raises to an A-bar specifier position. Hence in (38) and (39), an operator is projected within the relative clause, and this operator is co-indexed with the relative noun. Ei is bound by the adjunct relative operator. Massam and Roberge restrict binding of Niuean ai to an operator in an adjunct phrase. However in (39), ei resumes the indirect object te ngā'i of the relative clause verb tuku 'put'. The verb tuku has several definitions, including 'leave' and 'deposit' (Buse and Taringa (1996)). These latter definitions could arguable classify tuku as a two-place rather than a three-place predicate. Bauer (1982:319) expresses some doubt as to the existence of a grammatical class of indirect objects in NZ Maori. She finds it probable that indirect objects are treated as adjuncts. Hence it is not entirely clear that (39) constitutes a case where Massam and Roberge's categorization of Niuean ai does not extend to CI Maori ei. However it does appear to be the case that agent and theme relative operators in CI Maori are not resumed by ei. None of the relevant examples in this chapter contain ei.

CI Maori therefore has two strategies for indicating the role of the relative noun in the relative clause. Nominative subjects are not overtly resumed within the relative clause, while adjuncts (and indirect objects?) have the anaphoric particle ei. In the table below, the strategies are shown with respect to grammatical function (defined by case). The problematic grammatical function is the direct object, which we have seen does not appear to participate in relative clauses. In all instances of relativization on the transitive

³⁷ The reader should note that this is a very general survey of the status of relativization strategies. I do intend to offer a full description of relativization here. I hope however that the discussion surrounding the Accessibility Hierarchy will clarify the motivation for the differing types of theme relative clauses.

theme, some morphological process promotes the theme to grammatical subject, while the agent is demoted to an adjunct agentive case (passive agent or agentive genitive case).

Table (4):

Subject (<i>nominative</i>)	Direct Object (<i>accusative</i>)	Indirect Object (<i>dative</i>)	Adjunct
null operator	-	<i>ei</i>	<i>ei</i>

The constraint operating on transitive theme arguments in relative clauses appears to operate more generally in the syntax of CI Maori. We saw in (33) - (37) above that topicalization applies to nominative case-marked arguments. The example in (41) shows again that an accusative argument cannot be topicalized. Example (42) shows that when an adjunct phrase is topicalized with *ko*, the anaphoric particle *ei* immediately follows the verb. Compare example (42) with the adjunct relative clause (38).

(40) Kua 'inangaro te tangata i tēta'i pā'ua
 TAM want det man acc det clam
 "The man wanted some clams"

(41) *ko (i) tēta'i pā'ua i 'inangaro te tangata

(42) Ko te ara 'oki i 'aere mai ei au i nakōnei
 top det path adv TAM go dir part 1sg prep earlier today
 i te pōpongi.
 prep det morning
 "This path I had already walked earlier today in the morning."³⁸
 {EDU18}

In section 5, I propose that a relative operator in non-*te* relative clauses moves to the specifier of a Topic Phrase. Pearce (1999) proposes that topicalized phrases in NZ Maori also move to the specifier of Topic Phrase. Like CI Maori, in NZ Maori subcategorized arguments which are topicalized are marked with *ko* and are restricted to the nominative case. It appears then that CI Maori non-*te* relative clauses are a subset of syntactic processes which involve raising to the specifier of a Topic Phrase, and which are restricted to nominative case-marked arguments. When adjunct phrases are relativized on or topicalized with *ko*, they are resumed within the clause by anaphoric *ei*. Thus relativization and topicalization share syntactic characteristics. In section 5, we will

³⁸ This example is potentially ambiguous with a cleft reading, as *ko* can also mark the head of a cleft clause. However, in the context of the story, I believe it should be treated as a topic.

“I gave away this book, which will be read by the children”

Stowell (1982) argues that the presence of internally defined tense within an embedded clause implies that there must be a CP layer present in the phrase structure of that embedded clause. The function of C, he argues, is to fix the temporal reference of the embedded clause with respect to that of the matrix clause.⁴¹ CI Maori relative clauses have their own specification for tense/aspect, so they must have a CP level. CP is also theoretically required for relative clauses within Government and Binding (GB) theory. In the following paragraphs, I present an analysis of relative clauses which utilizes a CP level of syntactic structure.

A basic component of Universal Grammar within GB is that the argument structure (subcategorization) of a predicate must be satisfied at D-Structure. This is captured formally by the Projection Principle and the Theta Criterion.⁴² In CI Maori relative clauses, the argument co-indexed with the relative noun is not represented phonetically within the relative clause as there is no resumptive proform. However the well-formedness of the relative clause suggests that the Projection Principle and Theta Criterion are satisfied by some empty category. Relative clauses in English may also contain a phonetically empty argument position (e.g. the man [_{RC} I saw \emptyset]). Unlike CI Maori however, English alternatively projects a Wh-operator initially in the relative clause (e.g. the man [_{RC} **who** I saw t]). Regardless of whether the Wh-operator is overt or not, English relative clauses show similar syntactic behaviour arising from subjacency violations, such as in Weak Crossover. The *syntactic* representation of the two types of relative clause must thus be the same, even though they differ *phonetically* (in the absence or presence of the Wh-operator).

A Wh-operator must bind a variable, hence it must be located in a position where it takes scope over its syntactic binding domain. Rizzi (1996) proposes that a Wh-Criterion enforces the binding configuration within the syntax. According to the Wh-Criterion, the Wh-operator in English relative clauses raises to the specifier of CP. CP is the

⁴¹ Enç (1987) makes a similar point. He argues that all clauses must have a CP level, as the C head (*COMP* in Enç's terminology) is the location of a “temporal index” which fixes the tense of IP to a time interval, or in some subordinate clauses to the tense of a main clause.

⁴² The Projection Principle requires all arguments of a predicate to be projected in the syntax. The Theta Criterion requires that each argument be assigned a single thematic role, and that each thematic role be assigned to a single argument.

highest projection of the relative clause. Rizzi (1997) proposes that all operators, Wh- or otherwise, are subject to some form of the Wh-Criterion, such that they will have to raise to the specifier of an A-bar head by Logical Form.

THE WH-CRITERION: (RIZZI 1996:64)

- A. A *wh* operator must be in a Spec-head configuration with $X^{\circ}[+wh]$
- B. An $X^{\circ}[+wh]$ must be in a Spec-head configuration with a *wh*-operator

(Where $X^{\circ}[+wh]$ indicates a head marked with the feature [+wh])

The Theta Criterion, Projection Principle and Wh-Criterion are regarded as universal principles. Thus I assume that relative clauses in CI Maori also involve the projection of a phonetically null operator. The following paragraphs elaborate on the nature of the relative clause operator.

Lasnik and Stowell (1991) classify two types of operator: quantificational and non-quantificational.⁴³ Quantificational operators (e.g. *each*, *every*) assign a range of possible referents to the empty category in their D-Structure position. Non-quantificational operators do not define a set of possible referents, rather they are anaphoric. They seek a unique antecedent and connect that antecedent to an argument position. Lasnik and Stowell propose that the operators in restrictive and non-restrictive relative clauses differ according to this quantificational/non-quantificational dichotomy. They argue that the restrictive relative clause operator is quantificational, while the non-restrictive relative clause operator is non-quantificational. The examples below show a restrictive (46) and a non-restrictive relative clause (47).

- (46) The man [_{Restrictive RC} that left the building last night] failed to turn off the lights
- (47) The man, [_{Non-restrictive RC} who left the building last night], failed to turn off the lights

⁴³ These two types of empty category can be distinguished by Weak Crossover (WCO). The presence of a variable operator and trace gives rise to WCO (i), while the presence of a non-quantificational operator and its null epithet trace does not (ii). Lasnik and Stowell (1991:690) describe WCO as in (iii). According to their generalization, WCO applies only to the traces of true variable operators, while the trace in (ii) is not a true variable, rather a null category with the binding properties of a definitive description.

- (i) *every man_i [_{that} his_i mother rejected t_i] {Lasnik and Stowell (1991: ex.59a)}
- (ii) Gerald_i, [_{who}_i his_i mother loves t_i] {ibid. ex.36a}
- (iii) "In a configuration where a pronoun P and a trace T are both bound by a quantifier Q, T must c-command P"

The restrictive relative clause in (46) carries a presupposition that there is a set of potential referents for 'the man', but the appropriate referent is a man who satisfies the condition that he 'left the building last night'. In terms of sets, the relative noun refers to a set of men, and the relative clause refers to a set of entities who 'left the building last night', but the referent of the entire DP comprising the relative noun and relative clause is the intersection of the two sets. It is in this sense that the relative operator is quantificational. The relative operator, which is the syntactic representation of the relative noun, ranges over a set of men, however the only suitable referent is the one who left the building last night. Non-restrictive relative clauses do not presuppose a set of potential referents for the relative noun. Rather, they give a property of the relative noun. The set defined by the non-restrictive relative clause and the set defined by the relative noun are equal. In (47), the relative clause simply states a property of the relative noun. The relative operator in the non-restrictive relative clause thus takes a referent, the relative noun, and defines a property of the relative noun. It is thus non-quantificational, because it does not presuppose that there are set of potential referents, rather there is a unique referent.

Lasnik and Stowell base generate both types of operator in the appropriate argument position. However they propose that the quantificational operator raises to SpecCP, while the non-quantificational operator is adjoined to IP at S-Structure.⁴⁴ Rizzi (1997) accepts Lasnik and Stowell's distinction between operator types, however he proposes that *all* operators raise to a specifier position, and that adjunction to IP is not permitted. Rizzi's argument relies on the proposal that the CP is not a single projection, but rather a series of functional projections with differing syntactic functions.⁴⁵ Rizzi (1997) posits

⁴⁴ Lasnik and Stowell further argue that the quantificational operator leaves behind a variable trace which must be A-bar bound by a true Quantifier Phrase (p.711). A non-quantificational operator leaves behind a trace which they describe as a "null epithet" (p.709). They argue that the null epithet belongs to a category which is unrecognized in the Binding Theory, and the associated binary features [\pm pronominal; \pm anaphoric] of Chomsky (1982). In Chomsky's system, both R-expressions and variables, both [-p,-a], are subject to Condition C of the Binding Theory (An R-expression must be free in its binding domain). Chomsky assumes that R-expressions are distinct from variables simply because R-expressions are overt, while variables are null categories. However Lasnik and Stowell argue that Chomsky's category of variables should be further divided. Their division is shown below (Lasnik and Stowell (1991:ex68))

	Overt Categories	Null Categories
R-expressions	Names, definite NPs	Null epithets
Variables	(Overt variables)	Wh-trace; QP-trace

The null categories must be locally A-bar bound, however the nature of the binding phrase is important. A null epithet must be A-bar bound by a non-quantificational phrase, while Wh- or QP-trace must be A-bar bound by a true quantifier.

⁴⁵ This is similar to expansions assumed for the traditional IP, initially proposed by Pollock (1989).

that the two main functions of complementizers are subordination and tense selection of the lower clause. In his account, these roles are structurally assigned to two separate functional projections replacing the CP: ForceP, which acts as the subordinator and the indicator of clause type, and Fin(iteness)P, which determines whether the embedded IP is finite or nonfinite. In addition to these projections, there can be a Topic phrase and a Focus phrase, which house topicalized and focused phrases respectively within the clause. TopP and FocP are located between ForceP and FinP. Rizzi argues (p.284), that the checking of feature values in a Specifier-Head agreement relationship is a fundamental principle underlying CP structure.⁴⁶ This extends the Wh-Criterion proposed for [+wh] clauses to all types of positive feature values (note that the Wh-Criterion only applies to positive values).

(48) ForceP > (TopP) > (FocP) > FinP

Thus a relative operator must raise to an appropriate specifier in the syntax in order to satisfy a specifier-head agreement relationship. Based on the analysis of Italian topicalized and focalized constituents by Cinque (1990), and on Lasnik and Stowell's split between quantificational and non-quantificational operators, Rizzi (1997:292-3) proposes that focal constructions always involve quantificational A-bar binding, while topic constructions exhibit non-quantificational A-bar binding. Rizzi argues that quantificational operators raise to the specifier of FocusP. He defines focal constituents as introducing new information which take scope over the "contextually given knowledge that the speaker presupposes to be shared with the hearer" (p. 285). Topicalized phrases are defined as "expressing old information" which is salient in the discourse (p. 285).

We have already identified a quantificational/non-quantificational distinction in relative clauses. In CI Maori, non-te relative clauses are non-restrictive. Following Lasnik and Stowell, I propose that the non-te relative operator is non-quantificational. Following Rizzi, it raises to the specifier of Topic Phrase.⁴⁷ A Topic Criterion instantiates the

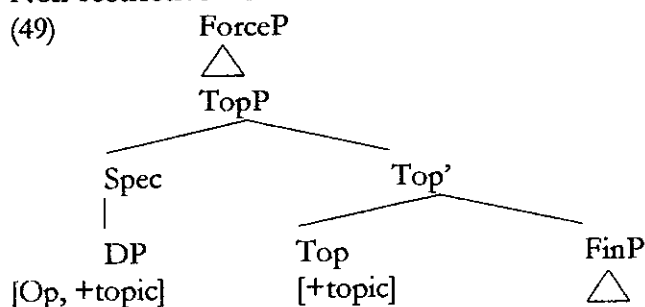
⁴⁶ This reflects similar proposals for the licensing of arguments in A-positions, as is argued in the Minimalist Program (e.g. Chomsky (1993)) where all Case "assignment" is undertaken by Case feature checking in Spec-Head agreement.

⁴⁷ In fact, Rizzi (1997) does not identify the restrictive relative operator in Italian as quantificational. He locates it in the specifier of Force, rather than the quantificational specifier of Focus. He shows that restrictive relative operators can co-occur with focalized phrases. He does however identify the *non-*

operator's raising requirement: the non-quantificational operator in non-restrictive relative clauses raises to agree with a [+topic] feature in TopP. Rizzi (1997:282) states that A-bar features such as [+topic] "determine the interpretation of the category bearing them". The feature [+topic] determines that the proposition expressed by the relative clause is a property of the relative noun; the non-restrictive relative clause thus has an interpretation similar to a topicalized constituent: "as for [relative noun], it ...". An advantage of this approach is that it immediately accounts for the syntactic similarity between the relativized operator and a DP topicalized with *ko*. Both structures involve raising of a nominal element to the specifier of TopicP.

To summarize the rather complex arguments presented so far, in both restrictive and non-restrictive relative clauses, an operator is located at D-Structure in the position that corresponds to the thematic role of the relative noun within the relative clause. This operator satisfies the Projection Principle, and the Theta Criterion. The operator in a restrictive relative is quantificational, while the operator in a non-restrictive relative clause is non-quantificational. The CI Maori non-*te* relative clauses are non-restrictive, thus their relative operator is non-quantificational and is assigned the feature [+topic]. It raises to SpecTopP in order to agree with a [+topic] feature in the head of Topic. Relative operators in CI Maori are phonetically empty (at least in the non-restrictive clauses seen thus far). Therefore, I do not have evidence of their location at S-Structure, however they must raise by LF, the level at which the Criteria universally apply.

Non-restrictive Relative Clause:

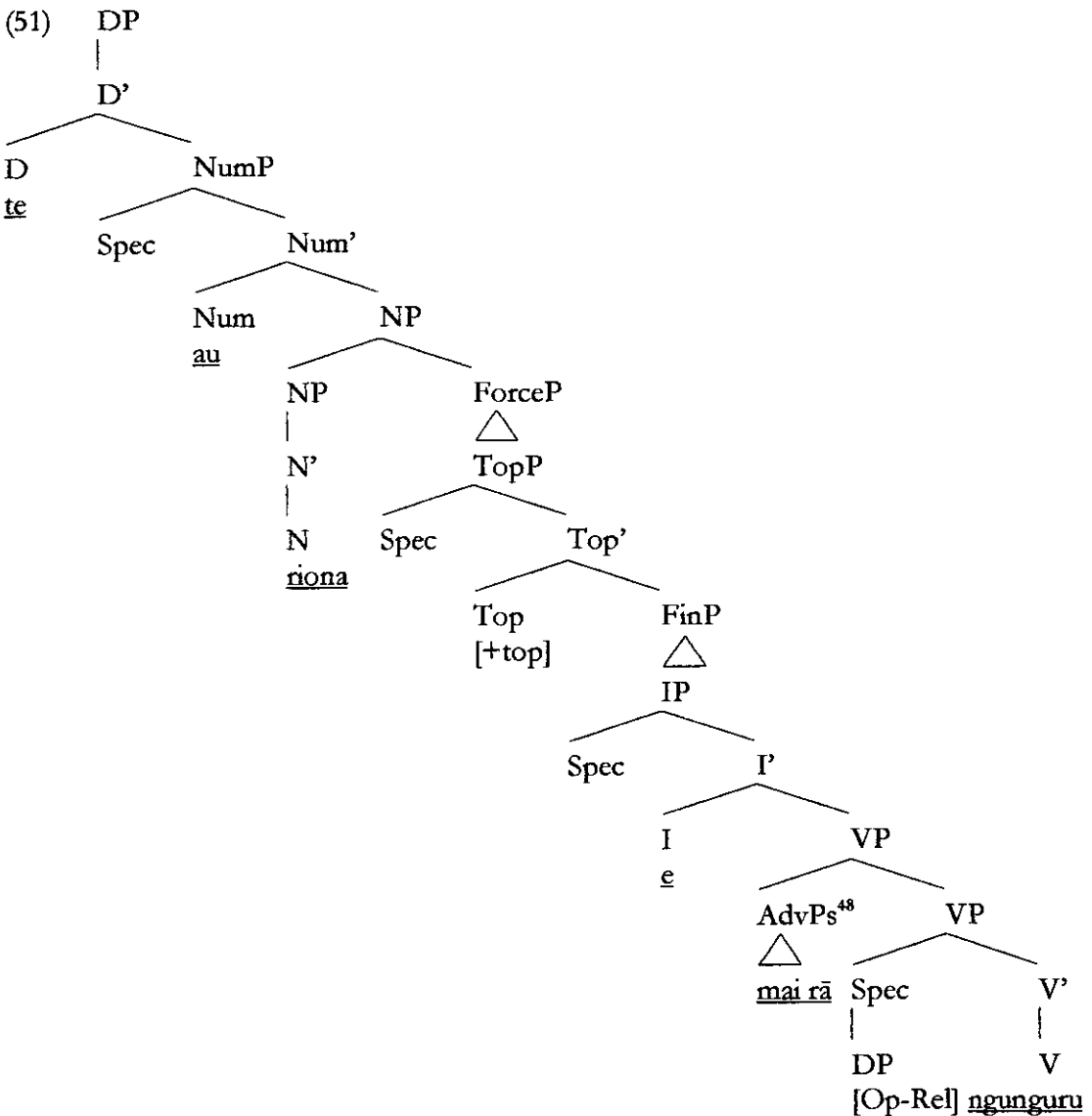


Following these assumptions, we can build a phrase structure for non-*te* subject relative clauses. (51) shows the phrase-structure tree for the non-restrictive SRC (50) at D-Structure. The relative operator [Op-Rel] is base generated in the specifier of VP. Here it

restrictive operator as a topic. In chapter five (especially section 3), I show that there is evidence of only two A-bar specifiers in CI Maori, and that these correspond to a Topic and Focus phrase.

receives the agent theta role from the verb ngunguru 'roar'. The relative noun riona 'lion' is located at the head of NP, the number marker au is base generated in Num, and te is base generated in D. Rizzi (1997) assumes that ForceP and FinP are minimally required in a clause. TopP is generated in order to satisfy the theoretical requirements imposed by the presence of the relative operator and the [+topic] feature.

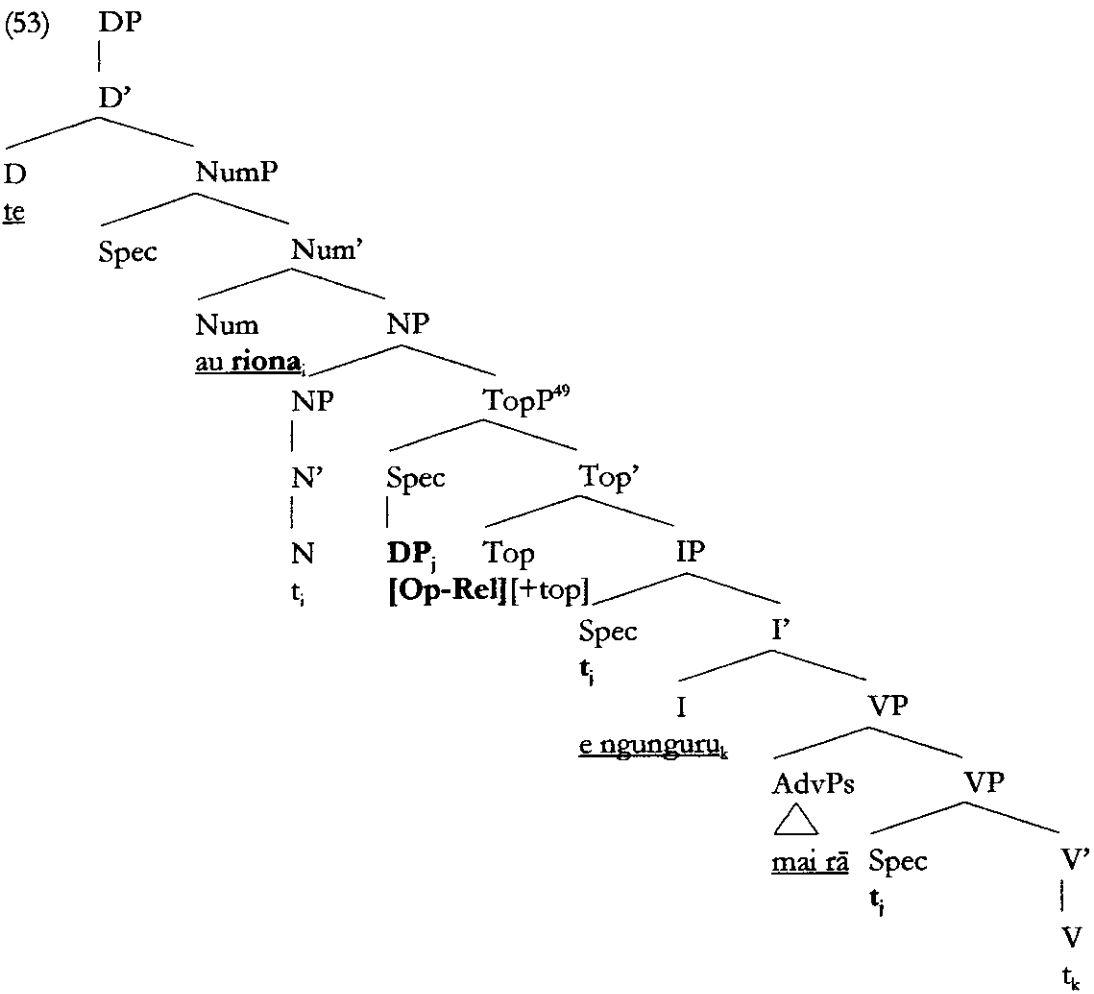
- (50) Ka rongo mātou i te au riona [RC e ngunguru māi
 TAM hear 1pl.ex acc det num lion TAM roar dir
 ra!]
 dist
 "We hear the lions which roar" {EDU11}



⁴⁸ AdvPs is intended as a shorthand for two Adverbial phrases containing māi and rā, both adjoined to VP. They are collapsed into a single phrase here for simplicity.

(53) illustrates the S-Structure of the above example. The operator [Op-Rel] raises from SpecVP, the location of the agent theta role of the verb *ngunguru* ‘roar’, to SpecTopP. It leaves a null epithet trace in SpecVP. As the relative noun in subject relative clauses corresponds to the nominative case-marked argument, the operator raises via SpecIP, the nominative case checking location. In (53) co-indexation indicates *syntactic movement*, while the anaphoric chain formed between the relative noun, operator, and the operator’s traces is indicated by *bold face*.

- (52) Ka rongo mātou i te au riona [RC e ngunguru māi ra!]
 TAM hear Ipl.ex acc det num lion TAM roar dir
 dist
 ‘We hear the lions which roar’ {EDU11}



⁴⁹ ForceP and FinP are omitted to simplify the illustration.

The non-quantificational operator in non-te relative clauses provides a mechanism by which the relative noun can be interpreted as the missing argument of the relative clause: a non-quantificational operator seeks an antecedent, and binds the antecedent to a thematic location in the relative clause. The principles that force an operator to be generated (Projection Principle, Theta Criterion, Topic Criterion) are part of the inventory of Universal Grammar. We can assume then that the structure of all relative clauses must conform to these theoretical devices, and hence will resemble at some level the phrase structure of non-te relatives.

6. *Accounting for the Genitive Case-marked Agent*

The relative clause construction is characterized, in a descriptive sense, as having a missing argument co-indexed with the preceding relative noun. CI Maori places a constraint on the nature of this missing argument. If it is a theme, it must be identified as the nominative case-marked argument. Thus, in a transitive relative clause the theme is licensed with the nominative case, and the agent is assigned some other case. In possessive relative clauses, the agent is located at S-Structure in the matrix DP, and is licensed with the genitive case. The agent is overtly indicated as a thematic agent, because it receives the a-genitive allomorph. This is the allomorph assigned to agentive possessors and to the agent of the AE (via the nā preposition). From this perspective, the possessive relative clause construction is quite transparent in its interpretation. However, the theoretical account of possessive relatives is somewhat complex, as there is no obvious morphological mechanism by which the agent is demoted from its canonical role as the nominative case-marked argument of a transitive verb.

In this section, I present an analysis for non-te possessive relative clauses. The section is mainly concerned with accounting for the possessive relative agent, which appears to have raised out of the relative clause into the relative noun's DP. It is licensed for genitive case there. Following the discussion in sections 4 and 5, the possessive relative construction allows a theme argument to raise to SpecTopP via SpecIP where it is licensed with nominative case. The examples below show non-te possessive relatives (54), (56), and their main clause equivalents. The direct object 'anga'anga 'work' in (55) becomes the relative noun in (54). The agent au 'I' is not found as a nominative case argument of the relative clause. Rather it is the first person possessor āku of the relative

noun. Similarly in (57), the nominative case agent of pēni 'paint' is represented in the relative clause as the a-genitive possessor ā rātou of the relative noun tūtū 'picture' (56).

Possessive Relative: Non-te Relatives:

(54) 'E ma'ata tāku 'anga'anga [_{RC} kā rave i tēia rā]
 det big det.A.Isg work TAM do prep det.proxI day
 "I have a lot of work to do today" (lit: it's big my work [that I am] going to do today)

(55) Ka rave au i te anga'anga i tēia rā
 "I will do the work today"

(56) e putuputu ana rātou i te tāuru mai i te au
 TAM assemble TAM IIIpl to put dir acc det num
 vāito tapa ki roto i tā rātou au tūtū [_{RC} ka
 pattern tapa prep in acc det.A IIIpl num picture TAM

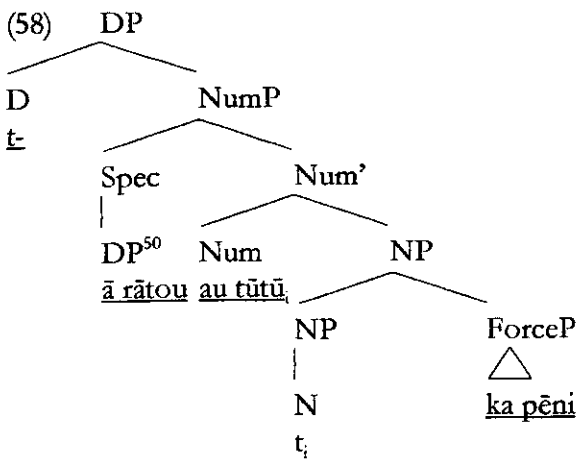
pēni]

paint

"They get together to put tapa patterns into the pictures they are going to paint"
 {EDU14}

(57) Ka pēni rātou i te au tūtū
 "They will paint the pictures"

In (56), the genitive agent precedes the number marker au. CI Maori number markers project maximally to NumP, and the lexical head moves to Num from its base position in N. NumP's specifier checks genitive case. The tree in (58) illustrates that the understood agent of the relative clause in (56) is situated outside of the relative clause at S-Structure. It is located in SpecNumP of the matrix DP, where it precedes au in the head of NumP.



The word order in this example gives clear evidence that the possessive relative agent is located within the matrix DP at S-Structure. Genitive case arguments within a DP can be positioned either before or after the lexical head, as discussed in chapter two (section 4). Pronominal possessors, such as ā rātou in (58), are most commonly positioned before the lexical head, while phrasal possessors are more likely to be in the post-head position. It is unclear whether the post-head position is available for the possessive relative agent. The few examples of non-t̄ possessive relatives in my corpus have a pronominal possessive argument, with no competitor for SpecNumP.⁵¹ In elicitation with my language consultant, theme relative clauses were consistently given as t̄-possessive relatives, as passive SRCs, or as AE relatives.⁵² However, the alternation between pre- and post-head possessors is found in possessive relative clauses in NZ Maori and Hawaiian – both East Polynesian languages:⁵³

New Zealand Maori:

(59) Ka mōhio ahau ki te tangata a Hone [RCⁱ kōhuru ai]
 TAM know Isg to the man of John TAM murder part
 “I knew the man that John murdered” {Bauer (1997): ex. 3716f}

(60) Ka mōhio ahau ki t.ā Hone tangata [RCⁱ kōhuru ai]
 TAM know Isg to the.of John man TAM murder part
 “I knew the man that John murdered” {ibid. ex. 3716g}

⁵⁰ I have not indicated a trace of movement here, as we have yet to ascertain the D-Structure location of the agent.

⁵¹ Competitors for SpecNumP are demonstratives and bi-morphemic determiners. These force the genitive case argument to remain in the NP where it follows the relative noun (see chapter two, section 5).

⁵² While I do not have any examples of phrasal possessors for non-t̄ relatives, the corpus does contain many examples of both phrasal and pronominal agents for t̄-possessive relatives. It may be the case that t̄-relatives are preferred for phrasal possessors, and this may override the restrictive/non-restrictive dichotomy.

⁵³ Notice that these examples both contain the anaphoric particle ai. I return to this in section 6.2.

Hawaiian:

(61) **ka mea'ai Pukiki āna** [_{RC}i kuke ai]
 the food Portuguese of-him TAM cook part
 "the Portuguese food that he cooked"
 {Cook (1999: ex.31b); original source: Hopkins (1992:233)}

(62) **kāna mea'ai Pukiki** [_{RC}i kuke ai]
 his food Portuguese TAM cook part
 "the Portuguese food that he cooked"
 {ibid. ex 31a; original source: Hopkins (1992:233)}

In terms of case-marking, the possessive relative agent behaves like a thematic agent, rather than a thematic possessor. There are two genitive case allomorphs: a, which marks a dominant or agentive possessor, and o, which marks a non-dominant/non-agentive possessor. Genitive arguments are inserted into the syntax with a thematic role feature, which determines whether the a-genitive or o-genitive allomorph is chosen, and a genitive Case feature, which must be checked in Specifier-head agreement within NumP. Thematic agents receive the a-genitive allomorph; thematic themes receive the o-genitive allomorphs; thematic possessors may receive either a- or o (see chapter two, section 4). In (63), the relative clause agent is case-marked with the a-genitive allomorph, as it is a thematic agent. (64) illustrates that the thematic *possessor* of ngā'i takes the o-genitive. Thus the genitive argument within the relative clause DP is not the thematic possessor of the head noun ngā'i, rather the thematic agent of the relative clause.^{54,55}

(63) I tōku manako, 'e mamao **tāku ngā'i** [_{RC}i 'aere]
 prep det.O.Isg thought det far det.A.Isg place TAM go
 "In my opinion, it was a long way to the place where I had to go" (lit: it's far my place [where I] went) {EDU18}

(64) 'e reka **tōku ngā'i**
 det nice det.O.Isg place
 "My place is nice"

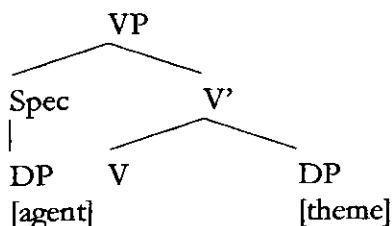
So far the evidence from CI Maori, and some supporting evidence from the cognate construction in NZ Maori and Hawaiian shows that the relative clause agent is a genitive case-marked argument of the relative noun at S-Structure. Its surface word ordering is

⁵⁴ This argument is also made for possessive relatives in New Zealand Maori in Bauer (1982).

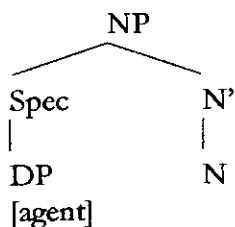
⁵⁵ In this example the relative noun ngā'i 'place' is thematically a location rather than a theme argument. In the main clause version of the relative clause shown here, te ngā'i is marked with ki. Bauer (1997:50) notes that goal phrases which indicate an endpoint of movement are treated syntactically as arguments, rather than adjuncts in NZ Maori. On the basis of this example, this may also be true of CI Maori, as *adjunct* locatives are indicated by anaphoric ei in relative clauses (see section 4).

entirely consistent with that of canonical possessors within the DP. However there are various possibilities for its D-Structure location. The agent could be base generated in SpecVP, the canonical location for the agent of a transitive verb (65). It must then raise out of the relative clause to NumP of the matrix DP, where it receives case. Alternatively the agent could be base generated in a location other than SpecVP within the relative clause, for example a topic or adjunct position. A third option is that the agent is base generated in the specifier of the relative noun's NP (66). In each of these possibilities, issues of binding and case checking must be addressed; I discuss these as they arise.

(65) **D-Structure location of transitive agents:**



(66) **D-Structure location of a-genitive possessors:**



In this section, I propose that the possessive relative agent is inserted at D-Structure in the specifier of the relative noun's NP, and raises to SpecNumP for genitive case checking. It emerges with the a-genitive allomorph, because it is a thematic agent. The agent is co-indexed with an empty operator within the relative clause. This operator is assigned the agentive thematic role by the relative clause verb, but is syntactically represented as an adjunct. The theme is the sole argument of the relative clause verb, and thus it receives nominative case.

The structure in (69) demonstrates the proposed D-Structure for possessive relatives. The relative clause agent is co-indexed in the relative clause with a phonetically null operator [Op-Ag], which is located within an adjunct PP. Adjunct phrases follow the subcategorized arguments of a verb (67), so I right-adjoin the adjunct to V'. An operator [Op-Rel], in the complement to V, resumes the relative noun. Subscripted indices are reserved for syntactic movement, while co-indexation arising through anaphora is indicated by differing typefaces. As a D-Structure representation, there is no syntactic

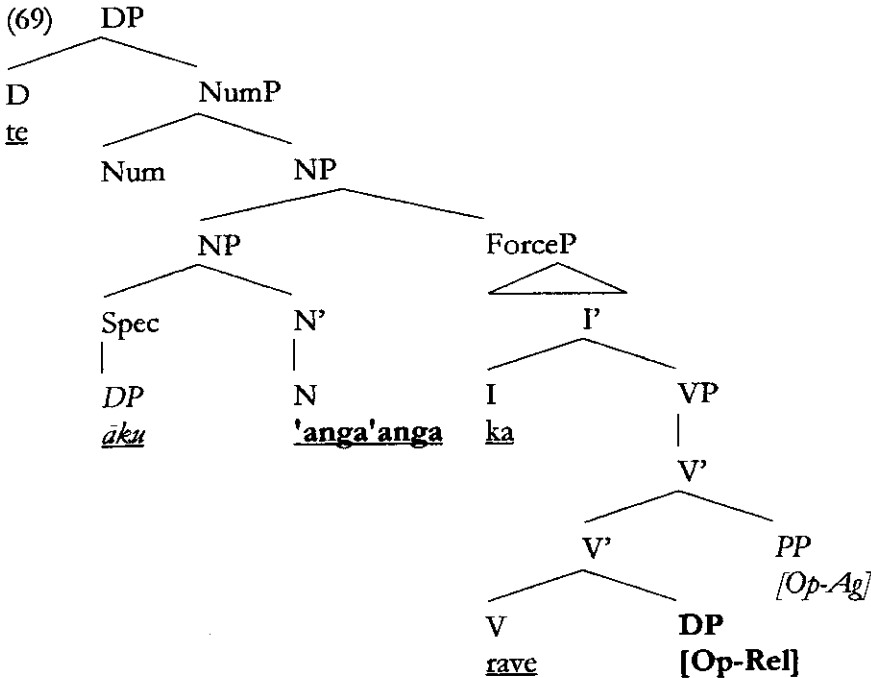
movement in (69); I nonetheless represent the anaphoric chain between the agent and [Op-Ag] in italics; and that between the relative noun and [Op-Rel] in boldface.

- (67) Kua rave mai 'a Pāpā Avito i te pakete māunu
 TAM take dir pers Papa Avito acc det bucket bait
 'eke-rere mei roto i te kāparāta-anu
 squid prep in acc det cupboard-cold
 "Papa Avito took the bucket of squid bait out from inside the fridge"
 {EDU9}

Possessive Relatives: Non-te relatives:

- (68) 'E ma'ata tāku 'anga'anga [_{RC}kā rave i tēia rā]
 det big det.A.Isg work TAM do prep det.proxI day
 "I have a lot of work to do today" (lit: it's big my work [that I am] going to do
 today) {EDU1}

D-Structure:



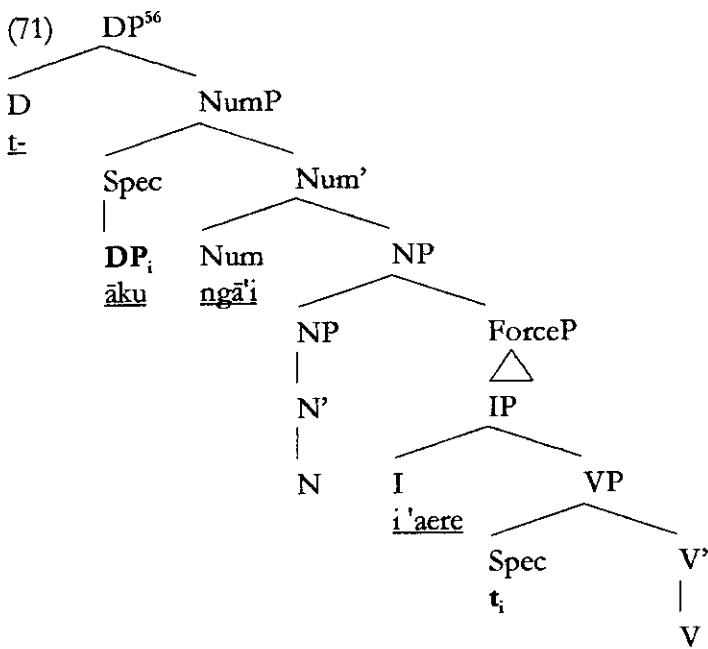
This structure makes two assumptions that require further examination. In section 6.1 I argue that the agent *āku* in (69) cannot raise from a D-Structure location within ForceP to SpecNumP for case licensing. In section 6.2, I discuss why the agent is resumed by an adjunct rather than an argument operator.

6.1 Against Raising out of ForceP

A reasonably straightforward account of the possessive relatives could run as follows. The agent is base generated in SpecVP of the relative clause where it is assigned the agent thematic role. It is assigned a genitive case feature, so that the theme argument may receive the nominative. However there is no head within ForceP which can license the agent's genitive case, hence the agent raises to SpecNumP where the genitive case feature can be checked. This seemingly simple account in fact raises some difficult problems. I consider these in this section and in section 6.2, and show that this account cannot be sustained.

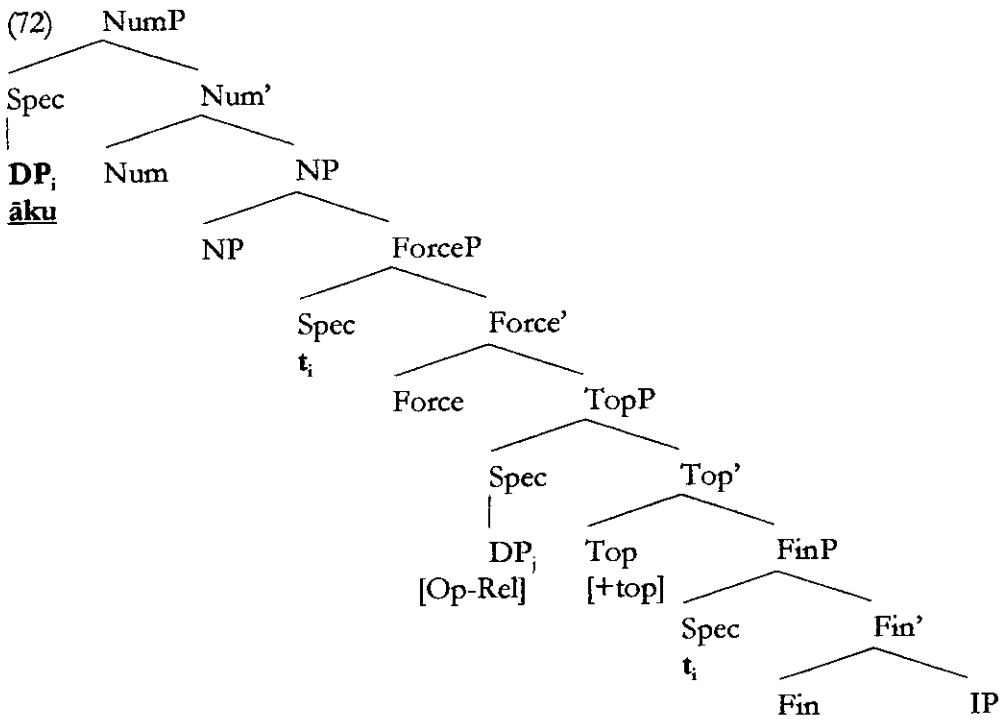
Massam (1995) argues that argument raising structures in Niuean cannot be treated as syntactic movement from a thematic position in an embedded clause to the argument position of a matrix clause. She rejects this on several counts. An argument which moves directly (without landing in an intermediate position) from a D-Structure location in an embedded clause to its S-Structure location in the matrix clause, leaves a trace in its D-Structure position in the embedded clause. Traces must be bound within their governing category, under Principle A of the Binding Theory (an anaphor must be bound in its governing category). The governing category is the embedded clause. The raised argument itself is the only possible antecedent for the trace. However the raised argument is not located within the embedded clause, rather within the matrix clause. Consider the possessive relative clause below. The agent in (71) is base-generated in SpecVP of the relative clause and raises directly to SpecNumP. The trace in SpecVP is not bound within the relative clause's binding domain, ForceP.

- (70) I tōku manako, 'e mamao tāku ngā'i [RC i 'aere]
 prep det.O.Isg thought det far det.A.Isg place TAM go
 "In my opinion, it was a long way to the place where I had to go" (lit: it's far my
 place [where I] went) {EDU18}



The binding theory violation can be corrected according to Massam, by raising the argument via an A-bar specifier (e.g. SpecForceP). The intermediate trace in the A-bar specifier binds the trace in SpecVP within its governing category. While this salvages the binding violation, the trace left in an intermediate position in (72) cannot be properly governed under the Empty Category Principle (Rizzi (1990)). In Rizzi's (1997) analysis of the CP-system, there are several available specifiers for the intermediate trace of the agent's movement. In section 5, I argue that non-*t_e* relative clauses project a relative operator [Op-Rel] which raises to SpecTopP at S-Structure. In (72) below, traces of the *agent's* movement are located in SpecForceP and SpecFinP. In actual fact, the nature of the functional head via which the agent raises is irrelevant. We will see that ForceP is a barrier to external government, and hence prevents the intermediate trace from being licensed under the Empty Category Principle.

⁵⁶ I have omitted the relative operator [Op-Rel] and its traces from this tree.



According to the ECP, the traces in SpecForceP and SpecFinP must be antecedent governed by the raised agent. The relative clause is an adjunct in the relative noun's NP, hence it is not theta-marked by the relative noun. This makes it a blocking category for external government from the relative noun's DP, thus it constitutes a barrier to external government. Therefore the trace in SpecForceP and SpecFinP are not properly governed under the ECP:

THE EMPTY CATEGORY PRINCIPLE:

A nonpronominal empty category must be

- (i) properly head-governed (Formal Licensing)
- (ii) antecedent-governed or Theta-governed (Identification)

ANTECEDENT GOVERNMENT: {RIZZI (1990:25)}

X W-antecedent governs Y (W = {A, A', X⁰}) iff

- (i) a. X is in a W-position
- b. X c-commands Y
- (ii) X and Y are coindexed
- (iii) a. no barrier intervenes
- b. Relativized Minimality is respected

The presence of the operator [Op-Rel] in SpecTopP provides a further problem for the licensing of the agent's traces. As an A-bar operator, [Op-Rel] qualifies as a potential antecedent governor for the agent's trace in SpecFinP. According to Relativized Minimality, [Op-Rel] blocks actual antecedent government. Even if there is no trace in

SpecFinP, it will prevent the trace in SpecForceP from antecedent government of the trace in SpecVP.⁵⁷

Massam also points out that raised arguments do not share the properties of other types of movement to SpecCP (or more generally, an A-bar specifier in Rizzi's (1997) articulated CP). For example, raising is bounded in that a raised argument can only move from the embedded to matrix clause, but not any higher. On the other hand Wh-movement, relativization, and topicalization, which also raise to A-bar specifiers, are unbounded. The possessive relative agent's movement is restricted not by the nature of the moved element, but rather by the nature of the relative clause construction. The possessive relative agent cannot move higher than the relative noun's DP. However canonical possessors (in DPs without a relative clause) are also unable to extract out of the possessed noun's DP. Thus the possessive relative agent is only able to raise as far as SpecNumP, but this is the result of a more general syntactic restriction. Namely, that possessors cannot raise out of *any* DP.

Thus raising out of ForceP presents problems either for binding theory, or for the proper government of traces. In the following section, I show that such raising exhibits some rather more fundamental problems for case-marking.

6.2 Case- and Theta-marking within Possessive Relative Clauses

The account that I propose for possessive relatives locates the agent in the relative noun's NP at S-Structure. The agent is co-indexed with a null operator within the relative clause. In this section, I discuss the reasons for assigning the null operator to an adjunct function. This has implications for both case-marking and for the assignment of thematic roles within the relative clause.

The Theta Criterion and Projection Principle work together to ensure that the arguments of a verb are projected within its clause and that the verb assigns a unique thematic role to each argument. Arguments are projected into a position where an appropriate thematic role can be assigned to them. The agent role is assigned to SpecVP, and the

⁵⁷ As I have only considered a subset of the possible clause-types to which the ECP applies, it may be the case that a more thorough study of ECP effects in CI Maori would shed light on the problems raised by this structure.

theme role is assigned to the complement of V. In CI Maori, the argument with the highest thematic role receives the nominative case. Thus the agent of a transitive verb is canonically licensed for nominative case. In an unaccusative verb, the absence of an agent means that the theme is the highest thematic role, and it receives nominative case. In passive clauses, the agent of a transitive verb is present, but does not receive the nominative case. Pearce (1998a) argues that in NZ Maori passive clauses, the presence of passive morphology provides an overt licensing head for the agent's *'e* agentive marker. Thus while the passive agent is located in SpecVP for assignment of the agent thematic role, the passive morphology provides the agent's case checking head. The theme is then the highest thematic role and thus receives the nominative case.

Massam (1995) argues against base-generation of raised arguments in their thematic position, because they receive two cases. This violates Case theory, which requires that an argument only receive one case. If an argument raises from a D-Structure position within an embedded clause to an S-Structure location in the matrix clause, it leaves a trace within the embedded clause. The trace is assigned case by the embedded clause predicate at S-Structure. (73) illustrates a CI Maori raising structure. Here the theme argument of *'inangaro* 'want' is the entire clause 'you to ask for my head'. However, the second person singular agent of *pati* 'ask for' is generated not as the nominative case argument of its own clause, but as the accusative argument of *'inangaro* 'want'. (74) shows that a clausal complement introduced by *kia* can license nominative case. (74) differs from (73) in that the nominative case subject is a theme rather than an agent, however nominative case is not sensitive to thematic role.

(73) ka 'inangaro au i ā koe [kia pati i tōku
 TAM want Isg acc pers IIsg TAM ask for acc det.O.Isg
 mīmiti]
 head
 "I want you to ask for my head" {EDU1}

(74) Kāre 'oki te tūpāpaku e 'inangaro [kia mā'ū rātou]
 Neg adv det ghost TAM want TAM get wet IIIpl
 "The ghost doesn't want us to get wet (lit: the ghost doesn't want that we get
 wet)" {EDU22}

In the subordinate clause, the theme of *pati* receives accusative case. If we assume that accusative case cannot be licensed without the concurrent licensing of nominative,⁵⁸ the theme's accusative case in (73) indicates that nominative case is also licensed on some phonetically null element. An argument which moves from one syntactic position to another leaves a trace in its original position, and this trace is visible for case licensing. If the agent of *pati* in (73) moves from the embedded clause (introduced by *kia*) to the matrix clause, its trace is eligible for nominative case-licensing. The agent itself appears with overt accusative case in the matrix clause. This creates a situation where the agent's trace is licensed for nominative in the subordinate clause (allowing the theme to receive accusative), while the agent itself is licensed for accusative in the matrix clause. This forms a chain between two case-marked positions, and thus violates Case theory, which disallows two cases to be licensed on a single argument. The grammaticality of (73) suggests that there is some other null element in the embedded clause's agent position which is licensed for nominative case. Pearce and Waite (1997) argue that a (little) *pro* is projected in the subordinate clause's agent position. This *pro* is co-indexed with *ko* in (73), and receives the nominative case.

I argue in section 4 that the theme argument in possessive relatives receives the nominative case. We cannot directly verify this statement, because there is no main clause equivalent of possessive relatives. However by positing this, subcategorized theme and agent arguments are uniformly relativized on as nominative case-marked arguments. Therefore the theme in a possessive relative is nominative case-marked argument, and the possessive relative agent receives genitive case in the matrix DP. If the theme receives nominative case within the relative clause, it must be the highest thematic role within the relative clause. Even though the agent of the possessive relative clause is syntactically a DP possessor, it is still *thematically* an argument of the relative clause verb. The overt possessive agent must be resumed by a null element which is assigned the agent theta role within the relative clause. The fact that the theme argument receives the nominative case suggests that the element which resumes the agent is somehow not eligible for the nominative case. This is then a different situation from that of the raising structure in (73), because in that case the theme was licensed for accusative case. I argue

⁵⁸ This appears to be a correct assumption, as accusative case is allocated to themes in transitive clauses, while themes in unaccusative constructions receive nominative case. Thus accusative case is not an inherent case of theme arguments.

there that the agent of the embedded clause is syntactically represented by *pro*, and it is *pro* that receives the nominative case.

The raising clause in (73) is a clausal argument of the matrix verb and thus differs from a possessive relative clause, which is an adjunct of the relative noun. However it is not the case that the relative clause structure prevents nominative case-licensing on an agent of the relative clause verb. In (75), *te tangata* ‘the man’ is an nominative case-marked agent of the relative clause. Furthermore, if we assume that the accusative case cannot be licensed without concurrent licensing of the nominative case, then the covert agent (the relative [Op-Rel]) must be licensed for nominative in (75) in order for the theme argument to receive accusative.

(75) I *te taimē kātoatoa* [RC i *rutu atu eī te tangata i*
 prep det time all TAM hit dir part det man acc
te puakaaoa,] kua auē te au tamariki
 det dog TAM cry det num children
 “Every time that the man hit the dog, the children cried”

(76) *Kua kite atu au i te tangata* [RC i *rutu atu i*
 TAM see dir 1sg acc det man TAM hit dir acc
te puakaaoa]
 det dog
 “I saw the man who hit the dog”

The fundamental problem for possessive relatives is that the theme argument must be licensed with nominative case, so the null agentive element in the relative clause cannot receive nominative. There are thus two options. Either we posit that the null agent is still an argument of the relative clause, and receives some case other than nominative, or we posit that the null agent is demoted from an argument role, leaving the theme as the highest thematic argument.

If the null agent is assigned some case other than the nominative, what case is it assigned? A scenario where the agent argument of a active transitive verb receives some case *other* than the nominative, may potentially be an instance of ergative case-marking. Pearce (1998b) points out that the case-marking pattern in the AE in NZ Maori closely

resembles an ergative clause. Here the agent is overtly case-marked, the verb is active and cannot be passivized, and the theme receives the unmarked nominative case (77).⁵⁹

NZ Maori:

- (77) Nā Māui i herehere te rā
 belong Maui TAM tie the sun
 "It was Maui who tied up the sun" {Bauer (1997: ex4325)}

Given that CI Maori also has an AE construction, we may explore the possibility that the possessive relatives exhibit ergative case-marking. We have already seen that the AE has a nominative case-marked theme, while the agent is marked with the preposition *nā*. An ergative clause requires structural licensing of an agentive case, however AE clauses differ in the presence of a preposition which may have some role in licensing the genitive case. I suggest that it is the preposition *n-* in the AE that assigns genitive case to the agent. This is supported by evidence that the preposition *n-* assigns either *a* or *o* genitive case to its complement in other structures. The examples below show adjunct PPs introduced with *n-*.

- (78) tē⁶⁰ tui nei au i tēia piripou nō Tau
 TAM sew proxI Isg acc det.proxI trousers prep.O Tau
 "I'm making these trousers for Tau (to wear)"
 {Buse and Taringa (1996:272)}

- (79) tē kana nei au i te 'akari nā te moa
 TAM grate proxI Isg acc det coconut prep.A det fowl
 "I'm grating up the coconut for the chickens"
 {ibid.:263}

A further complication is provided by the existence of two case-marking patterns in CI Maori AE clause. In some AE clauses, the theme is licensed with the nominative case (80). However the AE theme argument is more commonly marked with the *i* accusative marker (81). Harlow (1986) analyzes the case-marking configuration in (80) as the Proto-East Polynesian (PEP) pattern (the construction itself is only productive in East Polynesian languages). Thus in PEP, the theme argument is assigned nominative case. It appears that while the older case-marking pattern still exists in CI Maori, the grammar is

⁵⁹ Pearce's comment relates specifically to the analysis of Chung (1978), where it is argued that the accusative case-marking system of Proto-Polynesian has been reanalyzed to an ergative system in some Polynesian languages. This, Chung argues, arose through a reanalysis of passive clauses, with a marked agent and nominative theme, to active clauses. A grammar becomes ergative when passive morphology is no longer required to license the agentive case.

reanalyzing the AE structure, at least in main clauses, to maintain the usual *accusative* case-marking for the theme of a transitive verb.⁶¹

(80) **Nā Tioni i 'aka'oro te motokā**
 prep.A Tioni TAM drive det car
 "It was *Tioni* who drove the car"

(81) **Nā Papa Tere e akatika i tō mātou poti**
 prep.A Papa Tere TAM sail acc det.O 1ex.pl boat
 "It is *Papa Tere* who sails our boat" {EDU5}

I suggest that then the AE agent's genitive case is not ergative in the sense of a structural ergative case. Instead the preposition *n-* licenses the agentive genitive case. I conclude from this that positing an ergative case-marking system for the possessive relatives is problematic in that there is little evidence of a structural ergative case elsewhere in the grammar. Even the AE construction, which could be treated as ergative (e.g. Pearce (1998b) for NZ Maori), has undergone diachronic changes in case-marking to make it less ergative in appearance.

The other option is to assume that the null agent in possessive relative clauses is demoted from being an argument of the relative clause verb. This enables the theme to receive nominative case as the highest thematic role. However, this raises a problem for assignment of the agent thematic role. The agentive theta role is usually assigned to SpecVP, however a constituent in SpecVP is an argument of the verb. I propose that possessive relative clauses assign the agent role to an operator via a (null) adjunct preposition.⁶²

The postulation of an adjunct operator which is assigned the agent theta role may seem somewhat *ad hoc*. However, there is evidence to support it from possessive relatives in

⁶⁰ The use of *te* as a tense/aspect marker here should not be confused with *te* as a determiner. Waite (1989:80-82) discusses the NZ Maori cognate of the tense marker *te*, and presents evidence from various Polynesian languages that it is a separate morpheme.

⁶¹ Harlow (1986:300) comments that with the exception of Marquesan and NZ Maori, all other East Polynesian languages mark the theme with the accusative marker. It is worth noting in this regard that the East Polynesian languages are characterized by an accusative case system, while the Tongic and Samoic-Outlier subgroups are ergative.

⁶² Thus nominative case-marking on the theme appears to take priority over the usual assignment of the agentive role to SpecVP. This is the optimal solution for the grammar because it is the nominative case-marked theme that allows the relative clause to be grammatical. Furthermore the grammar indicates the peculiar agentive Theta-marking by overtly marking the agent within the DP with the *agentive* genitive

NZ Maori and Hawaiian. In this chapter, we have seen that relative clauses formed on an adjunct phrase contain the anaphoric particle *ei*. In CI Maori, possessive relatives do not usually have *ei* (at least in the corpus and in elicitation, although my consultant did not rule it out). However, the examples below from NZ Maori and Hawaiian show that in these languages the cognate of *ei* does emerge (see also (59), (61)).

NZ Maori:

- (82) Ka mōhio ahau ki t.*ā* Hone tangata [_{RC}i kōhuru ai]
 TAM know Isg to the.of John man TAM murder part
 "I knew the man that John murdered" {ibid. ex. 3716g}

Hawaiian:

- (83) *kāna* mea'ai Pukikī [_{RC}i kuke ai]
 his food Portuguese TAM cook part
 "the Portuguese food that he cooked"
 {ibid. ex 31a; original source: Hopkins (1992:233)}

Bauer (1982:314) notes for NZ Maori that anaphoric *ai* occurs obligatorily in possessive relatives,⁶³ but occurs only occasionally with SRCs. Although Bauer finds problematic an account of the exact distribution of *ai* in NZ Maori, the presence of *ai* in NZ Maori and Hawaiian indicates that the agent operator is treated as an adjunct within the possessive relative clause. Of course, its absence in CI Maori may imply that it is *not* treated as an adjunct in this language. However, given that I have little other evidence of the agent's status within the relative clause, I suggest that the cross-linguistic data provides an indication that the agent may not be an argument of the possessive relative clause. Certainly, a unified analysis of possessive relative clauses for all three languages would be desirable. Perhaps the agent is an adjunct phrase in all three languages, however *ei* in CI Maori has a particular constraint on the thematic roles to which it can refer. CI Maori *ei* perhaps cannot take an adjunct *agent* as an antecedent, while NZ Maori and Hawaiian *ai* can.

I propose then that the agent thematic role is assigned to an adjunct phrase which contains a phonetically null operator. I suggest that the nature of this operator is similar to those involved in 'easy to please' clauses. The analysis proposed for 'easy to please' constructions (initially by Chomsky (1977), and updated in subsequent work) is

allomorph. This argument could receive a satisfactory account within Optimality Theory, by positing various constraint, and ranking the nominative-case constraint above the thematic role constraint.

demonstrated in (84). John is base generated in the clause headed by easy, while the embedded clause contains an operator and a trace bound by the operator. The operator is co-indexed with John, thus forming a chain between the surface location of John and its thematic position.

(84) **John_i** is easy [**Op_i** to please **t_i**]

Cinque (1990:98) assumes the principle of Chomsky's analysis to be correct, in that the 'easy to please' constructions involve an operator.⁶⁴ However, like Lasnik and Stowell (1991) (see section 5), he argues that the operator in 'easy to please' constructions is non-quantificational.⁶⁵ This follows from the definition of non-quantificational operators as those which anaphorically bind an antecedent in a matrix clause to an thematic position in a subordinate clause. In the case of possessive relatives, there is no implication of a set of potential agents represented by the agent operator. Rather the operator binds the agent to its role in the relative clause.

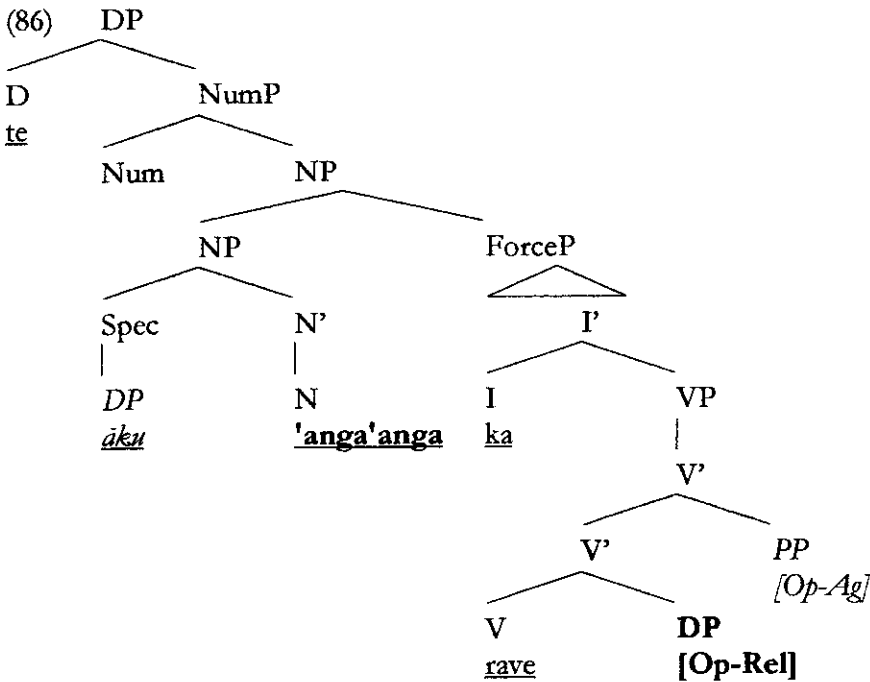
(86) below shows the proposed D-Structure of a non-te possessive relative clause (repeated from (69)). The agent āku is base generated in SpecNP, and is co-indexed with a null operator [Op-Ag] adjoined to V' within the relative clause. The relative operator [Op-Rel] is in its D-Structure position as complement to V of the relative clause, and is assigned the theme role. The co-indexation between the agent in SpecNP and [Op-Ag] is indicated by italics, and that between the relative noun and the relative operator by bold face.

⁶³ Ai can be replaced by a deictic particle in some instances. Bauer (1982) notes several problems in the choice between ai and the deictic particles. The important point for this discussion is that an anaphoric particle occurs: its form is to some extent irrelevant for this discussion.

⁶⁴ Cinque (1990) uses the term "complement object deletion" for 'easy to please' clauses. I will not use this term, as the possessive relative structures are not instances of object deletion, rather agent deletion.

⁶⁵ Cinque (1990) and Lasnik and Stowell (1991) disagree on some aspects of their account of operators, especially with respect to the type of empty category that the operator binds. Cinque argues that the non-quantificational operator binds a *pro*, while Lasnik and Stowell argue it binds a null epithet (see section 5). I have no particular arguments to bear on the type of category that the trace binds. I follow Lasnik and Stowell largely because in their account topicalizations, 'easy to please' clauses, and non-restrictive relative clauses are treated as a syntactically unified phenomenon. In section 5, I point out how the non-restrictive non-te relatives and topicalizations share syntactic features.

- (85) 'E ma'ata tāku 'anga'anga [_{RC}kā rave i tēia rā]
 det big rel.A.1sg work TAM do prep det.proxI day
 "I have a lot of work to do today" (lit: it's big my work [that I am] going to do today)

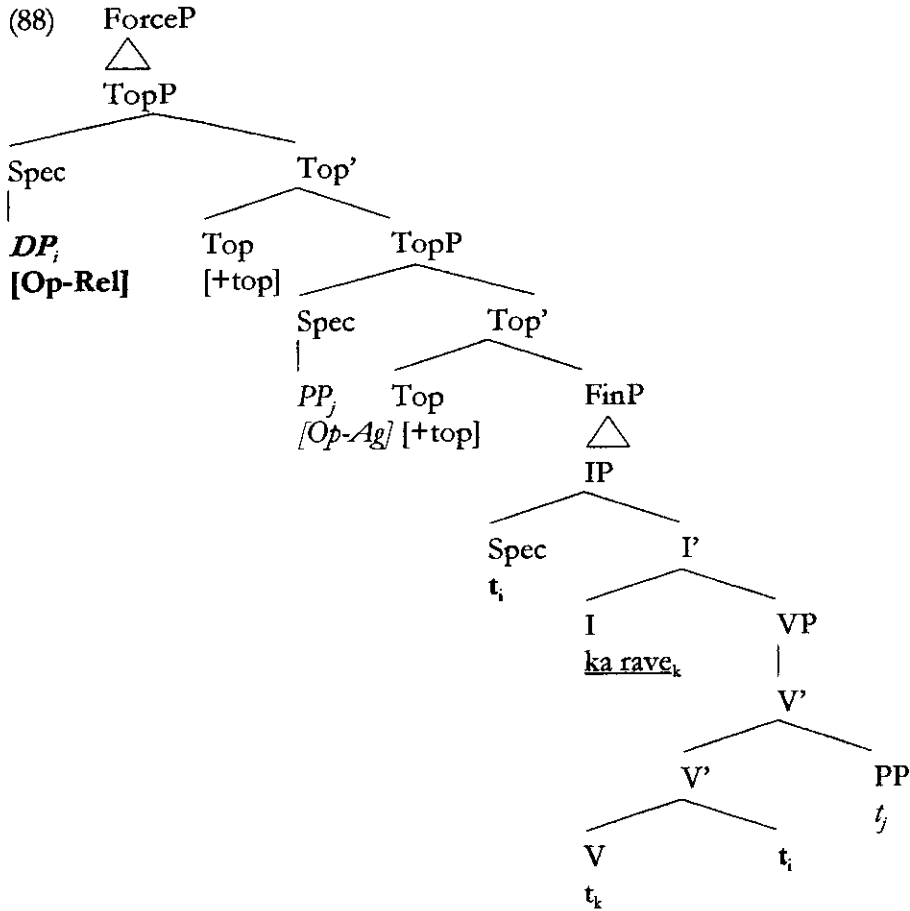


In (86), there are two operators: the agent operator and the theme relative operator. As both operators must raise to a scopal position within the syntax, there must be two A-bar specifiers. In section 5, I propose that the relative operator [Op-Rel] raises to SpecTopP. Lasnik and Stowell (1991), and Cinque (1990) both identify the operator in 'easy to please' constructions, which I have adopted for the possessive relative agent, to be non-quantificational similar to the operators of non-restrictive and topicalized elements. Rizzi (1997) proposes that the non-quantificational operator in these constructions raises to the specifier of Topic Phrase. This means that both [Op-Rel] and [Op-Ag] must be licensed at SpecTopP. Rizzi specifically allows iteration of TopP (p.297). He argues that a clause may have as many Topic phrases as are required for its arguments and adjuncts. (87) illustrates this for Italian. There are two topicalized phrases, as well as a focalized phrase:

- (87) Credo che domani, a Gianni, QUESTO gli dovremmo dire
 C Top Top Foc IP
 "I believe that tomorrow, to Gianni, THIS, we should say"
 {Rizzi (1997: ex37c)}

(88) below provides two TopPs for the two operators present in the structure.⁶⁶ The relative operator [Op-Rel] raises from its base position (as complement to V) to the specifier of the highest TopP. I assume that the relative operator's TopP is higher than that of the agent, because the clause is primarily a relative clause, rather than an 'easy to please' type clause. [Op-Rel] raises via the specifier of IP, the nominative case checking location. [Op-Ag] also raises to SpecTopP.

S-Structure:



This section argues that the agent in a possessive relative clause is base-generated within the relative noun's NP. It raises to SpecNumP where is licensed for the a-genitive allomorph, as it is a thematic agent. It is co-indexed with a non-quantificational operator within the relative clause. This agent operator is demoted to an adjunct phrase, so that the theme can be relativized on as a nominative case-marked argument.

⁶⁶ A potential problem with this structure is whether two topicalized phrases are licensed elsewhere in the grammar of CI Maori. In chapter five, I show that topic and focus can co-occur, however I suspect that two topicalized phrases are *not* licensed. This adds another aspect of uncertainty to the proposal developed here, and is certainly an issue that requires further research.

7. Conclusion

In this chapter it is shown that the non-te relative clauses, as non-restrictive relative clauses, project a non-quantificational operator which is co-indexed with the relative noun. Relative clauses formed on subcategorized arguments have in common a constraint that the relative operator must be nominative case-marked. This restriction also applies to arguments topicalized with ko.

Lasnik and Stowell (1991) and Cinque (1990) state that non-quantificational operators are involved in the formation of non-restrictive relative clauses and topicalized clauses. Rizzi (1997) argues that non-quantificational operators raise to SpecTopP in the syntax. Thus, the restriction that topicalized DPs and subcategorized relative operators must be nominative case-marked can be reduced to a more general syntactic restriction. Movement of an argument to SpecTopP must take place via SpecIP for nominative case-checking.

I also consider the structure of possessive relative clauses. It is shown that the agent is located within the relative noun's NP at D-Structure. It is co-indexed with an operator in the relative clause, but the precise status of this operator is somewhat unclear. I suggest that it is located in an adjunct PP, so that the theme is the sole argument of the relative clause, and thus receives nominative case. This receives some support from the cognate construction in Hawaiian and NZ Maori. In these languages, the agent is resumed within the relative clause by ai, which usually refers to missing adjunct phrases.

In the following chapter, I consider some analyses for te-relative clauses. The focus of the discussion is the category and function of the relative clause initial te.

Chapter Four: Considering Te-Relative Clauses

In the previous chapter, I introduce relative clauses in CI Maori, and consider especially the syntactic structure of non-te relative clauses. I propose that the relative noun is resumed in the relative clause by a null operator, which raises to the specifier of TopicP in the syntax. The agent of possessive relative clauses is base generated in the specifier of the relative noun's NP. It is co-indexed with an operator which is assigned the agent thematic role within the VP of the relative clause.

In this chapter, I consider the question of how to represent te-relative clauses. I propose that these relatives consist of a headless relative clause in apposition to the relative noun. The appositional analysis has the advantage of utilizing structures which are independently required in the language. There is already an active process of apposition, which I argue is syntactically represented by an equative relative clause. Headless relative clauses introduced by te are also independently evidenced. Furthermore, the appearance of genitive case on the agent in te-relative clauses is explained by mechanisms which are independently required to account for the agent of non-te possessive relative clauses.

The chapter is divided as follows. In section 1, I consider the headless relative clause construction, and show that these constituents are maximally DPs. They conform to the syntax and semantics of other DPs which lack a lexical head. Appositive DPs are considered in section 2. I argue that these are actually equative relative clauses which are introduced by a marker ko. In section 3, I discuss how headless relative clauses and equative relative clauses together provide the necessary mechanisms to account for the syntax and semantics of te-relative clauses. I explore other options for te in te-relatives in section 4. I consider two alternatives: treating te as an operator or as a complementizer. Section 5 evaluates the competing accounts proposed in sections 3 and 4, and shows that the equative relative clause analysis for te provides the most economical explanation for the syntax and semantics of te-relative clauses.

1. *Headless Relative Clauses*

In chapter three (section 1), it is shown that te-relative clauses differ from non-te relatives in that they confer a restrictive reading on the relative noun. The reference of the relative noun is restricted by the proposition expressed in the te-relative clause. The examples below illustrate an SRC and possessive relative using the te-relative strategy.

Te-relative SRC:⁶⁷

- (1) Kua 'aere mai 'aia i roto i te urupū-tangata
 TAM go dir pers.IIIsg prep in acc det group-people
 [_{RC} tei āru i muri i ā Ietu]
 det.TAM follow prep after acc pers Jesus
 "He went into the crowd that followed after Jesus" {Mark 5:27}

Te-relative possessive relative:

- (2) E 'akamanako meitaki i te au tuatua [_{RC} tā kōtou e
 TAM think well acc det num word det.A IIpl TAM
 'akarongo]!
 hear
 "Think carefully about the words that you hear" {Mark 4:24}

In this chapter, I consider the structure of te-relative clauses. There are two constructions in CI Maori which have direct relevance on my proposal. In this section and section 2, I examine these with the intention of showing that the DP analysis for te-relative clauses utilizes constructions that are required elsewhere in the grammar. The first structure examined here, is the so-called "headless relative clause"; in section 2, I examine appositional phrases introduced with the marker ko.

The examples in (3), (4) and (5) below illustrate headless relative clauses, which are identical in surface word order to te-relatives. These headless relatives are inherently anaphoric because there is no head noun to establish a referent. However, the relative clause provides a referent: the whole headless DP refers to the nominative case marked argument of the relative clause, which is syntactically represented as the null relative operator.

Headless SRC:

- (3) Kua papu meitaki i taua va'ine ra i [tei tupu
 TAM clear well prep det woman dist prep det.TAM happen
 ki a ia,]
 prep acc IIIsg
 "It was very clear to the woman what had happened to her" {Mark 5:33}

⁶⁷ Anticipating the conclusions of section 3, I gloss the initial te in te-relative clauses as "det" (determiner).

- (4) Ki [te ka tatau:]
 prep det TAM read
 "To the one who will read: ..." (i.e. "to the reader") {Intro to Mark}

Headless possessive relative:

- (5) I tēia nei, 'ākara mai koe i [tāku ka rave]
 prep det.proxI proxI look adv IIsg acc det.A.Isg TAM do
 "Now, you watch what I am going to do" (lit: you watch the my [thing] that [I'm]
 will do) {EDU4}

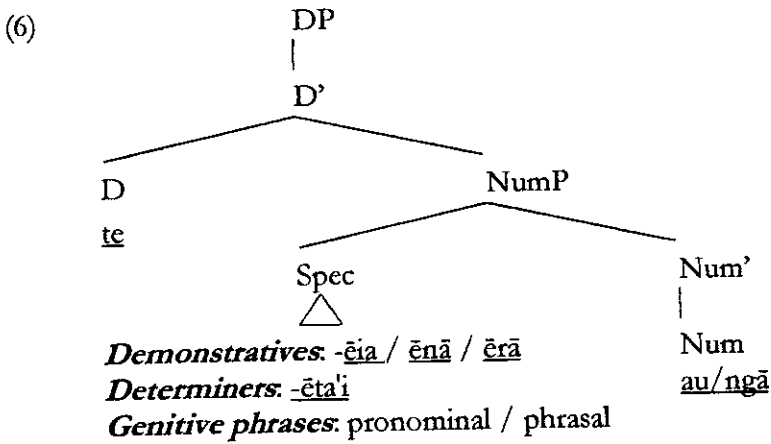
These headless relative clauses are maximally DPs, and are headed by the determiner te. They occur in syntactic environments where only DPs are permitted. For example, the preposition ki in (4) may take a DP complement, but cannot take a clausal complement. The clausal component of these DPs (that is, the tensed verb, its arguments and adjuncts) is formed using the non-te relative clause construction. The initial te in headless relatives is the DP determiner, but the relative clause initial te of te-relatives is lacking (see Table 1).

TABLE (1): N = RELATIVE NOUN; GEN = A-GENITIVE CASE ALLOMORPH; Ø = NO LEXICAL HEAD

	SRC	POSSESSIVE RELATIVES
NON-TE RELATIVE	te N [TAM V ...]	t-gen agent N [TAM V ...]
HEADLESS RELATIVE	te Ø [TAM V ...]	t-gen agent Ø [TAM V ...]
TE-RELATIVE	te N [te [TAM V ...]]	te N [t-gen agent [TAM V ...]]

These headless relative clauses are maximally DPs, but the complement of D lacks a lexical head. DPs whose complement lacks a lexical head are attested elsewhere in the grammar, and they are subject to a semantic constraint which directly dictates their syntactic structure. In the following paragraphs I consider both of these issues.

The grammaticality of DPs whose complement lacks a lexical head depends on the nature of the functional morphemes present in the DP. Consider again the DP structure proposed in chapter two. I argue there that the D node of a nominal phrase is occupied by te, while NumP holds other determining morphemes. (6) illustrates the morphemes and their distribution.



The examples below show that te is not permitted to occur alone in the DP (7), while the morphemes of SpecNumP can determine an empty head noun (8) - (11). In no instance are the number markers allowed with an empty head noun, regardless of the determining morpheme (12), compare with (8).

(7) *'e mānea **te**
det pretty det
“The (one) is pretty”

(8) 'e mānea **tēta'i**
“Some(thing)/some(one) is pretty”

(9) 'e mānea **tēia/tēna/tērā**
“This (one)/that (one)/ that (one) is pretty

(10) 'e mānea **tāku/tā korua / tā rātou**⁶⁸
“My (one)/your (one) (dual)/ their (one) (plural) is pretty”

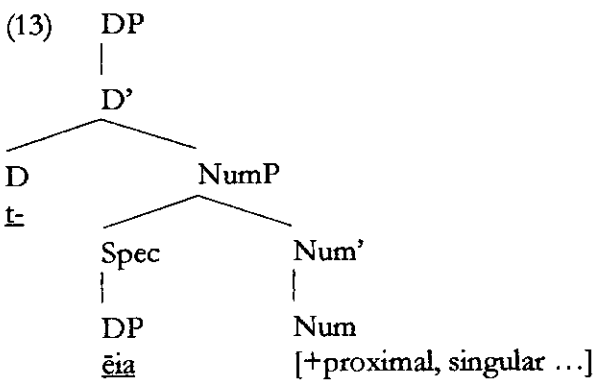
(11) 'e mānea **tā te tamaiti**
det pretty det.A det child
“The child's (one) is pretty”

(12) *'e mānea **te au/ te ngā/ tēta'i au**
det pretty det num/ det num det num
“The (one)s are pretty/the two (one)s are pretty/some (one)s are pretty”

The DPs illustrated above are anaphoric as they must seek their referent in the discourse. In chapter two, I propose that D enables an NP to act as an argument by making it referential, while deictic and anaphoric morphemes are located in SpecNumP. Te, as a D head, is required in order for the entire DP to be an argument and to refer to some entity, albeit by anaphora. The grammatical examples (8) - (11) also contain a SpecNumP

⁶⁸ The \varnothing -genitive allomorphs are equally permissible in this clause type, and in the type illustrated in (11).

morpheme, while the ungrammatical example in (7) does not. Semantically, headless DPs must locate their antecedent, hence they must have an overt anaphoric/deictic element. This forces the inclusion of a SpecNumP morpheme, and explains why only those DPs with both t̄ and a SpecNumP morpheme are grammatical. It has been proposed (e.g. Abney (1987), Ritter (1995)) that anaphoric elements project only functional (not lexical) projections. For example, Ritter (1995) argues that Modern Hebrew third person pronouns consist of projections of D and Num, while they lack a lexical projection (e.g. NP). I assume then that headless DPs contain no lexical projections. They contain D, which enables them to act as an argument. They also contain NumP. The head of NumP contains anaphoric/deictic features, which agree with the features of the constituent in SpecNumP.⁶⁹ The tree below illustrates the structure of a DP containing the determiner t̄, and the speaker proximal deictic marker ēia. The head of Num is filled by the feature [+proximal] in agreement with ēia.



Returning now to headless relative clauses, we find t̄ occurring both with a SpecNumP morpheme (14), (15) and without (16). It appears that t̄ can stand alone when it introduces a relative clause. In (16), t̄ is immediately followed by the relative clause tense/aspect marker i.

(14) I tēia nei, 'ākara mai koe i [tāku ka rave]

⁶⁹ Some comment is required with respect to the ungrammaticality of the number markers in headless DPs. Number markers are projected to check the number feature of a lexical head, so the lack of a lexical head explains why they cannot be present: there is no lexical head's number feature to check. However, this leads one to question why NumP must be present in a headless DP, even though NumP's head cannot be phonetically filled by the number markers. Headless DPs however can express non-singular number. Bi-morphemic determiners, which occupy both D and SpecNumP, have a non-singular form. The initial t̄ of these determiners is omitted in the non-singular form, e.g. tēia 'this one' (sg)/ēia (non-sg); tāna 'his/her one' (sg)/āna (non-sg). While the non-singular form of these determiners is seldom used in lexically headed DPs, it is commonly used in headless DPs. These headless DPs must still have a number feature, and this number feature occupies the head of Num. The ungrammaticality of the number markers is due to their restriction to number checking of a *lexical* head.

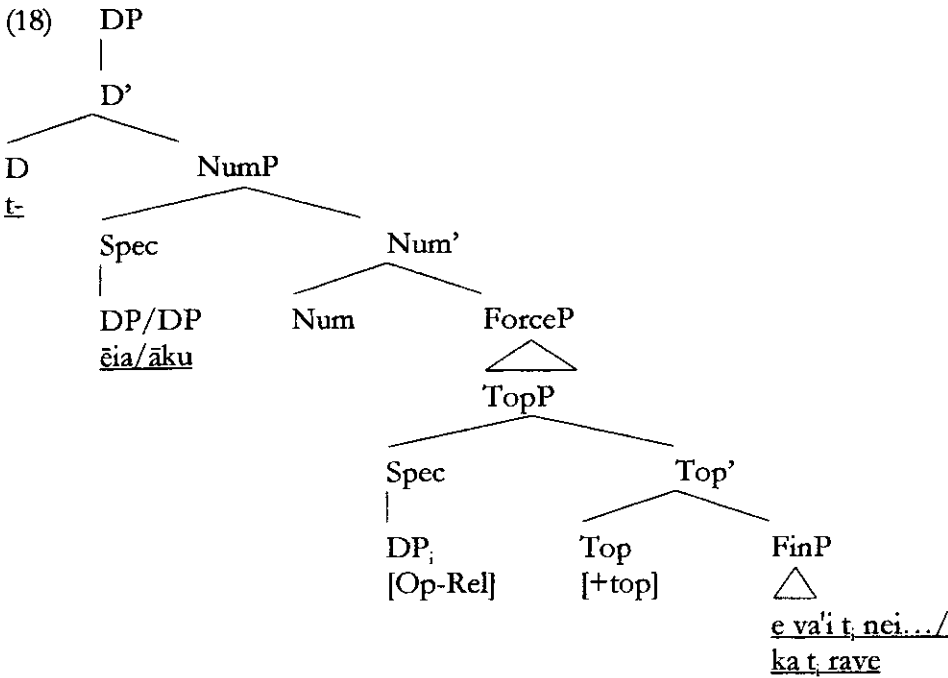
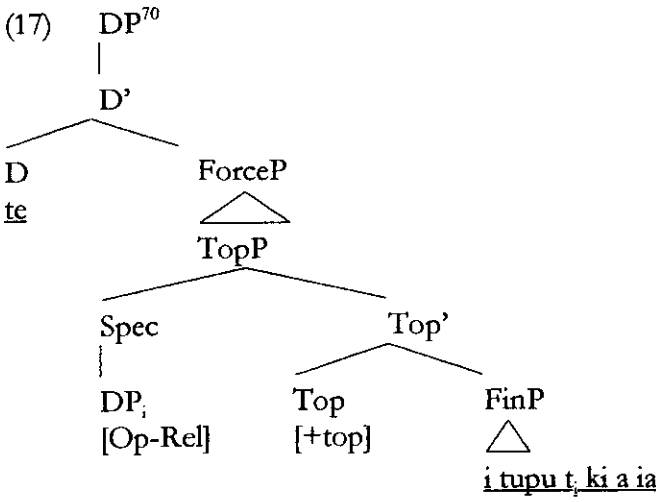
prep det.proxI proxI look adv IIsg acc det.A.Isg TAM do
 “Now, you watch what I am going to do” (lit: you watch the my [thing] that
 [I’m] going to do) {EDU4}

- (15) 'e toka 'ua rai [tēia e va'i nei i runga i
 det rock adv adv det.proxI TAM break proxI prep top acc
 tona kopu]
 det.O.IIIsg belly
 “This one which broke apart on top of his belly was a rock” {EDU7}

- (16) Kua pāpū meitaki i taua va'ine ra i [tei tupu
 TAM clear well prep det woman dist prep det.TAM happen
 ki a ia,]
 prep acc IIIsg
 “It was very clear to the woman what had happened to her” {Mark 5:33}

The semantic/syntactic constraint on empty-headed DPs dictates that there must be an anaphoric or deictic morpheme in order for a referent to be located. In (16) where te occurs with a relative clause only, it is the relative clause that provides the anaphoric morpheme. In chapter three, I propose that non-te relatives have a non-quantificational operator that raises to the specifier of a Topic Phrase. This operator is anaphoric in nature: it seeks a referent and binds this referent to its trace in the relative clause. Thus (16) satisfies the semantic constraint, because the relative clause operator provides the required anaphoric morpheme, although the anaphoric morpheme is phonetically null. Furthermore, te is required in order for the relative clause to act as the argument of the predicate. This follows from the identification in chapter two, of te as a complementizer-type function.

However, a question arises of how (16) should be represented syntactically. In the headless DP construction, te dominates an anaphoric morpheme in SpecNumP. One option for the syntactic representation of headless relative clauses is to treat the relative clause component as the direct complement of te (17) or of Num (18), in the case where a SpecNumP is present.



The structures in (17) and (18) satisfy the syntactic and semantic requirements, as te dominates the anaphoric operator in SpecTopP. However it assigns a different structural relationship between the relative clause and the matrix DP in headless relative clauses to that in headed relative clauses. In DPs with a lexical head and a modifying relative clause, the relative clause is an adjunct within the DP (see chapter three, section 1). However in (17) and (18), where a lexical head is not present, the relative clause is a complement of D or of Num. There is no interpretative reason for assigning such a different structure to these two types of clauses. The relative clause stands in the same modifying relationship to the entity referred to by the DP, whether that entity is directly referred to (in a lexically headed DP) or anaphorically located (in a headless DP). The alternative is to consistently

⁷⁰ This is essentially the structure that Kayne (1994) proposes for all relative clauses (headed or headless).

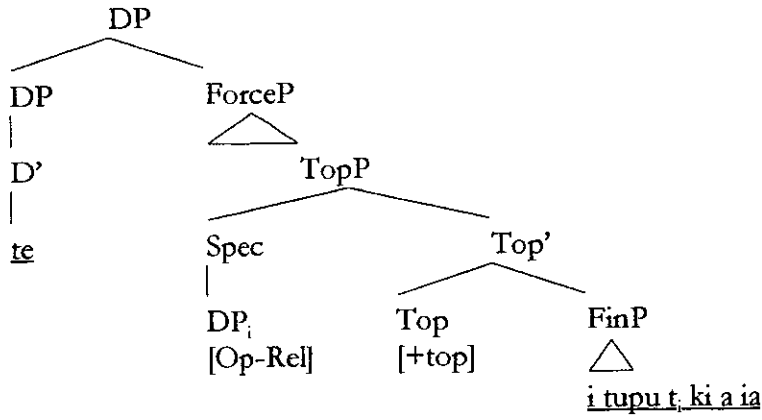
project the relative clause as an adjunct within the DP, whether the DP is lexically headed or not.

In chapter three (section 1), non-te relative clauses are adjoined to NP. Given that headless DPs do not contain NP, I now revise the assumption of chapter three. Instead I treat non-te relative clauses as adjoined to the right of DP. Non-te relative clauses are consistently right-peripheral in the DP, so their adjunction at the higher level of DP structure still predicts the correct word order. The adjunction of non-te relative clauses higher in the structure receives independent support from the facts of Niuean noun incorporation. Massam (1998) shows that relative clauses in Niuean cannot modify a non-referential element, and this explains their ability to modify only those incorporated nominals that refer. In my account, DP must be present for a nominal element to refer. By adjoining the relative clause to DP rather than to a lower projection (NumP, NP), the permissibility of a relative clause is directly related to the projection of DP. If a nominal element refers, it projects a DP and can be modified by a relative clause adjoined to that DP. If a nominal element does not refer, there is no DP projection, and hence no modifying relative clause. There is no DP node to which the relative clause can adjoin. Massam suggests, following Ghomeshi (1996), that relative clauses are located outside of the nominal functional projections. I propose that all non-te relative clauses are adjoined to DP, regardless of whether the DP consists simply of DP (20), of DP and NumP (22), or of DP, NumP, and NP (24).

Headless SRC:

- (19) Kua papu meitaki i taua va'ine ra i [tei tupu
 TAM clear well prep det woman dist prep det.TAM happen
 ki a ia,]
 prep acc IIIsg
 "It was very clear to the woman what had happened to her" {Mark 5:33}

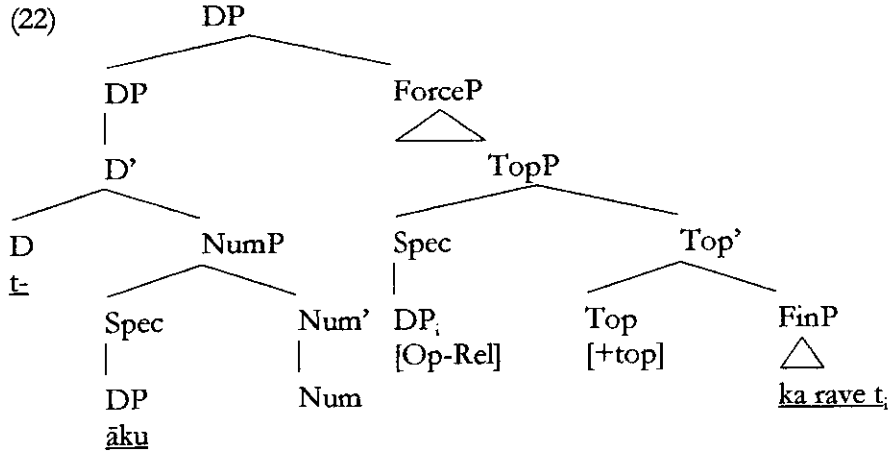
(20)



Headless Possessive Relative:

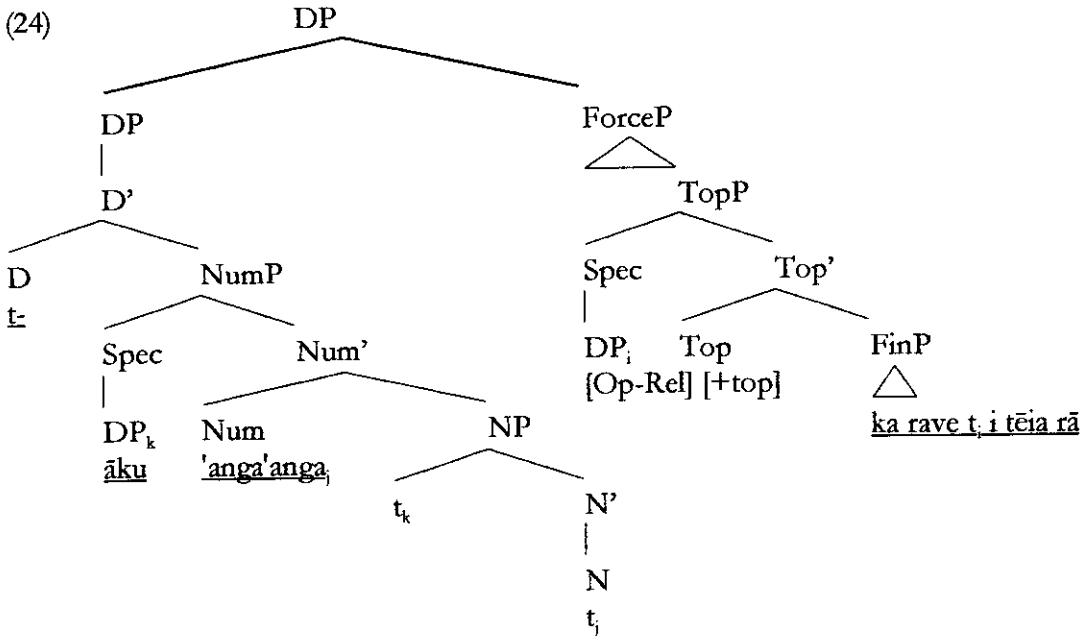
(21) I tēia nei, 'ākara mai koe i [tāku ka rave]
 prep det.proxI proxI look adv IIsg acc det.A.Isg TAM do
 "Now, you watch what I am going to do" (lit: you watch the my [thing] that
 [I'm] going to do) {EDU4}

(22)



Headed Possessive Relative:

(23) 'E ma'ata tāku 'anga'anga [RC kā rave i tēia rā]
 det big det.A.Isg work TAM do prep det.proxI day
 "I have a lot of work to do today" (lit: it's big my work [that I am] going to do
 today) {EDU1}



The structure proposed for empty headed relative clauses in (20) - (24) is consistent with the assumption that an empty headed DP must have anaphoric/deictic content. In (20), the anaphoric operator in SpecTopP of the relative clause provides an anaphoric morpheme, and the entire relative clause is adjoined to DP. It is inherent in the nature of all DPs that contain only functional projections to seek a referent in the discourse. In the following section, I consider a construction in which headless relative clauses frequently occur, and which will be shown in section 3 to be highly relevant for the analysis of te-relative clauses.

2. Equative Relative Clauses with Ko

Headless relative clauses may appear in another structure type. They can be placed in apposition to a head noun. The examples below show a headless relative clause introduced by ko. The constituent introduced by ko is co-referent with the preceding DP.

- (25) Kia 'akameitaki mai te Atua i a ia [ko tei
 TAM praise dir det Lord acc pers IIIsg eq det.TAM
 'aere mai i roto i te ingoa o te Atua!]
 go dir prep in acc det name O det Lord
 "The Lord praises him who comes in the name of the Lord" {Mark 11:9}

- (26) kua 'iki 'aia e 'okota'i nga'uru mā rua, [ko tāna

TAM select pers.IIIsg det one 10 & 2 eq det.A.IIIsg
 i tapa e au 'āpōtetoro]
 TAM name det num apostle
 "He chose twelve, which he named apostles" {Mark 3:14}

Clark (1973:75-6) states that some Polynesian languages use headless relative clauses in apposition to a head noun with a relative clause interpretation. His Tahitian example is shown below (Tahitian, like CI Maori, is an East Polynesian language). The relative clause is marked with a cognate of ko.

Tahitian:

(27) 'e aa'o 'oe 'i te tamaiti ['o tei taora mai
 TAM correct IIsg acc det boy prep det.TAM throw dir
 'i te 'ofa'i]
 prep det stone⁷¹
 "You will correct the boy who threw the stone"
 {example (2.114) from Clark (1973), original source Tryon (1970:88)}

Before I consider the structure that should be assigned to headless relative clauses introduced by ko, I briefly present further examples where ko introduces an appositional DP. The sentences below show ko preceding common and proper noun-headed DPs.⁷² In (28) and (29), the DP introduced by ko and the DP to which it stands in apposition are co-referential.

(28) I tēta'i tuatau, te⁷³ no'o ra tēta'i tangata ē tāna
 prep det time TAM live dist det man and det.A.IIIsg
 va'ine ē tā rāua tamā'ine [ko Ina]
 woman and det.A II.dl daughter eq Ina

⁷¹ Glosses altered from original to standardize with the glosses used elsewhere in this paper.

⁷² The example in (i) below shows another type of appositional structure. The relationship between the appositional DP Ietu and the preceding rāua in (i) is somewhat different from the examples in (28) and (29). In the latter case, the referent of the ko constituent, and of the immediately preceding nominal is identical. In (i) however, the second person dual pronoun combines a referent previously identified in the discourse ('he'), and a new referent Ietu. Thus while the pronoun inflects for the dual number of its referents, the new information is indicated by the DP marked with ko.

(i) kua 'aere atu rāua ko Ietu
 TAM go dir III.dl eq Jesus
 "He and Jesus left" {Mark 5:24}

There is general agreement among linguists studying NZ Maori, that the construction in (i) is related to that of (28) and (29) in the text (Bauer (1991); Pearce (1999), Pearce also cites Clark (1973:46) and Ray Harlow (p.c. with Pearce)). I will not consider this type of appositional phrase, as its different interpretation sets it apart from the structures discussed in this chapter.

⁷³ The use of te as a tense/aspect marker here should not be confused with te as a determiner. Waite (1989:80-82) discusses the NZ Maori cognate of the tense marker te, and presents evidence from various Polynesian languages that it is a separate morpheme.

“Once upon a time, there lived a man and his wife and their daughter (called Ina” {EDU7}

- (29) Kua kite atu au i a Moana [ko tōku teina]
 TAM see dir Isg acc pers Moana eq det.O.Isg younger sibling
 “I saw Moana, my younger sister.”

An appositional DP introduced by ko can also contain a head noun modified by a relative clause. In (30), the DP introduced by ko is headed by rā ‘day’. Rā is modified by a non-te relative clause, and it corresponds to an adjunct role within the relative clause. Following the usual assumptions of relative clause phrase structure (see chapter three, section 4), rā is co-indexed with a null adjunct relative operator within the relative clause. The adjunct relative operator binds the anaphoric particle ei. Again there is co-reference between the DP introduced by ko and the (italicized) noun phrase to which this DP is apposed.

- (30) I te rā mua o te 'Ōro'a o te Varāoa-'Aka'ōpuekore'ia,
 prep det day front O det feast O det bread-leaven.lack.pass
 [ko te rā ia [_{RC} tamate'ia ei te au punua māmoē
 eq det day proxI TAM kill.pass part det num young sheep
 nō te kaikai'anga o te 'Ōro'a Pāta]], kua 'ui atu ra ...
 prep.O det eat.dup.nom O det feast Passover TAM ask dir dist
 “On the first day of the Festival of Unleavened Bread, this day when lambs are
 slaughtered for the Passover Festival meal, [Jesus’s disciples] asked ...”
 {Mark 14:12}

In the examples, the DPs introduced by ko are co-referential with the immediately preceding nominal constituent. ko introduces a DP, which can be headed or headless and can further be modified by a relative clause. ko has several functions in CI Maori. As well the appositional DPs illustrated above, it can mark topicalized DPs (31), and it can be a functional marker in an equative predicate (32). I define an equative predicate as one where two DPs refer to the same entity ($DP_1=DP_2$).

- (31) ko te tangata i kite atu i te 'apinga
 top det man TAM see dir acc det thing
 “The man saw the thing”
- (32) Ko Ina tā rāua tamā'ine
 Eq Ina det.A III dl daughter
 “Their daughter is Ina”

Ko's cognate in NZ Maori also performs these differing functions. Pearce (1999) and Bauer (1991) both agree that the various constructions in which ko occurs in NZ Maori can be subsumed under two distinct types: ko as a topic marker, and ko as a focal marker in equative clauses.⁷⁴ Bauer argues that topic ko most commonly indicates a topic switch in the discourse. She defines topic as "what we are talking about" (p. 3). On the other hand, she considers focal ko, of which the equative ko is an example, to indicate a high unit with "high information value" (p. 3). In example (32) above, the ko-marked DP Ina introduces into the discourse new information, namely that 'their daughter' is "Ina".

The appositional use of ko, such as in (33) below, has a similar interpretation to the equative predicates. The ko-marked DP Ina again introduces new information, the name of "their daughter". Ko Ina is a focal unit, in Bauer's sense. In (33), ko defines an equational relationship between the DP that it marks (Ina 'Ina') and the DP to which it stands in apposition (tā rāua tamā'ine 'their daughter'). I assume then that the ko headed constituent in (33) is an equative relative clause. This is the approach taken for other East Polynesian languages. Bauer (1991) for NZ Maori and Cook (1999:46, footnote 5) for Hawaiian both consider that ko (Haw. 'o) is performing the same syntactic function in appositional phrases and in equative predicates. In (33), a relative operator is projected within the equative relative clause, and this relative operator takes the relative noun tā rāua tamā'ine 'their daughter' as its antecedent.

Cook Islands Maori:

- (33) I tēta'i tuatau, te no'o ra tēta'i tangata ē tāna
 prep det time TAM live dist det man and det.A.IIIsg
 va'ine ē tā rāua tamā'ine [_{RC} ko Ina]
 woman and det.A II.dl daughter eq Ina
 "Once upon a time, there lived a man and his wife and their daughter (called)
 Ina" {EDU7}

Before considering the syntactic structure of these equative clauses, some comments are in order on the nature of the relative operator. Equative relative clauses with ko provide new information about the referent of the relative noun. In (34) below, the relative noun a ia 'him' is further defined by the proposition expressed in the equative relative clause. The appropriate referent for a ia is one who also satisfies the condition of the relative clause.

⁷⁴ Bauer (1991) notes the DP marked by focal ko receives primary stress in the clause, while the DP marked by topic ko does not. Only in its topicalizing usage can ko be omitted.

- (34) Kia 'akameitaki mai te Atua i a ia ko tei 'aere
 TAM praise dir det Lord acc pers IIIsg eq det.TAM go
 mai i roto i te ingoa o te Atua!
 dir prep in acc det name O det Lord
 "The Lord praises him who comes in the name of the Lord" {Mark 11:9}

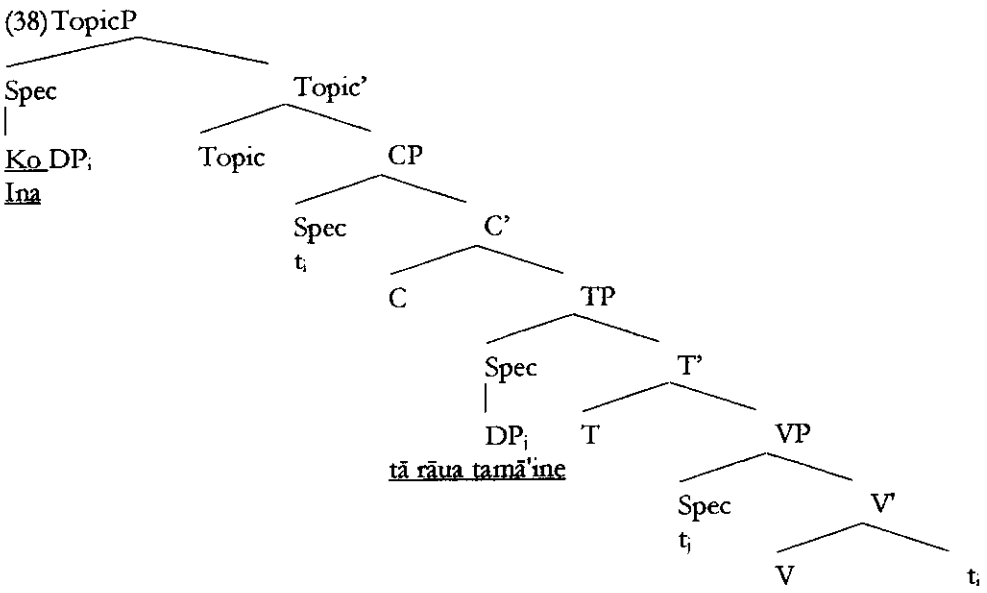
Lasnik and Stowell (1991) argue that the relative operator in a restrictive relative clause is quantificational, while that of a non-restrictive relative clause is non-quantificational. CI Maori equative relative clauses are interpreted as restrictive in their translation into English, however they are not restrictive in the strict sense of an English restrictive relative clause. In English restrictive relatives, the information expressed within the relative clause presupposes the existence of other potential referents of the relative noun. For example in (35), the restrictive reading presupposes that several possible men to which the relative noun may refer, but that the entire sentence is only true of the man who left the building last night. In the English appositional structure in (36), there is an implication that there is more than one potential referent of the relative noun, however this arises because of the partitive 'the one' which forces a restrictive reading. The CI Maori equative clause in (34) above has a similar interpretation to the apposed partitive DP in (36). The headless DP functionally headed by *te* forces a restrictive reading, by specifying the referent as 'the one'. Furthermore in the example in (33) above, which is also an equative relative clause, there is no implication that there is more than one daughter (*tamā'ine*). The relative clause simply indicates further information about the relative noun.

- (35) The man [_{Restrictive RC} that left the building last night] failed to turn off the lights
 (36) The man, the one who left the building last night, failed to turn off the lights

I assume then that the relative operator generated within an equative relative clause is non-quantificational, as the equative clause structure simply indicates a further property of the relative noun. The restrictive interpretation in (34) arises because of the headless DP. In chapter three (section 5), I show that the non-quantificational operator in non-*te* relative clauses raises to the specifier of TopicP, where it satisfies the Topic Criterion in specifier-head agreement with a [+topic] head. The non-quantificational operator in equative relatives must also raise to the specifier of TopicP to satisfy the Topic Criterion. I now consider the syntactic representation of equative relative clauses.

de Lacy (1999) proposes that NZ Maori equative predicates have a phonetically null tense morpheme and a null copular verb. De Lacy's structure is shown in (38) below for the CI Maori example in (37). The ko-marked DP starts as complement to a null copular verb and raises to SpecTopicP, via SpecCP. The unmarked DP is located in the specifier of VP at D-Structure, and raises to SpecTP for nominative case-checking. (38) is simplified in not indicating the movement of the null verb and null tense morpheme. De Lacy assumes that the V moves to T, and V+T moves to C.⁷⁵

(37) **Ko Ina** tā rāua tamā'ine
 Eq Ina det.A III_{pl} daughter
 "Their daughter is Ina"



In de Lacy's proposals for equative predicates, two distinct claims are made. The first is that equative predicates are syntactically analogous to verb-headed clauses, as they contain a verb (a null copular) and a (null) tense marker. He argues that the main distinction between equative predicates and verbal clauses is the differing cases assigned to the verb's complement. This is a consequence of the verbal head: the null copular verb assigns nominative case to its complement, while lexical verbs assign accusative case to their complement. In the former case, the complement must raise to a suitable nominative case-checking head, which de Lacy argues is SpecCP.

⁷⁵ An alternative structure for NZ Maori equative predicates is proposed in Pearce (1999). In her structure, the equative ko is a mixed Force/I head. In section 3, I argue that equative relative clauses and te-relative clauses share a common syntactic form, however they differ in that ko is omitted within the te-relative clause. If ko is a DP clitic, as de Lacy argues, rather than a Force/I head, its omission in te-relatives is less problematic. The structure in de Lacy also accounts better for the representation of interrogative clauses, as will be illustrated in chapter five, section 2.

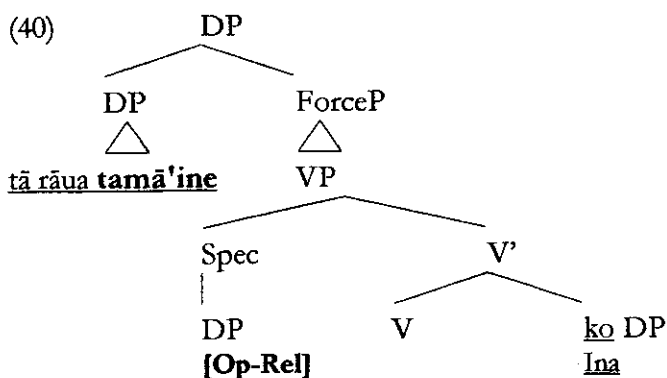
The second claim made by de Lacy is that equative ko and topic ko both raise to SpecTopP. His labeling of TopicP suggests that he considers the ko-marked DP in equatives to represent a topic rather than a focus. This appears to be at variance with Bauer's (1991) assertion that the two instances of ko differ in their interpretation. De Lacy argues that the DP constituent in his SpecTopP must be specific, but he does not address how Bauer's differing information values for ko are represented in his structure. I suggest that a compromise can be made between these positions by instead raising the ko-marked DP to a *Focus* Phrase, in Rizzi's (1997) sense. This compromise retains the syntactic structure proposed by de Lacy, while accounting for the differing interpretative values of ko-marked constituents. In chapter five (section 2), we will see that this alteration to de Lacy's structure accounts well for the data from interrogative clauses.

In this section I propose that the appositional ko is an instance of an equative relative clause. Appositive phrases thus receive the same syntactic representation as the equative predicates shown in (38) above. Ko introduces an equative relative clause, which modifies the immediately preceding noun. I propose that an empty operator is generated at D-Structure in the location corresponding to the relative/apposed noun, just as in the non-te relative clauses. This is demonstrated below, following the analysis of de Lacy (1999). In (40) the ko-marked DP Ina is located in the complement to V, while the non-quantificational relative operator sits in the specifier of VP. Elsewhere I adopt Rizzi's (1997) analysis of A-bar projections, so I consider TopicP in all cases to be located between ForceP and FinP. Thus TopicP in (40) below is dominated by ForceP, and I re-label de Lacy's CP as FinP.⁷⁶ I also re-label T(ense)P as IP, following the standard used elsewhere in this thesis.

- (39) I tēta'i tuatau, te no'o ra tēta'i tangata ē tāna
 prep det time TAM live dist det man and det.A.IIIsg
 va'ine ē tā rāua tamā'ine ko Ina
 woman and det.A II.dl daughter eq Ina
 "Once upon a time, there lived a man and his wife and their daughter (called) Ina"
 {EDU7}

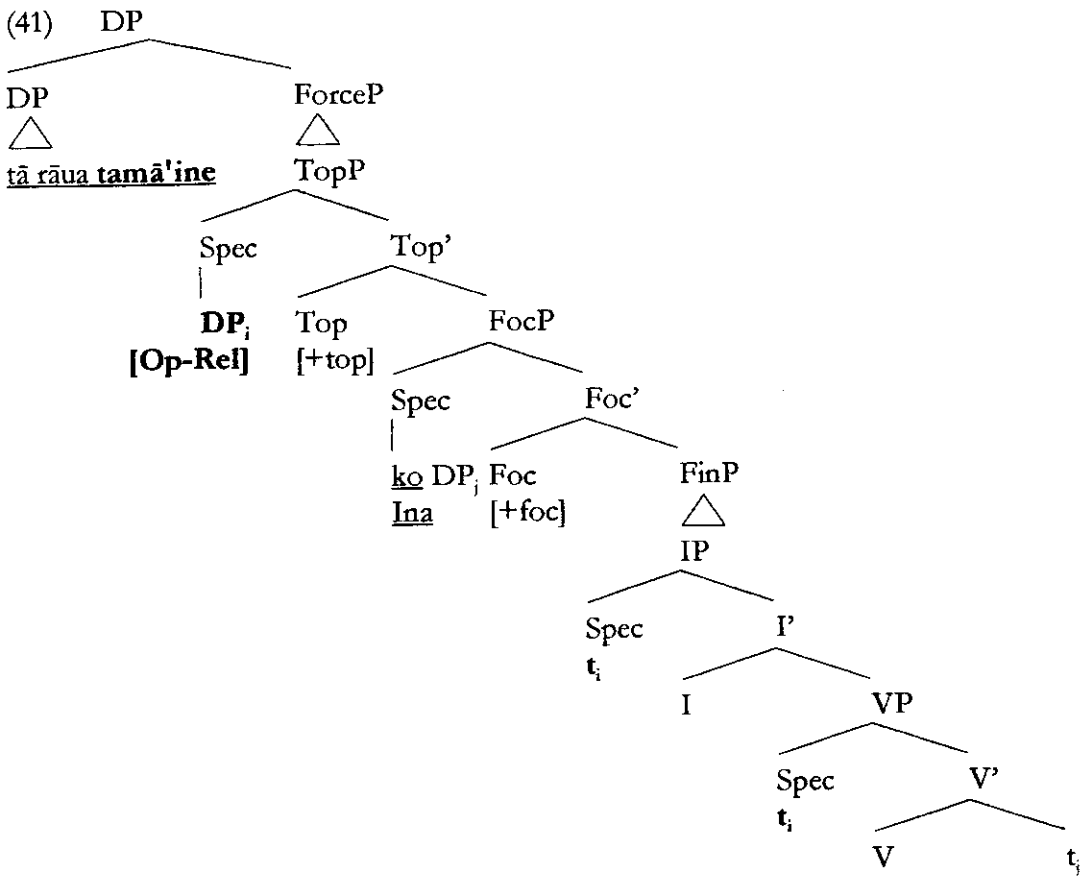
D-Structure:

⁷⁶ I discuss this re-labeling in chapter five (section 2), as its clearest motivation comes from the consideration of interrogative structures.



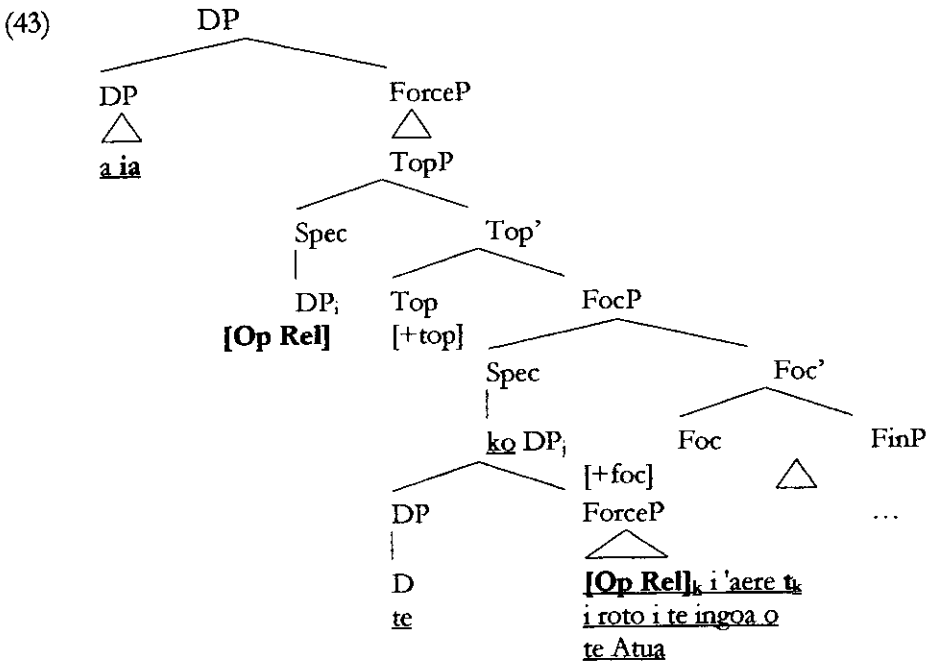
De Lacy argues that the ko-marked DP must raise to SpecCP (my SpecFinP) for nominative case licensing. He posits a further movement for the ko-DP, namely from SpecCP to SpecTopP. In my account, this DP instead raises to a Focus Phrase, as it is interpreted as a focus rather than a topic. Following Rizzi (1997), the ko-DP has a [+focus] feature which it must check in specifier-head agreement with a [+focus] head. Furthermore, the relative operator in (40) must raise to a TopicP, as a non-quantificational operator. As usual, the relative operator raises via SpecIP where it is licensed for nominative case. The S-Structure of (40) above is shown in (41).⁷⁷

⁷⁷ I locate TopicP higher than FocusP in (41). We will see in chapter five (section 3) that topics precede foci in CI Maori.



In the following section, I argue that te-relative clauses are equative relative clauses where ko is omitted. In order to facilitate that discussion, the tree in (43) below demonstrates the form of an equative relative clause where the ko-marked focal DP is instead a headless relative clause (42). The structure contains two relative operators: one within the headless DP's relative clause, and one within the ko equative clause. The relative operators are co-indexed with each other. This syntactic representation will be shown to be a minimal pair with a te-relative clause.

- (42) Kia 'akameitaki mai te Atua i a ia ko tei
 TAM praise dir det Lord acc pers IIIsg eq det.TAM
 'aere mai i roto i te ingoa o te Atua!
 go dir prep in acc det name O det Lord
 "The Lord praises him who comes in the name of the Lord" {Mark 11:9}



In sections 1 and 2, I discuss two structures which are relevant for the analysis of te-relative clauses. The headless relative clause construction is identical in surface word order to te-relative clauses. I show that DPs that lack a lexical head must contain an anaphoric or deictic morpheme in order for a referent for the DP to be located. With headless relative clauses, the relative operator provides this morpheme. I also examine appositional phrases headed by the equative marker ko. The appositional structure is treated as an equative predicate clause, which is adjoined to DP as a relative clause. In the remainder of this chapter, I examine te-relative clauses. I propose that these clauses have the same syntactic structure and interpretation as equative relatives with ko.

3. Te-Relative Clauses are Equative Relatives

In this section, I propose that te-relative clauses have the same syntactic structure as the equative relative clauses considered in section 2. They differ from equative relatives however, in that the equative marker ko, which cliticizes onto the focal/equative DP, is omitted. The claim that te-relative and equative relatives are two surface manifestations of the same syntactic structure implies that the two relative clause types share a similar semantic interpretation. They should also share an analogous internal syntax. The discussion in this section will demonstrate that this is indeed the case.

Te-relative clauses are identical in word order to headless relative clauses. The examples below compare an SRC (44), (45), and a possessive relative (46), (47) using the headless DP and te relative structures.

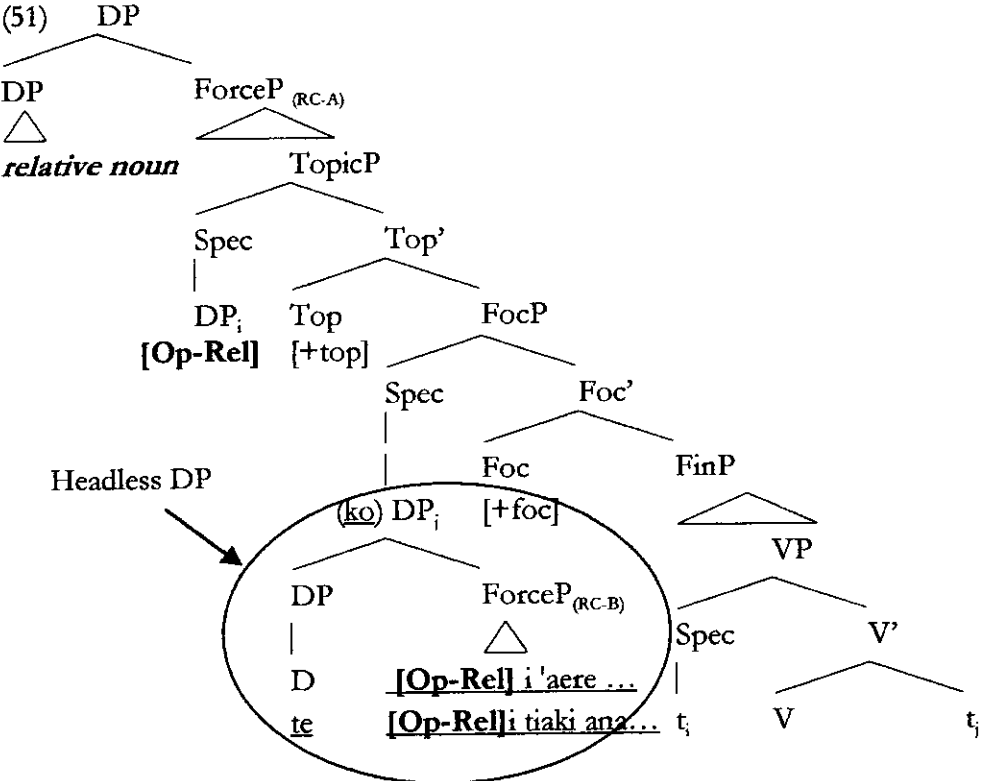
- (44) Kua 'akaunga'ia tēta'i au māpū tāne māro'iro'i kia
 TAM send on errand.pass det num youth male strong TAM
 'akakite atu ki [tei tiaki i te kāinga] ē, ...
 tell dir prep det.TAM guard acc det home sub
 "Some strong male youths were sent on an errand to tell those who guarded the home that..." {EDU18}
- (45) Kua 'oro te aronga [RC tei tiaki ana i taua au
 TAM run det crowd det.TAM guard TAM acc det num
 puaka rā]...
 pig dist
 "The crowd who were looking after the (aforementioned) pigs ran ..."
 {Mark 5:14}
- (46) I tēia nei, 'ākara mai koe i [tāku ka rave]
 prep det.proxI proxI look adv IIsg acc det.A.Isg TAM do
 "Now, you watch what I am going to do" (lit: you watch the my [thing] that [I'm] will do) {EDU4}
- (47) Nō reira ma'ata tā Mareko tuatua nō runga i te
 prep this big det.A Mark word prep top acc det
 au mea [RC tā Ietu i rave]
 num thing det.A Jesus TAM do
 "That's why Mark's writings about the things that Jesus did are numerous"
 {Intro to Mark}

In section 2, it was shown that headless relative clauses, such as (44) and (46) above, can modify a relative noun in the equative relative structure. The examples below illustrate a headless SRC and possessive relative in an equative relative clause with ko. Notice also that with the exception of ko, the te-relatives in (45) and (47) above are identical in their linear word ordering to the equative relatives below (48), (49).

- (48) Kia 'akameitaki mai te Atua i a ia [RC ko tei
 TAM praise dir det Lord acc pers IIIsg eq det.TAM
 'aere mai i roto i te ingoa o te Atua!]
 go dir prep in acc det name O det Lord
 "The Lord praises him who comes in the name of the Lord" {Mark 11:9}
- (49) kua 'iki 'aia e 'okota'i nga'uru mā rua, [RC ko
 TAM select pers.IIIsg det one 10 & 2 eq
 tāna i tapa e au 'āpōtetro]
 det.A.IIIsg TAM name det num apostle
 "He chose twelve, which he named apostles" {Mark 3:14}

In this section, I propose that te-relative clauses and equative relatives are identical in structure. The syntactic structure for (45) and (48) is given in (51) below. In both cases, a headless relative clause raises to the specifier of FocusP. The headless DP is either marked with ko (48) or not (45) and raises in both cases to the specifier of FocusP. The headless relative clause comprises DP functional projections, and is modified by an adjoined non-te relative clause (ForceP). A relative operator is base generated in SpecVP in the equative relative clause, and raises to SpecTopP. The structure of these clauses is somewhat complex as they contain a non-te relative clause embedded within a headless DP. To facilitate the discussion below, the relative clauses in (51) are labeled RC-A and RC-B. Relative clause A (RC-A) corresponds to the equative relative in (51), Relative clause B (RC-B) corresponds to the non-te relative adjoined with the headless DP in (51). The English sentence in (50) may help to clarify the relationships. Here the man is the relative noun, and is modified by an equative relative clause who is X. X is a DP the one that I saw, which contains a relative clause that I saw.

(50) [The man [_{RC-A} who is [the one [_{RC-B} that I saw]]]] arrived last night



This structure makes several assumptions about the semantic and syntactic relationship between te-relatives, headless relatives, and equative relatives. The first claim to be

investigated is that the te of te-relative clauses heads a DP, rather than a clause. The possibility that te could instead be a clausal constituent, for example a complementizer, is considered - and rejected - in section 4. The alternative is to treat te as the head of a headless DP with a modifying relative clause adjoined. The advantage of this is that it allows the te-relative clause to be represented by structures which are independently motivated for headless relative clauses, as shown in section 1.

In treating the te of a te-relative clause as the head of DP, the relative clause constituent within the headless DP is a non-te relative clause, RC-B in (51). This predicts that RC-B will display the same syntactic properties in te relatives as it does in non-te relatives. When non-te relative clauses are formed on the theme argument of a transitive verb, the theme must be licensed for the nominative case. RC-B in te-relative clauses also displays this nominative case constraint. Theme relative clauses are formed by either passivizing the relative clause (52) or using the possessive relative strategy (53).^{78, 79}

- (52) 'e ma'ata te au tū kekē [_{RC}tē ka ma'ani'ia
 det big det num image assorted det TAM make.pass
 i runga i te au vāito tapa]
 prep top acc det num pattern tapa cloth
 "There are many assorted images that are drawn [by them] on the tapa cloth
 patterns" {EDU14}

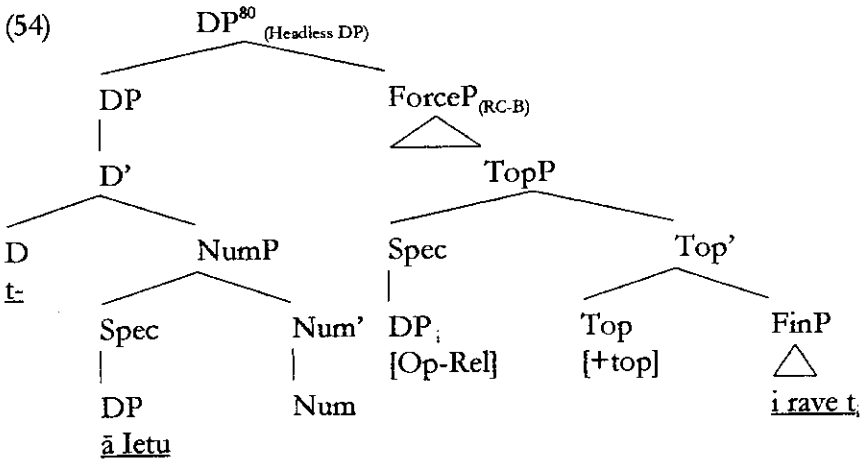
- (53) Nō reira ma'ata tā Mareko tuatua nō runga i te
 prep this big det.A Mark word prep top acc det
 au mea [_{RC}tā Ietu i rave]
 num thing det.A Jesus TAM do
 "That's why Mark's writings about the things that Jesus did are numerous"
 {Intro to Mark}

The requirement that a relativized theme argument is nominative case-marked falls out from the restrictions operating on non-te relatives and on topicalized DPs (chapter three, sections 4,5). (54) shows the phrase structure assigned to the headless DP constituent of a te-possessive relative. The relative clause agent ā Ietu 'Jesus' is located in SpecNumP,

⁷⁸ See also chapter three (sections 2-3) where it is shown that both non-te and te-relatives relativize freely on the nominative case-marked argument in a transitive or intransitive clause.

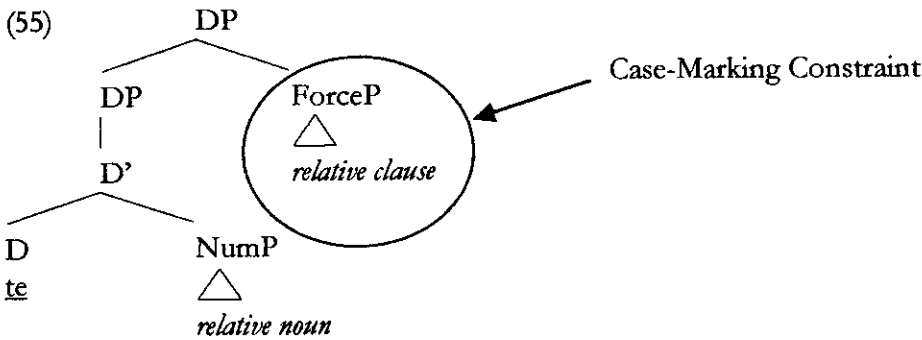
⁷⁹ In chapter three (section 3), it is shown that non-te relatives may also relativize on a theme by marking the agent with the AE *nā* preposition. However, RC-B in te-relatives appears to disallow the AE. Given that RC-B is actually a non-te relative in te-relatives, this is unexpected. It appears that the headless DP structure is incompatible with the AE, though I do not know why this should be.

where it is genitive case-marked. A non-te relative clause is adjoined to DP, and contains an anaphoric morpheme, the non-quantificational relative operator.



The similarity between non-te and te-relative clauses in terms of relativization on a theme argument are entirely expected, because in both cases the relative operator is generated within a non-te ForceP (RC-B in (54)). In non-te relatives, ForceP is adjoined directly to the relative noun's DP (55), while in te-relatives the relative clause ForceP is adjoined to an empty headed DP (56), which is in turn adjoined to the relative noun's DP. A constraint like case-marking is an clause-internal restriction on the form of ForceP, so it follows that it will impose the same limitation regardless of the external syntactic environment.

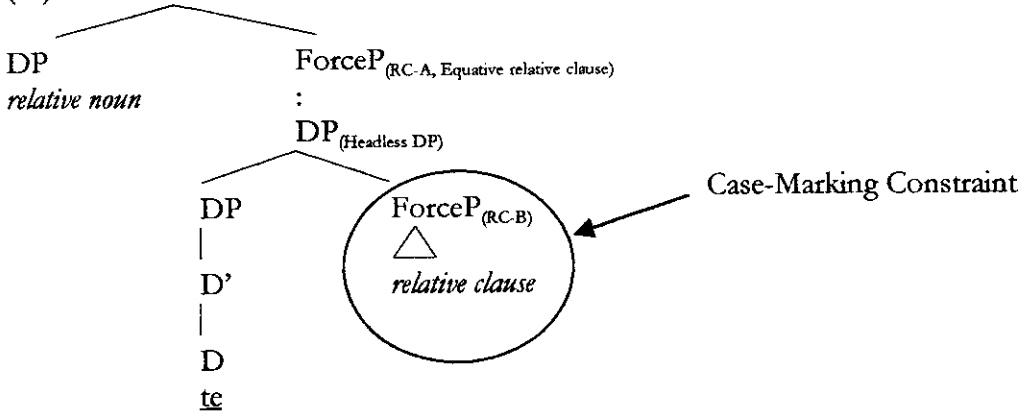
Non-te relative:



⁸⁰ I have omitted from the relative clause ForceP, the agentive operator [Op-Ag] which is co-indexed with the agent in SpecNumP. See chapter three (section 6) for details.

Te-relative:

(56) DP



Thus te-relative clauses place the same restriction on case-marking of the theme argument as non-te relatives. However, te-relatives are not able to relativize on an adjunct phrase. When non-te clauses are formed on an adjunct phrase, ei is anaphorically bound by the relative operator (57). Following Massam and Roberge (1997), ei is an operator-bound clitic which refers only to adjunct phrases.

- (57) I te taime tikāi [_{RC} i uru atu ei te vaka nō
 prep det time adv TAM enter dir part det canoe prep.O
 Sālelologa ki uta i a 'Upolo], kua rere atu 'a
 Sālelologa prep ashore acc pers 'Upolo TAM jump dir pers
 'Ina ki va'o
 'Ina prep out
 "At the very moment that the canoe from Sālelologa came ashore at 'Upolo,
 'Ina jumped out" {EDU1}

Above, I argue that the relative clause constituent, RC-B of te-relatives is a non-te ForceP. (57) illustrates that adjunct relative clauses are licensed for non-te relatives, so the lack of te- adjunct relative clauses requires explanation. When a relative clause is formed on an adjunct phrase, an operator is generated in an adjunct phrase location. With equative predicates (RC-A), the operator is generated as the complement to the null copular verb. The operator is not generated in an adjunct location, but rather in an argument location. Thus it is not the equative structure itself that prevents adjunct relatives. We can also rule out the role of RC-B, as RC-B does allow adjunct relative clauses, as (57) shows.

Thus, it must be some feature of the DP in FocusP that prevents te- adjunct relatives. The examples in (58) and (59) show equative relative clauses, both with and without ko.

These relatives differ from te-relatives in that the DP which immediately follows the relative noun is lexically headed. In (58), the ko-marked DP is lexically headed by ngā'i 'place'. The relative noun te kāinga 'the home' is co-referent with ngā'i 'place'. A non-te relative clause modifies ngā'i, and ngā'i corresponds to an adjunct locative phrase of the relative clause predicate 'akaputupu 'assemble'. The relative noun ngā'i 'place' triggers ei insertion. (59) has a very similar syntax. The relative noun pi'a no'ono'o 'sitting room' is modified by an equative relative clause. In this case, ko is omitted, however the DP headed by ngā'i has a non-te relative clause attached. Ngā'i corresponds to an adjunct of the non-te relative clause, and is resumed by the anaphoric ai (I discuss (59) below).

- (58) I reira kua 'apai atu rātou i a Ietu ki te
 prep then TAM carry dir IIIpl acc pers Jesus prep det
kainga o te Ta'unga Ma'ata, [RC-A ko te ngā'i [RC-Bⁱ
 home O det priest big eq det place TAM
 'akaputupu mai ei te au ta'unga mama'ata, te aronga
 assemble dir part det num priest large det group
 pakari, e te au puapi'i o te Ture.]]
 wise and det num teacher O det law
 "Then they took Jesus to the house of the High Priest, the place where the chief
 priests, the elders, and the teachers of the Law had gathered."
 {Mark 14:53}

- (59) Kua 'oro atu 'aia ki roto i te pi'a no'ono'o, [te
 TAM run adv IIIsg prep in acc det room sit.dup det
 ngā'i [RC i 'akairi'ia ai tōna pona teatea mānea
 place TAM hang.pass part det.O.IIIsg dress white pretty
 i te pae maramarama.]
 prep det side window
 "She ran into the sitting room, the place where her pretty white dress was
 hanging beside the window." {EDU20}

The remaining difference between the allowed adjunct relative clauses in (57) to (59) and the disallowed te- adjunct relatives is the headedness of the equative DP. A headless DP anaphorically/deictically locates its referent, and as such may impose restrictions on the nature of the antecedent. For example, personal pronouns in some languages can only take human antecedents, while other languages allow pronouns to refer to both human and non-human antecedents. I suspect that the inability of te-relatives to refer to adjuncts is due to the fact that the headless DP construction generally refers to people and objects, while adjuncts typically refer to location and time. CI Maori has other proforms for these types of phrases. Reira is commonly used as a locative or temporal proform, as illustrated

in (60). Thus, the seeming inability of te-relatives to form on adjunct phrases reduces to the inability of headless DPs to take for example a location as their antecedent.⁸¹

- (60) Kua topa te moko ki roto i te tai e ko
 TAM fall det lizard prep in acc det sea and eq
 tōna openga rāi te reira
 det.O.IIIsg ending adv det there
 “The lizard fell into the sea and there was his ending” (i.e. “that was the last of
 him”.) {EDU7}

The discussion shows that the syntax of the headless DP constituent within the te-relative clause is predictable from the syntax of non-te relative clauses and from headless DPs. In te-relative clauses, a relative operator in an argument position must be nominative case-marked. This same constraint is found in non-te relative clauses (see chapter three, section 4). Te-relative clauses cannot form on an adjunct relative operator, however this is disallowed because of the restriction on possible antecedents in headless DPs generally. The advantage of the proposal developed here for te-relatives is that it utilizes several structures which are independently required in the language. We have already motivated the existence of an empty-headed DP. The location and genitive case marking of the possessive relative agent is generated by the same mechanisms that generate the non-te possessive relative agent. However, we have yet to account for why this headless DP should be located within an equative relative clause. There are three points to this argument. The first is the assumption that the te-relative is maximally clausal rather than nominal. The second is the assumption that ko can be omitted freely. And finally, the proposed syntactic similarity between te-relatives and equative relatives should find a corresponding semantic similarity between the two clause types.

Above I argue that the te-relative clause is a headless DP, and I propose that this headless DP is an argument of an equative relative clause. Why do we not just say that the DP is adjoined directly to the relative noun, without the intervening equative relative clause? If this were the case, it would be expected that the te-relative would behave like other adjoined DPs. Below I show that in terms of modification, te-relatives behave like clausal rather than nominal modifiers. The relationship between a head and its modifier is typically indicated by word order or by morphological marking, such as case markers and

⁸¹ It should be the case that if the antecedent of a te-relative clause is the type of object to which a headless DP can refer, e.g. a instrument, then the te-relative clause construction could be formed where this instrument corresponds to an adjunct phrase within the relative clause RC-B (e.g. “the knife [the one [that she cut the meat with]]”). Unfortunately, there are no relevant examples in my corpus.

prepositions. CI Maori distinguishes between word level modifiers (X) and phrasal modifiers (XP). The relationship of word level modifiers to the head noun is given by their syntactic location, while phrasal modifiers are marked with prepositions. Word level modifiers are located immediately after the head that they modify, but before any DP arguments or adjuncts. Phrasal modifiers are introduced with a preposition indicating their thematic role, and follow any word level modifiers, or any arguments. In (61) below, the head noun 'anga'anga 'work' is immediately followed by the word level modifier ngutu'are 'household', which is not within a DP, and is not marked by a preposition. However the DP adjunct tēia pōpongi 'this morning' is preceded by the preposition nō. In (62), the head noun kēke 'cake' is immediately followed by the word level modifier ma'ata 'big', which is in turn followed by an o-genitive case marked possessor. As adjuncts, te-relative clauses (and in fact all relative clauses) come finally in the nominal phrase; unlike DP adjuncts however, te-relatives are not prepositionally marked. This makes them analogous to clausal constituents, which are also not case-marked (63).

- (61) Kua oti 'oki [tāku au 'anga'anga ngutu'are
 TAM finish adv det.A.Isg num work household
 nō tēia pōpongi.]
 prep.O det.proxI morning
 My housework for this morning is also finished." {EDU1}

- (62) Kua kite au i [te kēke ma'ata o te tamaiti tā
 TAM see Isg acc det cake big O det child det.A
 te tangata ka kai
 det man TAM eat
 "I saw the child's big cake that the man will eat"

- (63) Kua 'inangaro 'a Ani iā Ngarima [kia 'aere ki
 TAM want pers Ani acc.pers Ngarima TAM go prep
 te toa]
 det shop
 "Ani wanted Ngarima to go to the shop"

The evidence from modification supports the claim that te-relatives are maximally clausal rather than nominal. The next point to consider is the omission of ko in te-relatives. Bauer (1991:4) specifically states that the ko which heads NZ Maori equative predicates is not able to be deleted. However, there is some evidence that equative ko may be deleted in CI Maori.⁸² The examples below (repeated from (58) and (59) above) are almost

⁸² This appears to be a point on which CI and NZ Maori differ. To my knowledge, there is no equivalent of te-relative clauses in NZ Maori.

minimal pairs, however in (65) the equative DP is not marked by ko. Notice that the interpretation of these examples is identical.

- (64) I reira kua 'apai atu rātou i a Ietu ki te
 prep then TAM carry dir IIIpl acc pers Jesus prep det
kainga o te Ta'unga Ma'ata, [RC-A ko te ngā'i [RC-Bi
 home O det priest big eq det place TAM
 'akaputupu mai ei te au ta'unga mama'ata, te aronga
 assemble dir part det num priest large det group
 pakari, e te au puapi'i o te Ture.]]
 wise and det num teacher O det law
 "Then they took Jesus to the house of the High Priest, the place where the chief
 priests, the elders, and the teachers of the Law had gathered."
 {Mark 14:53}

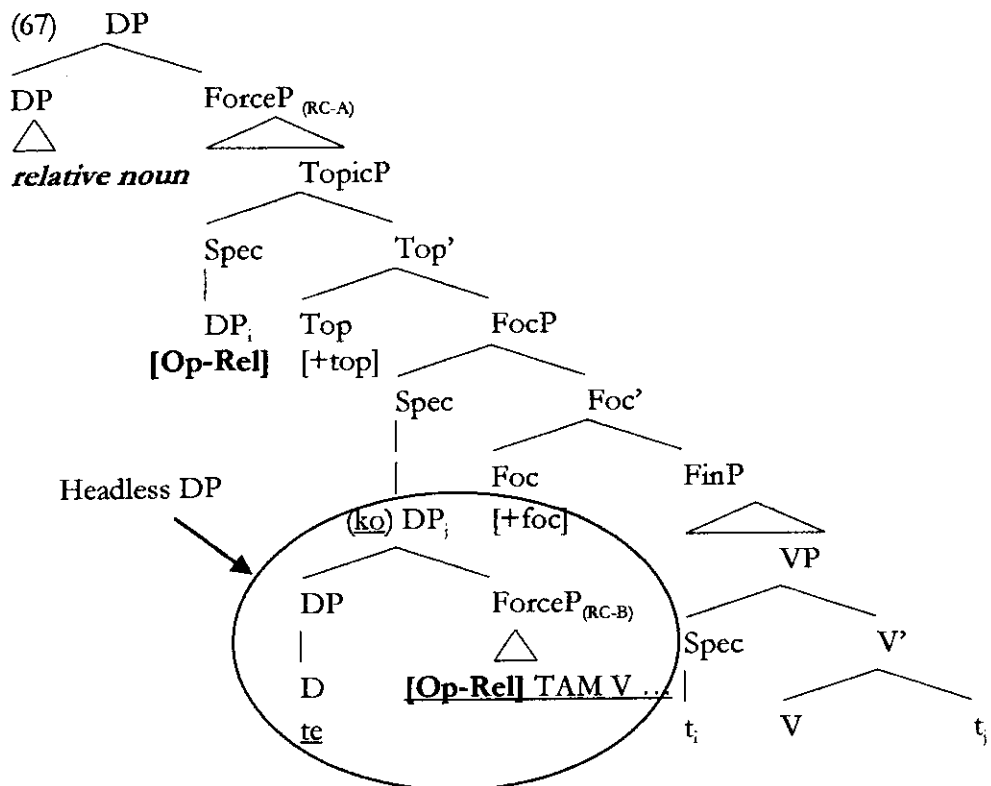
- (65) Kua 'oro atu 'aia ki roto i te pi'a no'ono'o, [te
 TAM run adv IIIsg prep in acc det room sit.dup det
 ngā'i [RC i 'akairi'ia ai tōna pona teatea mānea
 place TAM hang.pass part det.O.IIIsg dress white pretty
 i te pae māmarama.]
 prep det side window
 "She ran into the sitting room, the place where her pretty white dress was
 hanging beside the window." {EDU20}

Thus, ko can be deleted in equative relative clauses. It is less easy to establish whether ko can be omitted in equative main clauses. The example in (66) below contains two DPs in juxtaposition, with no overt indication of their relationship to each other. I suggest that the initial DP te mea ma'ata 'the important thing' may be an equative ko DP, although I have not checked this interpretation with my language consultant. The interpretation of the example does lend to an equative reading, as the clause stresses the importance of 'your finding the float'.

- (66) 'E pōutu nā tātou. Te mea ma'ata tā'au ka
 det float prep.A lincl.pl det thing big det.A.IIsg TAM
 'ākara nō te pōutu
 look prep.O det float
 "It is a float for us. For you to search for the float is the important thing."
 {EDU16}

Allowing for the possibility that (66) may have a different interpretation, the deletion of ko in (65) and (66) may well be stylistic and should thus be distinguished from te-relative

clauses where ko deletion has become grammaticalized.⁸³ I confine my comments below to the omission of ko in te-relative clauses. Te-relative clauses always contain a headless DP as the equative argument, however, when the equative DP does not contain an adjoined relative clause (RC-B), the omission of ko does not appear to be licensed. Thus the specific condition that allows for the omission of ko appears to be the combination of a headless DP and the embedded relative clause, RC-B.



I suggest that the possibility of omitting ko comes from the interpretation of te in the head of DP. Consider the function that each constituent plays. The relative operator in RC-B is co-indexed with the relative operator in RC-A (the equative clause) and with the relative noun. This enables a property expressed within RC-B to be predicated of the relative noun. The headless DP determines that the referent of the relative noun is exclusively one who satisfies the property expressed in RC-B (“the one who ...”). RC-A defines the equational/co-referential relationship between the relative noun and the equative noun marked by ko. Ko, when present, overtly marks this equational relationship. The function of ko and the function of the headless DP are in fact very similar. Ko states that DP₁ (the relative noun) is co-referent with DP₂ (the equative

⁸³ The te-relative clause structure appears to be stable, as it is evidenced in the {HTR} texts, which are approximately 100 years old (see Corpus Bibliography in Appendix Two).

noun). A headless DP also forms this relationship, because a headless DP has no internally defined referent, and must seek a referent by anaphora. I propose that the crucial factor allowing ko deletion is the headless DP structure, which carries out much the same role as ko. I further suggest that the typology of te supports this proposal. In chapter two, I argue that the determiner te plays a role similar to a clausal complementizer in allowing an nominal constituent to act as the argument of a predicate. Ko in the equative structure overtly marks the relationship of a DP to the relative noun, within the structure of which the equative relative clause is embedded. In this respect ko acts as a complementizer in indicating that the equative DP in SpecFocP is subordinate to the relative noun.⁸⁴ Now if te plays a complementizer-type role, then it also indicates that the constituent it dominates is subordinate to the relative noun. This feature of te subsumes the complementizer function of ko, and thus allows it to be omitted.

The final question to be addressed is the semantic interpretation of te-relative clauses. Given that te-relatives and equative relatives share a syntactic structure, they ought to confer a similar interpretation on the relative noun. In equative relative clauses, the entity described within the relative clause is co-referential with that defined by the relative noun. This often corresponds to a restrictive interpretation of the relative clause. In the discussion of equative relative clauses (section 2) however, I argue that the restrictive meaning does not come from a restrictive/quantificational relative operator, but rather from the headless DP, which introduces a partitive interpretation. Restrictive relative clauses and partitive structures share the presupposition that there are other potential referents for the relative noun.

The section of text below demonstrates that the interpretation of te-relative clauses is the same as that of equative relative clauses. In both cases, a restrictive reading for the relative noun arises through the partitive interpretation of the headless equative DP. In the text, the relative noun plus relative clause is underlined, while the relative clause itself is in bold face. Three principal categories are set up in this parable. Seeds which fall on bad soil (te ua tei topa ki te **ngai one papaku**), seeds which fall on good soil (te ua tei topa ki te **ngai one meitaki**), and seeds which fall into thorn bushes (te ua tei topa ki **rotopu i te au rakau taratara**). These three classes of seed are compared to three types of people who hear the word of the Lord. In the case of the types of people, the relative clause defines

⁸⁴ Pearce (1999) treats topic ko as a complementizer of Force in Rizzi's (1997) sense.

an exclusive set and the following clauses then describe the characteristics of this set. For example, in verse [16], the relative clause states that there is a correspondence between the seeds in bad soil, and the people who are glad to hear the word of the Lord. The content of verse [17] sets out the parallels between this type of seed, and this type of person.

{Extract from Mark 4:15-20}

[15] I tetai au taime ka topa te tuatua a te Atua na te pae i te mataara; ko te aronga teia tei akarongo, e ka aere mai ra a Tatane e ka apai ke atu i te tuatua tei ruruia ki roto i a ratou.

When the word of the Lord falls by the side of the road, there are people who hear it, and Satan comes along and takes away the word which is sown among them.

[16] Ko te ua tei topa ki te ngai one papaku, ko te aronga ia tei rekareka i te akarongoanga i te tuatua.

The seeds which fall onto shallow soil, these are the people who are glad of the message of the word

[17] Inara kare te reira i topa oonu ki roto i a ratou, e kare katoa e noo tinamou. Me tae mai te manamanata me kare te takinga-kino no taua tuatua a te Atua, ka akaruke vave ua ratou.

But it (the message) doesn't fall deeply into them, and they don't stay constant. If trouble or bad treatment comes to them because of the Lord's word, they quickly give up.

[18] E ko tetai pae tangata kua aite ratou mei te ua tei topa ki rotopu i te au rakau taratara. Ko te aronga teia tei akarongo i te tuatua a te Atua,

And other people, they resemble the seeds which fall onto thorn bushes. These are the people who hear the word of the Lord,

[19] inara no te manamanata o to ratou oraanga, e te noinoi apinga, e tetai au inangaro ke kē atu, kua riro te reira ei takore atu i te tuatua a te Atua i roto i a ratou e kare atu ra i ua mai.

but the problems in their lives, and the love of things (love of riches), and all other desires, these serve to destroy the word of the Lord in them and they don't bear fruit.

[20] Inara ko tetai pae tangata kua aite ratou mei te au ua tei ruruia ki te ngai one meitaki tikai. Kua akarongo ratou i te tuatua a te Atua, kua ariki e kua ua mai: tetai pae taki toru ngauru, tetai pae taki ono ngauru, e ko tetai pae taki tai anere."

But other people, they resemble the seeds which are sown in good soil. They bear the word of the Lord, great it and bear fruit: some thirty, some sixty, and some one hundred.

This text demonstrates the restrictive interpretation of te-relatives, which I argue derives from the headless DP with te. The choice between non-te and te-relative clauses relates

in most cases to the non-restrictive/restrictive distinction respectively. While te-relative clauses always relate to a restriction on the referent of the relative noun, there are some cases in the corpus where non-te relatives may be interpreted restrictively. My consultant offered te-relatives whenever the context did not disambiguate between a restrictive or non-restrictive reading for the relative clause (for example, in translation of a sentence in isolation). It is less easy to determine the conditions that separate te-relatives from equative relatives. Both have a similar interpretation as an equative clause, however the overt marking of the equative relationship in equative relatives may confer added emphasis on the association between the relative noun and the relative clause.

In this section, I propose that te-relatives are actually equative relative clauses with a headless DP as the equative nominal phrase. They differ from equative relatives however in the absence of ko. The discussion shows that this approach to te-relatives has the advantage of not introducing any new structure into the grammar. The headless relative clause construction is attested elsewhere in the grammar, as is the equative relative clause structure. In this and the previous chapter, we have seen that relative clause operators and DPs topicalized with ko are subject to a similar constraint in syntactic movement. I argue that in both cases the raised constituent moves to the specifier of TopicP where it satisfies a Topic Criterion. Furthermore, a focal usage of ko has been identified in the equative structure, and I propose that this focalized DP raises to the specifier of FocusP. The table below demonstrates the various specifiers discussed in this chapter and in chapter three. In chapter five (sections 2,3), I consider some other types of constituent that raise to SpecTopP and SpecFocP.

TABLE (2):

Specifier	TYPE OF DP	CLAUSE TYPE
SpecTopicP	Non-quantificational relative operator	Non- <u>te</u> relative clause Equative relative clause <u>Te</u> relative clause
	Lexical DP	Main clause with topicalized DP
SpecFocusP	Lexical DP	Equative relative Clause Equative Main clause

4. Te in Te -Relatives is Not a Determiner

The previous section concludes that te-relative clauses are equative relatives with the equative marker ko omitted. Thus te-relative and equative clauses are structurally identical in all respects, except for the omission of ko in te-relatives. In this section, I explore another possibility that I will ultimately reject, namely that non-te and te-relatives are minimal pairs, differing in the absence or presence of te. This approach argues that CI Maori marks the difference between restrictive (te-relative) and non-restrictive (non-te) relative clauses by the presence or absence of te.

The discussion of the syntactic structure of non-te relative clauses in chapter three (section 5) shows that the Projection Principle and the Theta Criterion require a null element to be generated within the relative clause. The null element is a non-quantificational operator. According to the Topic Criterion (Rizzi 1997), the operator raises to SpecTopP, a scopal position, from where it dominates its binding domain. As a non-quantificational element, the operator seeks an antecedent - the relative noun. The co-indexing between the relative noun, the operator in SpecTopP, and its trace in an A-position of the relative clause enables the relative noun to be interpreted as an argument or adjunct of the relative clause predicate. The analysis of non-te relative clauses requires the presence of A-bar projections (ForceP, TopP etc.), however the projections themselves are devoid of phonetic content.

The principles which dictate the structure of non-te relatives (the Projection Principle, Theta Criterion, and Topic Criterion) are universal principles operating on syntactic structures, therefore they will apply equally to te-relatives. In section 3 above, I show that a relative operator representing a subcategorized argument must be nominative case-marked in te-relatives, just as in non-te relatives. However te-relatives are unable to form on an adjunct relative operator.

The discussion in this section assumes that non-te and te-relative clauses are minimal pairs, which differ in their interpretation as non-restrictive or restrictive respectively. According to Lasnik and Stowell (1991), the relative operators of these clauses will differ accordingly. Lasnik and Stowell argue that the relative operator in a restrictive relative clause is quantificational, while that of a non-restrictive relative clause is non-quantificational. As a restrictive relative clause, the te-relative operator is quantificational. It raises to an A-bar position where it has scope over its binding domain. The quantificational operator in te-relatives appears to be subject to the same movement

constraint as the non-te non-quantificational operator. In both cases, the argument relative operator must be nominative case-marked.

The proposal that te-relative clauses are structurally identical to non-te raises several questions. The first concerns the role that te plays in the relative clause. Te consistently precedes the tense/aspect marker, the predicate, and all arguments and adjuncts of the relative clause. I will explore here the possibility that te occupies a position within the A-bar system of the relative clause, either a specifier or a head. Another consideration is the inability of te-relatives to form adjunct relative clauses. A third aspect to be examined is how to account for the genitive case-marking on the possessive relative agent. This poses the most serious threat to the alternative treatment of te-relative clauses, as we shall see. In 4.1, I consider if te could be the overt manifestation of the quantificational relative operator. In section 4.2, I discuss whether te could be a complementizer that only emerges in restrictive te-relative clauses.

4.1 Te is a Quantificational Operator

The discussion of the previous paragraphs assumes a quantificational operator raises to an A-bar specifier in te-relative clauses. In this subsection, I consider if te could be the quantificational operator.

Keenan (1985:146) states that relative operators take one of four forms. They can be personal pronouns, special relative clause pronouns, full noun phrases, or “gaps” which are phonetically empty. Obviously the latter two options are ruled out under the analysis that te is a relative operator, as it is neither a full noun phrase, having no lexical head, or phonetically empty. Furthermore it cannot be a personal pronoun, as it does not encode person and number, which are normally encoded by CI Maori personal pronouns. Keenan (p. 149) states that special relative clause pronouns are “typically the same as, or morphologically related to, the demonstrative pronouns, or the interrogative pronouns in the language.” While te has the same initial morpheme as the demonstrative determiners (tēia, tēnā, tērā), it nonetheless occurs most commonly as te alone. The following examples illustrate that interrogative pronouns also have a different form. Wh-elements in CI Maori encode categorial information. The proper noun Wh-proform is 'ai (68), the

common noun Wh-proform is a'a (69), and the locative/temporal Wh-proform is 'ea (70).⁸⁵

- (68) Inārā kāre kua tika'anga kia 'iki ē [ko 'ai te
 but neg TAM right.nom TAM appoint sub eq who det
 ka no'o ki tōku tua katau e tōku tua kauī
 TAM sit prep det.O.Isg side right and det.O.Isg side left
 ‘But [I] do not have the right to decide who will sit at my right and at my left
 {Mark 10:40}
- (69) kāre atu ra 'aia i kite ē, [e a'a tāna
 neg dir dist pers.IIIsg TAM know sub det what det.A.IIIsg
 ka tuatua]
 TAM say
 ‘He didn't know what he would say” {Mark 9:6}
- (70) E 'akakite mai ki a mātou [ā 'ea e tupu
 TAM tell dir prep pers Iexpl prep when TAM happen
 ei tēia au mea]
 adv det.proxI num thing
 ‘Tell us when these things will happen” {Mark 13:4}
- Te-relative clauses on the other hand, contain an initial te/t- regardless of whether the relative noun is a common (71) or proper noun (72), (73), or a location (74).
- (71) Kua 'a'ao a Ioane i te kākā'u [RCteī ma'ani'ia ki
 TAM wear pers John acc det clothes det.TAM make.pass prep
 te 'uru'uru kamera]
 det hair camel
 ‘John wore clothes which were made of camel skin” {Mark 1:6}
- (72) ... e ko Iuta Ikariota, [RCteī tuku atu i a Ietu
 and eq Judas Iscariot det.TAM give dir acc pers Jesus
 ki tōna au enemi]
 prep det.O.IIIsg num enemy
 ‘...and Judas Iscariot who betrayed Jesus to his enemies” {Mark 3:19}
- (73) te aronga tei 'aere na mua e rātou [RCteī āru
 det crowd det.TAM go prep.A front and IIIpl det.TAM follow
 na muri,] ...
 prep.A behind
 ‘The people who went in front and those who followed behind ...” {Mark 11:9}
- (74) E i te au ngā'i kātōatoa [RCtā Ietu i 'aere ...]
 And prep det num place all det.A Jesus TAM go

⁸⁵ Examples (68) and (69) show the Wh-elements co-occurring with apparent te-relative clauses. I consider the structure of Wh-clauses in more detail in chapter five (section 2), so will not comment on their usage here. The intended point of these examples is simply the encoding of lexical category by the Wh-elements.

The examples show that te does not encode categorial information. However, there are languages where relative operator encodes grammatical information. For example, the German relative operator inflects for the gender and number of the antecedent relative noun, and for the case of the position it occupies within the relative clause. It is located in an initial position in the relative clause and just like te, is homophonous with the definite determiner. The difference between the German relative operator and te in CI Maori is that te does not encode features such as gender, person and number of the relative noun. However, it may be argued that te *does* provide information about the grammatical function of the relative noun within the relative clause. It has been noted in section 3 that te-relative clauses only relativize on subcategorized arguments, and that these subcategorized arguments must be nominative case-marked, regardless of their thematic role. The te-relative operator therefore always corresponds to the grammatical subject (where grammatical subject is defined as the nominative case argument). Thus te as a relative operator indicates that the relative noun corresponds to the grammatical subject of the relative clause.

This immediately raises the issue of adjunct relative clauses. The discussion of te-relatives has taken the defining feature of these clauses to be the presence of clause initial te. I have argued that relative clauses with te are restrictive, however the reverse is not entailed, that restrictive clauses must contain te. We must therefore define whether it is the case that *restrictive* relative clauses cannot be formed on an adjunct, or whether *te*-relative clauses cannot be formed on an adjunct.

The example below illustrates a relative clause formed on an adjunct phrase. This clause has the form of a non-te relative, as it lacks the clause initial te. However, I suggest that it is a restrictive relative clause in interpretation.⁸⁶ The relative clause defines the reference of taime ‘time’ to the specific point in time when the canoe came ashore.

⁸⁶ The interpretation of example (75) as a restrictive relative clause is at variance with the previously stated fact that all non-te relative clauses are non-restrictive, and hence contain a non-quantificational operator. I believe that in argument relative clauses, the restrictive/non-restrictive reading does play a role in the choice between te- and non-te relative clauses. For adjunct clauses, we may allow that there is a choice between a restrictive/quantificational relative operator and a non-restrictive/non-quantificational relative operator. It would then be the case that the operator raises to either FocusP or TopicP accordingly. In either case, it binds anaphoric ei; in chapter five (section 2), we will see that ei is not sensitive to whether the operator is

- (75) I *te* *tai*me *tika*i [_{RC} i uru atu ei te vaka nō
prep det time adv TAM enter dir part det canoe prep.O
Sālelologa ki uta i a 'Upolo], kua rere atu 'a
Sālelologa prep ashore acc pers 'Upolo TAM jump dir pers
'Ina ki va'o
'Ina prep out
'At the very moment that the canoe from Sālelologa came ashore at 'Upolo, 'Ina
jumped out" {EDU1}

The limitation on te-relatives to argument functions must be correctly defined as a limitation on te, rather than on restrictive relative clauses. This suggests that the quantificational operator in restrictive relative clauses has two forms: te for an argument, and a null form for an adjunct such as in (75). While this seems a satisfactory account of te's distribution, it is problematic given that the parameter on which other operators differ, such as the interrogative pronouns in (68) - (70), appears to be lexical category, rather than grammatical function. In chapter five (section 2), it is shown that the Wh-operator 'e a'a can be either an argument operator 'what', or an adjunct operator 'why'. This provides further evidence that the form of an operator does not usually vary according to the argument/adjunct distinction.

The preceding discussion shows that te does not vary according to features that other anaphoric elements encode. Unlike personal pronouns, it does not inflect for number or person; unlike interrogative pronouns, it does not inflect for lexical category (proper name, common noun, location etc). Te as an operator differs according to grammatical function. While none of these factors taken separately rule out te as a relative operator, they do conspire to make the analysis less appealing. In the following section, I examine another option, to treat te as a complementizer. It will be shown that significant problems arise in the treatment of te as a complementizer.

4.2 Te is a Complementizer

In this section, I consider the possibility that te is a complementizer in te-relative clauses. This analysis proposes that non-te and te-relative clauses differ in the phonetic content of

quantificational or non-quantificational. Adjunct Wh-operators which are quantificational and raise to SpecFocP bind ei, just as non-quantificational adjunct relative operators in SpecTopP bind ei.

a complementizer head node (e.g. Force or Fin).⁸⁷ Here I consider if the analysis of te as a complementizer can be motivated in terms of evidence internal to the relative clause structure. In chapter five (section 1), I discuss in more detail a typology of the A-bar system in CI Maori, and examine other types of subordinate clause with the aim of establishing if there is a class of lexical complementizers.

In chapter two (section 3), I posit that there are two functional projections in the CI Maori DP: DP and NumP. I argue that the D node enables a lexical phrase to be the argument of a predicate, while NumP carries out the principal referential functions within the DP. I suggest, following Szabolcsi (1994), that the D node is like a complementizer. Both D and C subordinate a constituent to a predicate head. The lexical item that fills D in CI Maori is te. In section 3 of this chapter, I suggest that one of the reasons that ko can be omitted in te-relative clauses is because te always introduces a subordinate constituent. Thus, the equative DP headed by te is interpreted as subordinate to the relative noun. However, I maintain there that te stills heads a DP even in te-relatives. Given that te indicates subordination, why do we not simply say that te is the complementizer of te-relative clauses? Te-relatives perhaps have an overt complementizer to distinguish them from the non-restrictive, non-te relative clauses. Thus te as a complementizer marks a restrictive relative clause, perhaps in Specifier-head agreement with the quantificational te-relative operator (I return to the issue of argument versus adjunct operators later in this section).

The claim that te occupies a complementizer node within a clausal constituent raises an immediate problem with the typology of functional projections within the grammar of CI Maori. Like many Austronesian languages, CI Maori allows underived lexical bases of varying categorial types to head both clausal and nominal constituents. This places a burden on the functional projections to indicate the role a particular lexical base is playing within a sentence. For example, the underived verb rongo 'hear' is the head of a clause in (76), and it is marked with the tense/aspect marker kua. In (77) rongo is the head of a DP, and is marked with te.

⁸⁷ Here, I consider the implications of te as a complementizer, without addressing its specific location in the syntax. I will assume it occupies a head of the extended CP, however its actual location is peripheral to the issues raised in this chapter. The discussion in chapter five addresses the syntactic allocation of A-bar elements more precisely.

- (76) **Kua** rongo au i tā rātou tautai tītomo
 TAM hear Isg acc det.A IIIpl fish *tītomo*
 “I heard about their *tītomo* fishing” {EDU16}
- (77) Kua tutuki **te** rongo meitaki o Ietu ki te au ngā'i
 TAM reach det hear well O Jesus prep det num place
 kātoatoa
 all
 “Jesus’ good reputation had reached all places” {Mark 6:14}

Within GB theory, the projection of functional phrases enables various features of the morpho-syntax to be checked. For example, the CI Maori I node houses tense/aspect features of the predicate’s event structure, which are checked when the verb raises to I. Furthermore, nominative case is checked by specifier-head agreement within IP, so I fulfils another role relating to the predicate: checking the nominative case of its argument. Thus I is the “extended head” of V, in that I checks case and tense/aspect features of the verb and its subject. Similarly within the DP, NumP is the extended head of N as it checks the genitive case of the highest thematic argument of N, and checks the number feature of N. However unlike I and Num, D is *not* the extended head of a lexical base. The role of D in the syntax is outward-facing – it enables its complement to act as the argument of a higher predicate. As shown in chapter two, it plays a subordinator role similar to a complementizer. Rizzi (1997:284-5) proposes that the A-bar system (ForceP, FinP, etc.) is distinct from the IP system. While IP is projected to check morphological features (A features) of the verb and its arguments, the A-bar system is generated for interpretive functions such as Wh-elements, scope operators (A-bar features), and subordination markers.

Thus the A-bar heads (Force, Fin etc.) are not the extended head of V (or other category of lexical head), and D is not the extended head of N (or other category of lexical head). This means that there is no reason to exclude DP from taking an IP as a clausal complement. However, if te takes a predicative complement in some contexts (here, relative clauses) and a nominal complement in others, what sort of features does te itself contain that are compatible with both nominal and predicative complements?

Lefebvre and Massam (1988:219) propose that minor categories, such as D, are not specified for any categorial features, rather they inherit these features from their

complements.⁸⁸ Interestingly, the evidence that leads Lefebvre and Massam to this conclusion is the presence of the Haitian Creole determiner la as the head of both nominal and clausal constituents. Their proposal refers specifically to the categorial features [\pm V; \pm N], and certainly appears to be true of CI Maori, where D (via Num) and I can take complements of varying word categories. However, it also provides an explanation for the presence of te in relative clauses, because it argues that D does not have to co-occur exclusively with a nominal complement: it will be defined as nominal or clausal on the basis of its complement.

The types of features that typically belong to nominal DPs are features of referentiality (e.g. [\pm definite], [\pm specific]), deixis, number, and gender. In CI Maori, gender is not a grammatical feature of common or proper nouns, however DPs do mark distinctions of number, definiteness, and specificity. There are also three categories of deixis (near speaker, near hearer, distant to both). In chapter two (section 5), it was shown that the specifier of NumP is the locus of deictic and some referential features. The number markers in the head of NumP express number. A striking characteristic of the common noun DP in CI Maori is that te can occur in singular or plural DPs, in specific or nonspecific DPs, and in definite or indefinite DPs (due to the restrictions on the occurrence of 'e, the indefinite determiner). It co-occurs with all types of possessive phrases, and with all deictic particles. Thus many of the nominal features of a DP are not introduced by te, rather by its complements in NumP. However, te does enable a lexical phrase to refer. Therefore we might assume that te is specified for the feature [+referential].

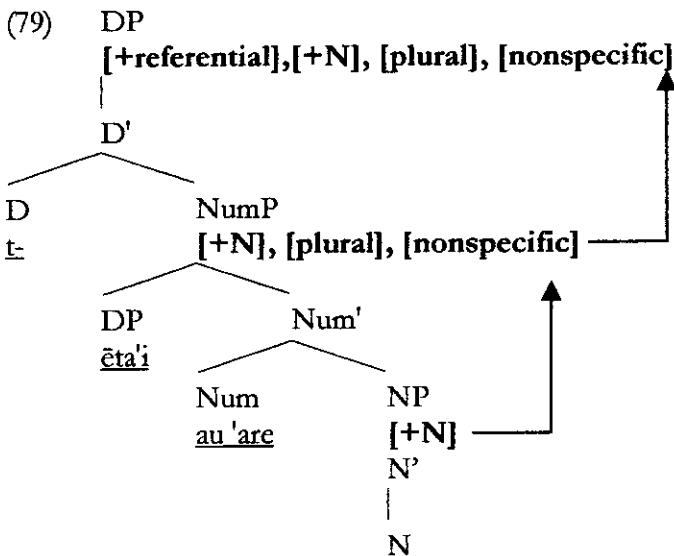
Lefebvre and Massam (1988) show that the Haitian Creole determiner la confers the feature [+definite] on its NP complement. When it occurs with a clausal complement, it marks a presupposition on the event described within that clause. They argue that the two features are closely related to one another semantically, because in both cases the existence of the event or object is presupposed to be true. Te in DPs is only inherently specified as [+referential], however its default reading is definite. In most cases where te alone determines a noun, te indicates to the interlocutor that the speaker assumes the referent is known. Te in relative clauses marks a restrictive relative clause. A restrictive relative clause presupposes that the relative noun has a set of potential entities as its

⁸⁸ My thanks to Anna Maclachlan for bringing this article to my attention.

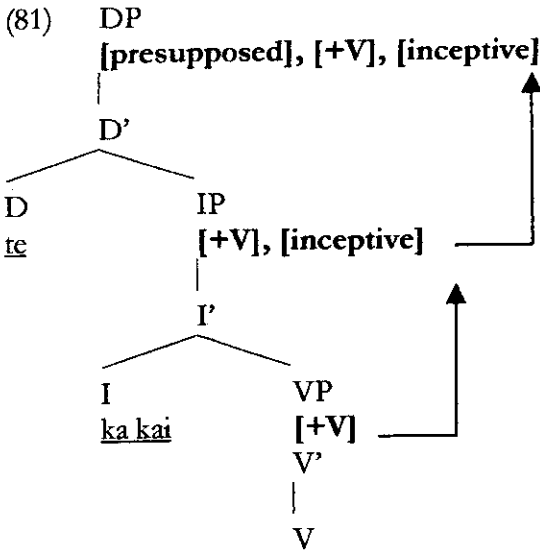
referent, for example in “the door that slammed”, there is a presupposition that there is a set of doors. The restrictive relative clause defines which of the set of doors is being referred to by the relative noun. Thus it may be the interpretation of te-relative clauses that require te to be present. Non-restrictive relative clauses on the other hand, do not presuppose a set of potential referents for the relative noun, and they do not occur with te.

Under the analysis of te as a complementizer, te inherits feature values from both nominal and clausal complements, and the features of the complements ultimately determine the clausal or nominal interpretation. Examples (78) and (79) show a nonspecific, plural DP. The nonspecific feature comes from ēta'i in SpecNumP; the plural feature from au in Num, and the categorial feature [+N] from 'are 'house' which moves from N to Num in the syntax. Examples (80) and (81) show a relative clause introduced by te. The tense/aspect feature percolates from ka in I, and the categorial feature [+V] from kai 'eat', which moves from V to I in the syntax. I represent te in (81) as a D, without specifying the functional head it occupies within Rizzi's (1997) articulated A-bar structure.

- (78) tēta'i au 'are
 det num house
 “some houses”



- (80) te tangata [_{RC} te ka kai]
 det man det TAM eat
 “The man who will eat”



In principle, the notion of te as a complementizer can be accommodated within the typology of CI Maori functional heads. In the following paragraphs I discuss some problems that arise if te is a complementizer.

We have already established in the previous sections that te-relative clauses differ from non-te in the presence of te initially in the relative clauses, and in the placement of the genitive case-marked agent in possessive relative clauses. There is a further interpretative difference: non-te relative clauses are non-restrictive, while te-relatives are restrictive. The examples below illustrate a te-relative SRCs (82) and a possessive relative (83).

- (82) kāre te au tamariki 'Amoa [_{RC} tei ānau i Nūtirēni
 neg det num children Samoa det.TAM be born prep NZ
 nei] i kite
 proxI TAM know
 "The Samoan children who were born in NZ don't know" {EDU14}

- (83) E 'akamanako meitaki i te au tuatua [_{RC} tā kōtou e
 TAM think well acc det num word det.A IIpl TAM
 'akarongo]!
 hear
 "Think carefully about the words that you hear!" {Mark 4:24}

In subsection 4.1, I show that restrictive relative clauses on an argument contain te, while restrictive relative clauses on an adjunct do not contain te. If te is a complementizer, this variance according to the grammatical function of the relative operator is unexpected. Rizzi (1990:67-68) proposes that interrogative, declarative, and relative subordinate

clauses are distinguished by combinations of the features [wh] and [predicative]. These features are located in an A-bar head, and according to the Wh-Criterion or variant, they must agree at some level of the syntax with a similarly featured constituent in their specifier. Rizzi argues that restrictive relative clauses are [+predicative] as they are predicated of the relative noun, however languages differ in the value of [wh] that they assign to the relative clause complementizer. For English relative clauses, these features determine the form of the relative clauses in (84) - (86) below. The Wh-pronoun which is [+wh, +pred]; the complementizer that is [-wh, +predicative]. In (84), the Wh-element raises to an A-bar specifier according to the Wh-Criterion, and agrees with a null complementizer, which must be [+wh,+pred] also. In (85), a null operator agrees with the feature values of that. Because that and which disagree in their value assignment for [wh], they cannot co-occur. Hence (86) is ungrammatical, because which is not in a specifier-head agreement relationship with a [+wh] complementizer, and that is not in a specifier-head agreement relationship with a [-wh] operator.

- (84) The thing which I saw
- (85) The thing that I saw
- (86) *The thing which that I saw

Now if te is a relative clause complementizer, it is specified as [+predicative] in Rizzi's typology. Te does not co-occur with interrogative pronouns, thus I assume that te is negatively featured for [wh]. If the opposite were true, Wh-elements pronouns would be required to co-occur with te, in order to satisfy te's [+wh] feature. Therefore, te is specified as [+pred, -wh]. It also must be explained why te does not occur in adjunct relative clauses. Te must be further specified to include a feature that disallows its co-occurrence with an adjunct relative operator. Given that te always introduces a relative clause on a nominative case-marked argument, we might posit that the relevant feature for te's distribution is [+nominative]. This will rule out the co-occurrence of te and an adjunct operator, which would be [-nominative], in much the same way as which cannot occur with that in (86). Both cases give rise to a feature value clash. The essential problem with this is that a feature such as [nominative] is a feature of the A-system, rather than the A-bar system, and hence it is unclear how it can be relevant for complementizer features, which belong in the A-bar system. Chomsky (1993) proposes that once feature values are checked in the appropriate specifier-head agreement relationship, they disappear from the representation. The nominative case-marked relative operator checks

its [+nominative] feature in SpecIP; according to Chomsky, the [+nominative] feature should then disappear.

In order for the distribution of te to fall out from feature checking, we must stipulate that the argument operator's [+nominative] feature persists, so that it can be checked again in specifier-head agreement with te. I find this solution rather *ad hoc* as there does not appear to be any motivation for it elsewhere in the grammar. One might imagine that it is similar to the nominative case-marking constraint on raising in relativization and topicalization. However, in that case the constraint applies specifically to the syntactic process of raising (move- α), rather than feature checking in a specifier-head agreement relationship. The persistence of the [nominative] feature predicts that the grammar differentiates the grammatical function of operators at the A-bar level, while the nominative case constraint operates over raising and is probably reducible to some condition on the proper government of traces. The latter constraint does not rely on the persistence of a case feature such as [nominative] into the A-bar system, as case features are not relevant in governing traces of movement. This provides one difficulty in accounting for the distribution of te as a complementizer.

Another problem arises with the possessive relatives. The possessive relative agent is unusual of transitive verb agents in both its surface location and in its case-marking. The agent of a main clause transitive verb comes after the verb and receives the unmarked nominative case (87). A transitive verb agent in an embedded clause also occurs post-verbally, and receives the nominative case (88). However, the possessive relative agent precedes both the verb and the tense/aspect marker e, and emerges with the genitive case (89).

- (87) Kua 'akarongo **rātou** i te tuatua a te Atua
 TAM hear IIIpl acc det word A det Lord
 "They heard the word of the Lord" {Mark 4:20}
- (88) Kua 'irinaki a 'Tama ē kua 'akarongo **rātou** i te
 TAM believe pers Tama sub TAM hear IIIpl acc det
 tuatua a te Atua
 word A det Lord
 Tama believed that they heard the word of the Lord
- (89) E 'akamanako meitaki i te au tuatua [_{RC} **tā** **kōtou** e
 TAM think well acc det num word det.A IIpl TAM
 'akarongo]!

hear

“Think carefully about the words that you hear”

{Mark 4:24}

Given that (88) and (89) are both embedded clauses, and further that embedded clauses generally do not mark the transitive agent (or indeed any subcategorized argument) with the genitive case, there must be something in the relative clause construction that produces this unusual situation. We can rule out that the presence of te blocks nominative case assignment to the agent. I have assumed throughout that a subcategorized relative operator must be assigned nominative case in order to raise to the left-periphery. In (90), the agent thematic role is assigned to the null relative operator, and the theme emerges with the accusative case. I argue in chapter three (section 6) that accusative case can only be licensed on the theme argument if the relative operator is licensed with the nominative case. In (90), nominative case is licensed on the null relative operator even in the presence of te. The relative operator is thematically an agent of the transitive relative clause.

- (90) No te mea kāre tēta'i 'ua atu [_{RC}tei rave i te
 prep.O det thing neg det adv dir det.TAM do acc det
 'anga'anga ūmere i roto i tōku nei ingoa] e
 work amazing prep in acc det.O.Isg proxI name TAM
 rauka i te tuatua 'akakino mai iaku i muri 'ua ake
 can to speak malign dir acc.pers.Isg prep back adv adv
 i te reira
 acc det there
 “Because anyone who performs a miracle in my name cannot speak ill of me
 afterwards”
 {Mark 9:39}

Following the treatment of non-te possessive relatives (chapter three, section 6), the agent in te- possessive relatives is licensed with the genitive case in order for the theme to receive nominative case. It is not the presence of te that forces an agent to emerge with the genitive case, as non-te possessive relatives are also marked with the genitive. However, the presence of te does seem to affect the surface location of the possessive relative agent. In non-te possessive relatives, the agent is located at SpecNumP at S-Structure, while in te-relative it must be within the relative clause itself as it follows the complementizer te. This raises an interesting problem for the account of te as a complementizer. I argue above that case licensing in CI Maori is a function of the extended head of the lexical phrase, and te is not an extended head. How then can we account for the fact that a genitive case-marked agent within a tensed clause can be

grammatical in only those cases where te is present, even though te supposedly plays no role in case-marking?

The genitive case within DPs is a structural case and is checked in SpecNumP. The first issue that must be established is whether the genitive case of possessive relatives is inherent or structural. The Actor Emphatic (AE) is the only other construction in CI Maori where the agent of a tensed clause receives genitive case. However in chapter three (section 6), I argue that the genitive case on the AE agent is licensed by the preposition n- as this preposition assigns genitive case to its complements in contexts other than the AE. (91) illustrates an AE main clause, and in (92) an adjunct phrase nā te moa ‘for the chickens’ is introduced by the preposition n- which assigns the a allomorph of the genitive case.

- (91) **Nā** **Tioni** **i** 'aka'oro **te** motokā
 prep.A Tioni TAM drive det car
 “It was Tioni who drove the car”

- (92) **tē** **kana** **nei** **au** **i** **te** 'akari **nā** **te** **moa**
 TAM grate proxI Isg acc det coconut prep.A det fowl
 “I’m grating up the coconut for the chickens”
 {Buse and Taringa (1996:263)}

The genitive case in the AE is structural, however it is assigned by the preposition n-. In possessive relatives, there is no preposition to license the genitive case. However there is no precedent for treating the genitive case as an inherent case either. It is not assigned inherently in either clauses or in nominal DPs. Furthermore, the pre-verbal location of the agent suggests that it must move for some reason, and the most obvious reason is case-checking. But this implies that there is a genitive case-checking head within clausal phrases, and also that there is a structural agentive case in clauses. Both of these assumptions are problematic, as was pointed out in chapter three, because this type of structural genitive case is simply not found elsewhere in tensed clauses, whether subordinate or main clauses. The only way to salvage the construction is to assign some case-checking facility to te. Certainly, the presence of te distinguishes te-possessive relatives from other subordinate clauses, where agents do not emerge in the genitive case. Earlier in this section, I argue that te can head both clausal and nominal constituents because it is not an extended head of the lexical head, and thus does not participate in feature checking. Case licensing is an example of exactly that function which te *should not*

carry out. I conclude from this that the analysis of te as a complementizer raises some rather fundamental problems for case licensing in the possessive relatives.

Another problem emerges in the comparison between non-te and te-possessive relatives. If te-relatives are structurally identical to non-te relatives, but differ only in the phonetic content of a complementizer head, we might wonder about the relationship of non-te and te-possessive relatives. In chapter three (section 6), I argue that the non-te possessive relative agent is not base-generated within the relative clause. However the te-relative agent must be base-generated in SpecVP of the relative clause, as it remains within the relative clause at S-Structure. The presence or absence of the complementizer te plays an indirect role in the D-Structure location of the agent. When te is absent in non-te relatives, the agent is generated outside of the relative clause.

It is difficult to imagine why the presence of a complementizer should have such fundamental effects on the D-Structure positioning of the relative clause agent. Arguments are base-generated in a position where they satisfy the Projection Principle of the verb, and where they can be assigned the appropriate thematic role. The location of an agent at D-Structure is determined by the argument structure of the verb, and should be independent of the presence of a complementizer. It is more feasible that the presence of a complementizer will affect the *S-Structure* location of the agent, rather than the D-Structure location.⁸⁹ We could revise the assumption of chapter three (section 6), and instead base-generate the agent in SpecVP in both relative clause types. The lack of te in non-te relative clauses then creates a situation where there is no case-checking head for the agent. Hence the agent is forced to move to the matrix DP for case checking.

It seems to me that this version, where the agents of both relative clause types are base generated in SpecVP of the relative clause, is unmotivated for several reasons. In chapter three (section 6), I showed that base generating the non-te agent within the relative clause

⁸⁹ Certainly, overt complementizers can impact on movement from within an embedded clause, as the examples in (i) and (ii) illustrate. Here the Wh-subject of the embedded sentence can only raise to sentence initial position if the complementizer is null (examples from Rizzi (1990:29)):

(i) *Who do you think [t' that [t left]]

Who do you think [t' \emptyset [t left]]

We could argue that the presence of the complementizer in te-relatives blocks the agent's movement. However, this again raises the question of a genitive case-licensing head with the relative clause. If the agent's movement is blocked while the clause is still grammatical, there must be some case-licensing head for the agent's genitive case.

proves problematic for binding, Case theory, and the ECP. Another undesirable feature of this analysis is that it implies that non-*te* relatives are somehow unusual or exceptional in that the agent cannot be case checked within its own clause and hence must raise out of its own clause to the matrix DP. This is inconsistent given that genitive case is canonically licensed for arguments within a DP, but is most unusual and problematic within the clause. Therefore I assume that the analysis of *te* as a complementizer presents fundamental problems in accounting for possessive relative clauses. In the following section, I review the analyses for *te*.

5. Evaluation of the Competing Analyses

The discussion in this chapter focuses on the structure of *te*-relative clauses. I present several treatments of this clause, concentrating particularly on the role of *te* in the relative clause. When non-*te* and *te*-relative clauses are compared, they appear to differ primarily in the presence or absence of *te*, as the examples below illustrate.

- (93) kua kite atu 'a Teremoana i te tupa [_{RC}e totorō ra
 TAM see dir pers Teremoana acc det crab TAM crawl dist
 ki va'o i tōna va'arua]
 prep out acc det.O.IIIsg hole
 "Teremoana saw the crab which was crawling out of its hole." {EDU4}

- (94) Kua 'ākara matariki atu te ariki, ngā mata'iaipo 'ē ngā
 TAM look intently dir det ariki num mata'iaipo and num
 rangatira i te tuna tūkē 'ua ake rāi [_{RC}tei āru
 rangatira acc det eel strange adv adv adv det.TAM follow
 mai i ā ia ki roto i te 'are 'uipā'anga]
 adv acc pers IIIsg prep in acc det house meeting
 The ariki, mata'iaipo and rangatira⁹⁰ watched closely the really very strange eel
 which followed her into the meeting house"
 {EDU1}

In both relative clause types, the relative clause follows the relative noun and has its own tense/aspect marker. However in *te*-relatives, *te* intervenes between the relative noun and the relative clause tense/aspect marker. In the case of the possessive relative, non-*te* and *te*-relatives differ further in the location of the genitive case-marked agent. In non-*te*

⁹⁰ An *ariki* is a paramount chief, who rules over a tribe; a *mata'iaipo* is the head of a sub-tribe; *rangatira* is a hereditary title held by the members of an *ariki* or *mata'iaipo* family (definitions from Buse and Taringa (1996)).

relatives, the agent is located in the relative noun's DP (95). In te-relatives, it follows the relative clause initial te (96).

Non-te Relative:

(95) 'E ma'ata tāku 'anga'anga [_{RC} kā rave i tēia rā]
 det big det.A.Isg work TAM do prep det.proxl day
 "I have a lot of work to do today"
 {EDU1}

Te-relative:

(96) Nō reira ma'ata tā Mareko tuatua nō runga i te
 prep this big det.A Mark word prep top acc det
au mea [_{RC} tā Ietu i rave]
 num thing det.A Jesus TAM do
 "That's why Mark's writings about the things that Jesus did are numerous"
 {Intro to Mark}

There is a further interpretive difference between the two relative clause types. Non-te clauses are non-restrictive relatives; te-relatives are restrictive. This interpretive difference is not uniquely indicated by the presence or absence of te however, as restrictive relative clauses on adjunct phrases do not contain te. Thus te is confined to restrictive relative clauses on subcategorized arguments.

The characteristics listed above define the syntactic and semantic features of te-relative clauses. Any account of te-relatives must provide a plausible explanation for each of these features. In the remainder of this section, I examine these features in turn and show how the analysis of te-relatives as a type of equative relative clause provides the best account for these features.

5.1 Presence or absence of te

By the very nature of the heading above, there is an implication that non-te and te-relative clauses share a syntactic structure, except for the omission of te in non-te relatives. The discussion of section 4 explores this issue. Non-te relative clauses are lexically headed by the relative clause verb and project maximally to a ForceP. A relative operator raises to an A-bar specifier, however the A-bar system itself does not contain any overt lexical material. The assumed syntactic minimality between non-te and te-relatives and the location of te to the left of the tense/aspect marker and verb of the relative clause leads

to an expectation that te may be the manifestation of some element of the A-bar system: a complementizer or a relative operator.

However te does not appear to act like a typical operator or complementizer. It varies according to whether the relative clause operator is an argument or adjunct. If te is itself the operator, its variance according to grammatical function sets it apart from other operators within CI Maori, such as Wh-elements, which vary according to lexical class. If te is a complementizer, it must agree only with the features of an argument relative operator, and these types of features are usually not present at the A-bar level (Chomsky (1993)).

The other option is to reject the notion that non-te and te-relatives are minimal pairs, and instead to follow the clue given by the fact that te is a determiner and canonically heads nominal phrases. This instead leads to a comparison of te-relative clauses to equative relative clauses marked with ko, and headless relative clauses. Given that te-relatives have an almost identical surface syntax to both these constructions, they can be represented as differing manifestations of the same construction. We must then explain the presence or absence of ko, rather than the presence or absence of te. I argue that ko can be omitted in certain circumstances where the interpretation of the constituent can be determined without ko. This is discussed in section 3. This approach further unifies several clause types, which can be subsumed under a single syntactic construction. It is shown in section 3 that main clauses with topicalized DPs, in equative clauses with ko, non-te and te-relative clauses all involve raising of either an overt DP or a relative operator to SpecTopP.

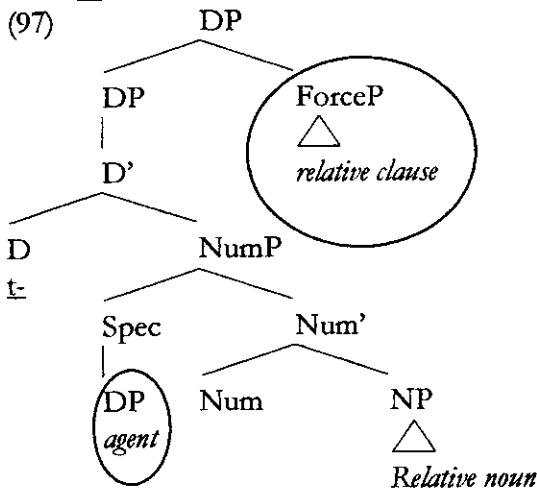
5.2 The Genitive Case-Marked Agent

Non-te and te-relative clauses differ also in the placement of the possessive relative agent. The underlying motivation for the possessive relative construction is the requirement to license the nominative case on a theme operator in a transitive relative clause. In chapter three (section 6), I note some problems with the theoretical account of this process, however its explanation on a descriptive level is quite transparent. In non-te relatives, the transitive agent is demoted not only from its canonical role as the nominative case-marked argument, but also it is demoted from its own clause. It is generated in the relative noun's NP, and thus receives genitive case. If non-te and te-relatives share a

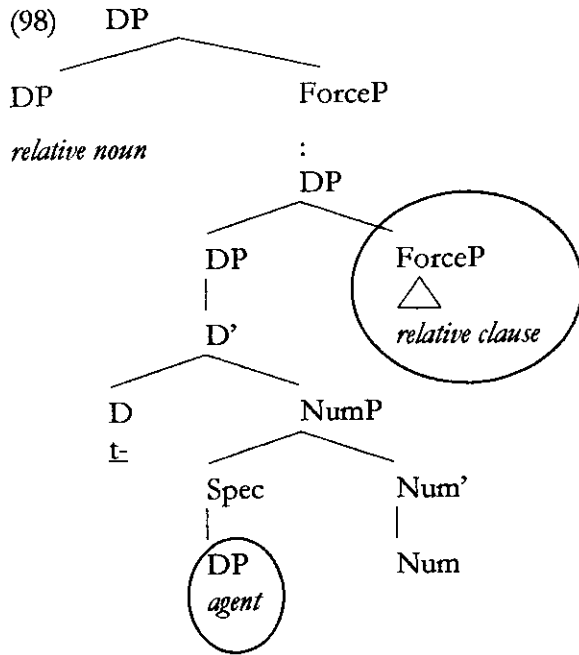
syntactic structure, the location of the genitive case-marked agent in te- possessive relatives poses grave problems, as were highlighted in subsection 4.2. The problem is that there is no obvious mechanism by which the agent's genitive case feature is checked, given that genitive case is not licensed on the arguments of other tensed clauses (main or subordinate) elsewhere in the grammar.

However, if the agent of te-relative possessive relative clauses is treated instead as a constituent of a headless DP, then the genitive case-marking is accounted for by the same mechanisms used in non-te relatives. Basically this is because the agent of a "te-relative" is in effect the agent of a non-te relative clause. Recall that te-relative te dominates a headless DP, with a non-te relative clause adjoined. This is schematized in (97) and (98) below.

Non-te Relative:



Te-relative:



5.3 Restrictive versus Non-Restrictive Relative Clauses

The interpretive difference between non-te and te-relative clauses initially appears to support a syntactic parallelism between the two clause types. The idea would be that te indicates a restrictive relative clause, while the absence of te indicates a non-restrictive relative clause. However, sections 3 and 4 show that this assumed connection between te and a restrictive reading is misleading. While it is true that te confers a restrictive interpretation on the relative noun, it is not the case that a restrictive interpretation is necessarily indicated by te. In section 4, I show that adjunct relative clauses may be interpreted restrictively, however they cannot contain te. This implies that te is somehow incompatible with an adjunct relative operator. I have already noted in 5.1 that the distinction between argument and adjunct is not parameterized in other types of operator or complementizer.

In section 3, I suggest that the restriction of te-relatives to subcategorized arguments is not a function of the relative clause construction as such, but rather due to the nature of the headless DP headed by te. Headless DPs generally cannot refer to the types of thematic role that are typically expressed by adjunct phrases. Many of these thematic roles have other pronominal forms, such as reira which is a locative/temporal proform. Therefore, the restriction of te-relative clauses to subcategorized arguments is a consequence of the type of antecedent that headless DPs generally may take.

6. Conclusion

The discussion of this chapter shows that te-relative clauses are best accounted for as equative relative clauses where the usual equative marker ko is omitted. The various syntactic and semantic features of te-relatives can be accommodated within this analysis without the need to introduce into the grammar any additional structure or constraints. Another aspect is the syntactic similarity between the various clause types which make use of an specifier in the A-bar system, that of Topic Phrase or Focus Phrase. In the following chapter, a preliminary typology of the A-bar system is proposed. The aim of that chapter is to examine the way in which various features of the A-bar system predict the surface form of various syntactic constructions.

Chapter Five: A Typology of the A-bar System

The previous chapters examine in detail the function of the lexical item *te*. In chapter two, I propose that *te* is analogous to a complementizer, in that it enables its nominal complement to act as the argument of a predicate. In chapters three and four, I examine the different types of relative clause. Of particular interest is the role of *te* in *te*-relative clauses. I conclude in chapter four that *te*-relative clauses are equative relatives with an omitted *ko*. I argue that *ko* may be deleted in *te*-relatives for two reasons. One relates to the anaphora introduced by the headless DP, which indicates overtly that the headless DP must seek an antecedent, the relative noun. The other relates to the fact *te* canonically indicates subordination to a higher predicate, and thus any constituent that *te* introduces, including a relative clause, will be interpreted as subordinate. In chapter four (section 4.2), I reject the notion that *te* is the relative clause complementizer in *te*-relatives, largely on the basis of the appearance of the genitive case-marked agent in possessive relative clauses. Genitive case is not licensed on clausal agents elsewhere.

The intention of this chapter is to examine in more detail the syntax of the left-periphery of clauses. Given that D, in which *te* is located, acts like a nominal complementizer, an interesting issue is whether clausal constituents also make use of a complementizer node. In section 1, I show that there does not appear to be a class of complementizers for clausal arguments. This supports my conclusion that *te* is not the relative clause complementizer, as the complementizers which mark clausal arguments are typically homophonous with relative complementizers. However, some clause-initial elements enable a nominative case-marked argument to raise to the specifier of IP. Thus, while clausal arguments do not contain a lexical complementizer, there is nonetheless a clause-initial position which has detectable syntactic effects. A raised nominative case argument in SpecIP is equivalent to a raised genitive case argument in SpecNumP. This enforces the position argued for in chapter two, that CP and DP are equivalent categories.

An interesting issue that arises in the discussion of relative clauses is the parallelism between topicalized DPs and relative clause operators. It is shown that these constructions all involve raising of either an overt topic DP or a relative operator to SpecTopP. We also noted the role of a FocusP in equative clauses. In sections 2 and 3,

I discuss further the syntax of A-bar specifiers and the DP constituents that raise to them. I consider various constructions that utilize the specifiers of TopicP and FocusP. Section 2 examines interrogative clauses, and proposes that Wh-operators raise to the specifier of FocusP. Section 3 shows some constructions in which TopicP and FocusP co-occur, and illustrates how the existence of these two operators with distinct informational values allows a concise treatment of several different clause types.

1. **Argument and Adjunct Complementizers: Raising to SpecIP**

In this section, I examine the properties of a set of clause-initial particles which may be assigned to the general class of “complementizer”. A subset of these complementizers enables a nominative case argument to raise to a preverbal position. I treat this preverbal position as SpecIP, following Pearce (1998a) for NZ Maori (see also chapter two, section 4). The discussion will also show that clausal arguments do not appear to have a lexical complementizer, while clausal adjuncts do.

Bhatt and Yoon (1992) define the category “complementizer” as bi-functional. Complementizers define their clause type as declarative, interrogative, imperative, and so on. They also indicate subordination to the verb of a matrix clause. English conflates these two functions into a single lexeme: the complementizer that indicates that the clause is declarative, and that it is subordinate to the main clause verb. Rizzi (1997) analyzes the two main functions of complementizers as subordination and tense selection of the lower clause. For example, the English complementizer that selects a finite clause (1), while for selects a non-finite clause (2).

- (1) The man hoped [_{CP} **that** his horse would win the race]
- (2) The man prayed [_{CP} **for** his horse to win the race]

In Rizzi’s analysis, these functions are structurally distributed between ForceP, which acts as the subordinator and the indicator of clause type, and Fin(iteness)P, which determines the finiteness of the embedded IP. As Rizzi points out (footnote 6, p. 328), his system differs from Bhatt and Yoon’s by assigning the functions of subordination and indication of clause type to the single phrase, ForceP. To integrate Bhatt and Yoon’s analysis with Rizzi’s, the C system would instead be composed of three functional projections, in

which the specification of subordination, of clause type, and of finiteness would be individually located.

In the consideration of complementizers in CI Maori, a distinction needs to be made between those subordinate clauses which fulfil an argument role in the matrix verb, and those which fulfil an adjunct role (i.e. selected versus non-selected phrases). I consider first clausal adjuncts.

Subordinate clauses which fill an adjunct role do generally have a clause-initial particle which may be considered a complementizer. Adjunct complementizers however differ from the complementizers in (1) and (2), as the former indicate a semantic relationship between the matrix and subordinate clause, as well as a grammatical relationship. For example, the adjunct complementizer because in (3) indicates a causal relationship between the main and subordinate clause, while that and for indicate only the grammatical relationship and entail no such semantic relationship.

(3) The horse won [_{CP} because the man trained it well]

Some adjunct complementizers in CI Maori display a quality that is of interest here, namely that they allow a nominative case argument to raise to SpecIP. In chapter two, I compare DP and NumP of the nominal phrase to CP (or equivalent, Rizzi (1997)) and IP of the clausal phrase. In nominal phrases, the D node must be lexically filled, most commonly by te, and genitive case-marked arguments are located either in SpecNumP or in the argument's D-Structure position within the lexical projection, NP, VP, AP. Clausal constituents do not require the C node to be filled, however when the node *is* filled nominative case-marked arguments may either raise to SpecIP or remain in their D-Structure position. This parallelism between a filled D/C node and an preverbal position for the subject provides support for the argument that DP and CP are functionally equivalent.

The examples below show the adjunct complementizer nāringa 'if'. In (4), a main clause with nāringa 'if', the nominative case-marked subject of the clause 'aia 'he' precedes the tense/aspect marker ka and the clausal predicate. In (5) and (6), nāringa precedes the negation particle kāre which in turn precedes the tense/aspect marker of the clause. The

placement of the nominative case subject 'aia 'he' differs in these examples. In both cases, it precedes the tense/aspect marker and verb, however it varies in its location with respect to the negator kāre. I return to this below.

- (4) nō te mea, **nāringa** 'aia ka pupu'i i te tīnana
 prep.O det thing, if IIIsg TAM shoot acc det mother animal
 kia mate, kā mate rāi te 'ānaunga
 TAM die TAM die adv det litter
 "Because if he shoots the mother animal dead, then the litter will die as well"
 {EDU18}

- (5) 'E ngari ake te reira tangata, **nāringa** kāre 'aia i
 det be better adv det there man if neg IIIsg TAM
 'ānau'ia mai
 birth.pass dir
 "It is better [for] that man if he hadn't been born." {Mark14:21}

- (6) **nāringa** 'aia kāre i 'akapērā, kāre e tangata e ora
 if IIIsg neg TAM do so neg det man TAM live
 mai.
 dir
 "If he didn't do that, no one would survive." {Mark 13:20}

Other clause-initial elements share this property of allowing a raised nominative case subject.⁹¹ The examples below show a raised subject with a clause negated by kāre (7), with a clause-initial temporal phrase (27), and with an Actor Emphatic clause where the agent is focused (9). However, inara 'but' (10) and nō te mea 'because' (11) (literally, 'of the thing') do not co-occur with a raised subject.

- (7) **Kāre** 'aia e 'inangaro i te no'o ki te pae i
 neg pers.IIIsg TAM want to stay prep det side acc
 te va'arua
 det hole
 "He didn't want to stay beside the hole" {EDU6}

- (8) **I** te **Rui'rua** māua i tae mai ei mei Tūpapa
 prep det Tuesday Iex.dl TAM arrive dir part. from Tūpapa
 "We arrived here from Tūpapa on Tuesday" {Buse and Taringa (1996:405)}

- (9) **Nā** **Tere** te tamaiti i moto
 prep.A Tere det child TAM punch
 "Tere punched the child" {Buse and Taringa (1996:263)}

- (10) Tei reira katoa te au manu taetaevao, **inārā** kua 'aere

⁹¹ In all cases, the subject can equally remain in its post-verbal position.

at there all det num creature wild but TAM go
 mai te au angera kia tauturu i a ia.
 dir det num angel TAM help acc pers IIIsg
 "All the wild creatures were there, but the angels came to help him"
 {Mark 1:13}

- (11) E ma'ata te aronga ko'i-tero e te aronga kē tei
 TAM many det crowd collect-tax and det crowd other det.TAM
 'akava'ava'a'ia 'e te au Paritea nō te mea kua 'a'ati
 outcast.pass agt det num Pharisee prep.O det thing TAM break
 rātou i tēta'i ture
 IIIpl acc det law
 "There were many tax collectors and other people who were outcast by the
 Pharisees because they broke a law." {Mark 2:15}

Pearce (1997a) considers the expression of time to be relevant in licensing this preposing in NZ Maori. While this is apparent in the case of the temporal phrase in (27), it is not immediately obvious with the other examples. In some cases, diachronic changes have eliminated temporal variation in the forms of both the negation marker in (7) and the AE preposition *nā* in (27). Clark (1973:131) considers that *kāre* in CI Maori (and its cognates in other East Polynesian languages) derives from the combination of a tense marker *ka* and the negative verb *kore*. While some East Polynesian languages, such as NZ Maori, continue to mark a tense distinction in the form of the negative marker, CI Maori uses *kāre* regardless of the tense of the positive clause. A similar change has occurred with the preposition *nā* that marks the preposed AE agent in (9). In AE clauses in NZ Maori, the preposition marking the agent displays a basic tense distinction: *mā* indicates non-past tense, while *nā* indicates past tense. CI Maori has retained only the past form *nā*, but *nā* may freely occur with non-past tense markers. Harlow (1986) considers that the tense alternation evidenced in NZ Maori reflects an older form, while neutralization of tense, such as in CI Maori, is an innovation. With respect to negation and the Actor Emphatic, various authors have suggested that these constructions are bi-clausal, and that the preverbal nominative case-marked subject is actually raised to the higher clause. Chung (1978) argues for a bi-clausal analysis of the AE in NZ Maori, and considers the preverbal subject as a raised subject. Hohepa (1969) proposes a bi-clausal treatment of NZ Maori negation with the negative verb taking a clausal subject, while Chung (1970) (cited in Waite (1987: 83-5)) argues instead that the negative verb in NZ Maori raises the subject of its clausal complement.

While the overt expression of tense/time is not a factor in the synchronic licensing of subject preposing in CI Maori, it is fair to conclude that it may have played a role in the diachronic grammar. Because both the negative marker *kāre* and the AE preposition *nā* no longer display a tense-related distinction, I assume that the clauses containing them are mono-clausal. The preposed subject in (4) - (9) must then be located within the clause at some location to the left of the tense/aspect marker, but following the clause-initial element. Following Pearce (1997a), Pearce (1998a) for NZ Maori, I assume that tense/aspect markers are located in I at S-Structure, and that the subject may prepose to the specifier of IP in the presence of a structurally higher constituent.

I have not yet addressed the syntactic location of these clause-initial constituents. In all cases, they must be located hierarchically higher than IP in order to precede the subject in SpecIP. This is the case regardless of whether the constituent in question licenses subject raising or not, as the possibility of subject raising is related to a particular type of clause-initial particle, rather than to a distinct surface location. I discuss the location of the AE agent in section 3, and the interrogative '*e a'a*' 'why' in section 2. They are shown to both be located in the specifier of FocusP. A constituent such as the clause-initial time phrase in (27), which would formerly be considered an IP adjunct, is instead adjoined to TopicP under Rizzi's analysis (p. 300), where it satisfies a Topic Criterion. Rizzi's articulated A-bar system obviates the need for adjunction to IP. All preposed elements are located within the A-bar system in order to satisfy some Criterion.⁹²

Rizzi (1997) defines the head of Force as the locus of the expression of clause type. He states (p. 283) that Force faces outward as it links its complement to the matrix clause. I consider that *nāringa*, *inārā* and *nō te mea* all play this role, as they indicate the semantic and grammatical relationship between their complement and the proposition expressed in the matrix clause. In (12), *nāringa* indicates that its complement is the [+wh] argument of *manako* 'wonder', however in other clauses, *nāringa* indicates a clausal adjunct. In both cases, it is a head of Force.

- (12) Kua manako mai au ē, **nāringa** pa'a au e 'aere
 TAM wonder dir Isg sub if perhaps Isg TAM go

⁹² Although the more usual feature-checking environment is between a head and a specifier, Rizzi (p. 323) cites Chomsky (1993), where it is posited that *adjoined* phrases are also able to enter into a feature checking relationship with a functional head.

nā reira
 prep.A there

“I wondered if perhaps I should go there”

{EDU18}

I locate within the articulated A-bar system the adjunct complementizers, the preposed time phrase, the AE agent, and the interrogative ‘why’. While these constituents differ in their actual location (see Table (1)), they share the feature that they belong within the articulated CP. Somewhat different is the negator *kāre*, which I propose projects its own NegP. As was noted briefly above, *kāre* derives from an earlier combination of a tense/aspect marker and the negative verb *kore*. This has led researchers in NZ Maori to posit that the negative markers in that language are higher verbs (e.g. Hohepa (1969), Chung (1970), Waite (1987)). However, the syntax of negation in CI Maori differs somewhat from NZ Maori, in that CI Maori does not display a tense alternation in the form of the negative particle. Furthermore, NZ Maori has differing negative forms for negating nominal and verbal clauses, whereas CI Maori uses *kāre* in both cases.⁹³ This leads me to treat *kāre* as a negation marker, rather than as a higher verb. I propose that *kāre* projects its own functional phrase, NegP.⁹⁴ In the examples below, *kāre* co-occurs with *nāringa*. In (13), the nominative case-marked subject ‘*aia*’ ‘he’ has raised from its canonical postverbal position to a location intermediate between *kāre* and the tense/aspect marker *i*. In (14), the subject has raised one step higher to precede *kāre*.

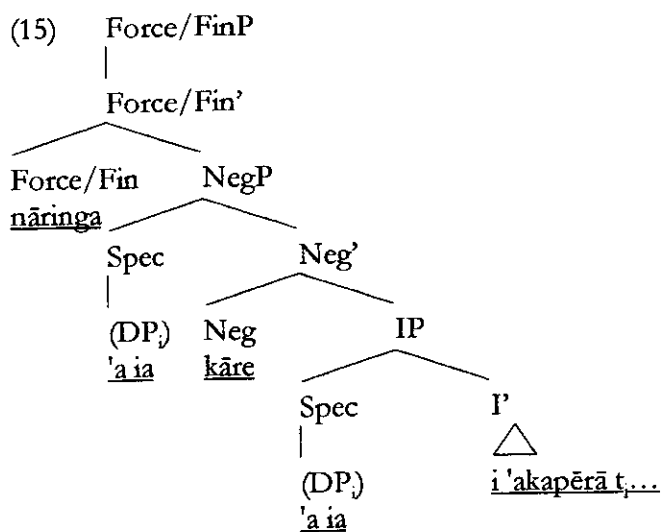
- (13) 'E ngari ake te reira tangata, **nāringa** **kāre** 'aia i
 det be better adv det there man if neg IIIsg TAM
 'ānau'ia mai!
 birth.pass dir
 “It is better [for] that man if he hadn’t been born.” {Mark14:21}

- (14) **nāringa** 'aia **kāre** i 'akapērā, kāre e tangata e ora
 if IIIsg neg TAM do so neg det man TAM live
 mai.
 dir
 “If he didn't do that, no one would survive.” {Mark 13:20}

⁹³ NZ Maori has several negative particles while CI Maori has four: *kāre*, ‘*auraka*, ‘*aua* and ‘*ei a’a*. The latter three are used interchangeably (Buse and Taringa (1996)) for negation of imperative clauses, while *kāre* is used in all other cases.

⁹⁴ Pearce (1997a) also proposes a NegP for NZ Maori negation. Her treatment differs from mine in that she locates the negative verb *kore* in the head of NegP. *Kore* projects a Tense/Aspect Phrase immediately dominating its own NegP (T/AP > NegP > T/AP > VP). Because there is no tense/aspect distinction in the CI Maori negation particles, there is no reason to posit the Tense/AspectP dominating NegP, which houses *kāre*.

The examples in the earlier discussion demonstrate that both nāringa and kāre have the ability to raise the subject (see e.g. (4), (7)), thus (13) and (14) illustrate the iterative nature of subject raising. I consider that the subject in (13) is located in SpecIP, shown in (15). The additional specifier position provided by NegP enables the subject to move one step higher: it raises to SpecNegP. The fact that nāringa can raise the subject to the higher SpecNegP strongly suggests that subject raising is not restricted to SpecIP, but rather the subject can raise to any specifier immediately below the head which licenses the raising. Above, nāringa is treated as a head of Force in Rizzi's system. Rizzi states the A-bar system is minimally composed of phrases of Force and Finiteness. Force and Finiteness are respectively the highest and lowest heads of the A-bar system, and as such they surround any TopicP or FocusP which may be projected in a specific clause. However, Rizzi allows that in cases where TopicP and/or FocusP are not present, the heads of Force and Finiteness may merge into a single functional head. I assume that this is the case for nāringa in (15). Thus, both kāre and nāringa attract a nominative case-marked subject to the specifier immediately below.



The table below briefly summarizes the various types of clause-initial constituent considered thus far. In the remainder of this section, I consider clausal arguments. The previous discussion establishes the existence of a class of pre-IP elements, and shows that their presence in the syntax enables subject preposing in some cases.

TABLE (1):

CONSTITUENT	MEANING / FUNCTION	SYNTACTIC LOCATION	ALLOWS RAISED SUBJECT?
<i>Kāre</i>	Negator	Head- NegP	Yes
<i>'E a'a</i>	'Why'	Specifier – FocusP	Yes
AE preposed agent	Focused agent	Specifier - FocusP	Yes
Time phrase	Indication of time	Adjoined – TopicP	Yes
<i>Nāringa</i>	'If'	Head - ForceP	Yes
<i>Ināra</i>	'But'	Head – ForceP	No
<i>Nō te mea</i>	'Because'	Head - ForceP	No

CI Maori non-finite clauses are introduced by the particle(s) *i te* (16). Accusative case-marked nominal complements can also be marked with *i te* (17).

- (16) E 'inangaro 'ua ana rāi 'aia [i te 'akarongo i tā
 TAM want adv TAM adv pers.IIIsg ?? hear acc det.A
 Ioane au tuatua
 John num word
 "He really only wanted to hear John's words" {Mark 6:20}

- (17) Ka 'inangaro rātou i te au pā'ua
 TAM want IIIpl acc det num clam
 "They want the clams"

The gloss for *i te* in (17) indicates that *i* is considered an accusative marker and *te* a determiner. There are two possible analyses of *i te* in (16). The non-finite clause could be treated as a DP headed by *te*, with *i* as a case marking. In this case, non-finiteness is a nominal category, while clausal constituents are finite. Alternatively, *i te* could be treated as a non-finite tense marker. Pearce and Waite (1997) argue that *ki te*, which heads NZ Maori non-finite clauses, is a non-finite tense marker. An IP headed by *ki te* cannot check nominative case, thus *ki te* clauses have a PRO subject. This analysis for NZ Maori *ki te* appears feasible for CI Maori *i te*. In the examples below, clauses introduced with *i te* do not contain an overt nominative case marked subject. Instead the subject argument role is filled with phonetically null PRO. PRO is co-indexed with either the subject (18) or the object (19) of the matrix clause. Pearce and Waite treat *ki te* as a mono-morphemic tense marker, but leave open whether it is located in an inflectional head (I) or in the head of a complementizer projection (Fin, Force etc.).

- (18) Kua tautā rāi 'a Ngarima [i te 'āpi'i i te reo
 TAM strive adv pers Ngarima TAM? learn acc det language
 papa'ā]
 European

“Ngarima really tried to learn the English language.”

- (19) Kua 'inangaro 'a Māmā i te au tamariki [i te 'āpi'i
 TAM want pers Mum acc det num children TAM? learn
 i te au tua nō te Puka Tapu]
 acc det num story prep.O det book sacred
 “Mum wanted the children to learn the Bible stories.”

CI Maori allows clausal and nominal constituents to be lexically headed by underived nouns, adjectives and verbs. Functional morphemes, such as tense/aspect markers, determiners, and so on, indicate whether a constituent is maximally clausal or nominal. The constituents differ further in the case-marking of their subject. While objects receive accusative case in both clause types, subjects in clausal constituents are licensed for nominative case, while subjects in nominal constituents are licensed for genitive case. As non-finite clauses with *i te* do not allow overt expression of the subject, the case of the subject cannot be evoked as evidence for whether these non-finite clauses are syntactically clausal or nominal. However, the very fact that they do not allow overt expression of the subject is an indication that they should be considered as clausal rather than nominal constituents. It is common in other languages, such as English, for non-finite clauses to be unable to license nominative case on their subject (20). In English, non-finite clauses are functionally headed by *to*. Stowell (1982:562) points out that English non-finite clauses do have tense: “the time frame of a *to*-infinitive is *unrealized* with respect to the tense of the matrix in which it appears”. Thus I assume that non-finite clauses are functionally headed by a non-finite tense marker *i te*. A characteristic of clause-initial elements noted earlier in this section is their ability to raise a nominative case-marked argument to SpecIP. Given that these *i te* clauses do not license a nominative case-marked subject, this feature cannot be attributed to them.

- (20) *I wanted [she to go]

Subordinate clauses headed by verbs of command, desire, or request are introduced with the mood particle *kia*. Pearce and Waite (1997) argue that *kia* and *ki te* in NZ Maori are chosen to introduce embedded clauses according to the thematic structure of the embedded clause verb. *Kia* introduces a clausal complement headed by an unaccusative verb. A *kia* clause is finite, hence the subject is overt and is assigned nominative case. *Ki te* introduces a non-unaccusative clause, and does not allow overt expression of the (agent) subject because the embedded clause is non-finite. The examples below compare

the clausal complements of *'inangaro*, which can be introduced either by *i te* or *kia*. In (21), the embedded verb *'āpi'i* 'learn' is a transitive (and hence non-unaccusative) verb. Expression of the agent subject is disallowed; instead (big) PRO is licensed in the agent position, and is co-indexed with the object of the matrix verb, *te au tamariki* 'the children'. In (22), *'inangaro* selects a clausal complement with *kia*. The embedded verb *kite* 'see' has a null non-agentive first person singular subject, which is controlled by the matrix clause subject *au* 'I'. In such a situation, Pearce and Waite (p.50) assume that (little) *pro*, a covert nominal phrase, is assigned nominative case within the *kia* complement. Thus (21) and (22) both have covert subjects (PRO and *pro* respectively) which are controlled by an overt argument of the matrix clause. However, the nature of the covert argument (PRO or *pro*) differs according to the case marking properties of the embedded clause. An *i te* clause is non-finite and cannot license nominative case, so only ungoverned PRO can occur; a *kia* clause is finite and does license nominative case, so *pro* can occur. (23) shows a case where the *kia* clause licenses an overt nominative case subject. The embedded clause predicate *mā'u* 'get wet' licenses nominative case on its theme subject *rātou* 'they'.

(21) Kua 'inangaro 'a Māmā i te au tamariki [i te 'āpi'i
 TAM want pers Mum acc det num children TAM learn
 i te au tua nō te Puka Tapu]
 acc det num story prep.O det book sacred
 "Mum wanted the children to learn the Bible stories."

(22) Ka 'inangaro au [kia kite ia roto i tēia 'āua
 TAM want Isg TAM see prep.pers in acc det.proxI field
 tiare mānea]
 flower lovely
 "I want to see inside this beautiful flower garden." {EDU6}

(23) Kāre 'oki te tūpāpaku e 'inangaro [kia mā'u rātou]
 Neg adv det ghost TAM want TAM get wet IIIpl
 "The ghost doesn't want them to get wet (lit: the ghost doesn't want that they get wet)" {EDU22}

The examples below show *kia* clauses with some other matrix verbs. In all cases, the verb in the *kia* clause has a non-agentive subject. The subjects in (24) and (25) are overt nominative case arguments, while in (26) the *pro* subject is controlled by the object of matrix verb, *te au tamariki*.

- (24) Kua karanga mai tōku māmā ē,⁹⁵ [kia 'aere au ki
 TAM tell dir det.O.Isg mum sub TAM go Isg prep
 runga i tōku ro'i moe ei]
 in acc det.O.Isg mattress sleep part
 "Mum told [me] that I must go to bed" {EDU18}
- (25) Ko Erotā 'uā'orāi tei 'akaue ana [kia 'opu'ia a
 eq Herod reflexive rel.TAM order TAM TAM catch.pass pers
 Ioane, kia tāpeka'ia ē tuku'ia ki roto i te 'are-'āuri]
 John TAM tie.pass and put.pass prep in acc det jail
 "It was Herod himself who ordered that John be captured,
 chained, and put into jail" {Mark 6:17}
- (26) E tuku 'ua mai i te au tamariki [kia 'aere mai
 TAM allow adv dir acc det num children TAM go dir
 kiāku nei]
 prep.A.Isg proxI
 "Let the children come to me" {Mark 10:14}

The examples below demonstrate the clausal complements of verbs of cognition (know, believe, think), speaking, and perception (hear, see). In chapter three (section 5), I noted that tense/aspect markers vary between main and subordinate clauses in CI Maori. The main clause perfective marker *kua* is ungrammatical within relative clauses and was consistently corrected by my language consultant to *i*. However in (28), (31), and (32), *kua* is quite acceptable, despite the subordinate nature of these clauses. Below, I discuss the particle *ē*, which comes immediately before the subordinate clause tense/aspect marker.

- (27) Kua kite te mama ē [ka tāvarevare tāna tamaiti]
 TAM know det mum sub TAM late det.A.IIIsg child
 The mother knows that her child will be late
- (28) Kua 'irinaki a Tama ē [kua kai a Ngarima
 TAM believe pers Tama sub TAM eat pers Ngarima
 i te kēke]
 acc det cake
 Tama believed that Ngarima had eaten the cake
- (29) Kua manako 'aia ē, [ka meitaki ake tōna ora'anga
 TAM think IIIsg sub TAM well adv det.O.IIIsg life
 mē 'aere atu 'aia ki te 'enua ko 'Upolu]
 if go dir IIIsg prep det island eq 'Upolu
 He thought that his life would be better if he went to the island called 'Upolu
 {EDU1}

⁹⁵ I discuss this particle *ē* further below.

- (30) I reira kua tuatua mai 'a Pāpā Tere ē [ka 'aere
 prep then TAM say dir pers Papa Tere sub TAM go
 mātou ki runga i tēta'i toka vaitata ki te pae motu.]
 lex.pl prep top acc det rock close prep det side island
 "Then Papa Tere said that we were going to a rock close to the shore of the
 island." {EDU5}
- (31) Kua 'akarongo 'a Ngarima ē [kua 'aere tōna māmā
 TAM hear pers Ngarima sub TAM go det.O.IIIsg mum
 ki te māketē]
 prep det market
 "Ngarima heard that her mum had gone to the market"
- (32) Kua kite meitaki au ē, [kua riri ma'ata 'a ia i
 TAM see well Isg sub TAM angry big pers IIIsg acc
 āku]
 pers.Isg
 "I could clearly see that he was angry with me" {EDU19}

The examples of non-finite, *kia* and declarative clausal complements are always introduced a tense/aspect/mood marker. However there is only one potential candidate for an argument clause complementizer, *ē*.⁹⁶ Buse and Taringa (1996:93) define *ē* as subordinating when it occurs before an embedded clause. Given this definition and its clause-initial location, it is possible that *ē* could be a complementizer for clausal arguments. As well as the clausal complements in (27) - (32) above, *ē* occurs with a variety of other subordinate clause types. (33) shows *ē* preceding a subordinate clause with *kia*, and a negated subordinate clause with *kāre* (34). In (35), *ē* co-occurs with a preposed AE agent *nā tōna tungāne* 'her brother'. (36) shows that *ē* can also precede interrogative subordinate clauses.

- (33) Kua karanga mai tōku māmā ē, *kia* 'aere au ki
 TAM tell dir det.O.Isg mum sub TAM go Isg prep
 runga i tōku ro'i moe ei
 in acc det.O.Isg mattress sleep part
 "Mum told [me] that I must go to bed" {EDU18}
- (34) Kua tuatua atu 'aia ki tōna mama ē *kāre*
 TAM say dir pers.IIIsg prep det.O.IIIsg mum sub neg
 'aia e 'oro 'aka'ou
 IIIsg TAM run again

⁹⁶ It may be that the tense/aspect/mood markers of these subordinate clauses are mixed C/I heads. The implication of this is that there is no lexical class of complementizers.

“He said to his mum that he wouldn’t run again.” {EDU6}

- (35) Kua manako a Teremoana ē nā tōna tungāne
 TAM think pers Teremoana sub prep.A det.O.IIIsg brother
 i kai i te kēke
 TAM eat acc det cake
 Teremoana thought that it was her brother who ate the cake.

- (36) Kā kite 'ua kōtou ē, 'e a'a au i manako
 TAM see adv IIpl sub det why Isg TAM think
 pērā ai i tēia vāito,]
 like that part prep det.proxI pattern
 “You really see why I think like that about this pattern” {EDU14}

The examples show that \bar{e} co-occurs with a wide variety of subordinate clauses. Further evidence of \bar{e} 's status comes from subordinate clauses which are not subcategorized arguments of a matrix verb. \bar{E} never precedes relative clauses, which are treated as adjuncts in chapters three and four. The examples in (37) and (38) show subordinate clauses introduced with *nāringa* ‘if’. In (37), the subordinate clause does not fulfil an argument role within the matrix clause, and \bar{e} does not occur. On the other hand, \bar{e} does precede the subordinate clause in (38) as the clause is the interrogative argument of the main clause predicate *manako* ‘think’. In (39), \bar{e} occurs before a constituent of direct speech. Direct speech is syntactically a main clause, although it fills the semantic role of the object of *ui* ‘ask’.

- (37) 'E ngari ake te reira tangata, nāringa kāre 'aia i
 det be better adv det there man if neg IIIsg TAM
 'ānau'ia mai!
 birth.pass dir
 “It is better [for] that man if he hadn't been born.” {Mark14:21}

- (38) Kua manako mai au ē, nāringa pa'a au e 'aere
 TAM think dir Isg sub if perhaps Isg TAM go
 nā reira
 prep.A there
 “I wondered if perhaps I should go there” {EDU18}

- (39) Kua ui au ki tōku pāpā ē, “Ka āru atu au?”
 TAM ask Isg prep det.O.Isg dad sub TAM follow dir Isg
 “I asked my dad, “Can I come with [you].” {EDU18}

Examples (37) and (38) show that \bar{e} occurs to the left of a subordinate clause only when the subordinate clause is a subcategorized argument of the matrix verb. In (39), \bar{e} precedes the direct speech which is an argument of *ui* ‘ask’, but is syntactically a main

clause. Furthermore, \bar{e} does not appear before non-finite clauses with te. The overall distribution of \bar{e} can then be summarized as follows. \bar{E} may appear whenever the subcategorized argument of a verb is expressed by a tensed clausal constituent. This distribution statement deliberately links \bar{e} 's appearance to the argument structure of the matrix verb, rather than to the subordinate clause. This explains why \bar{e} can appear when the clausal argument is *not* syntactically subordinate, such as in direct speech (39). I propose then that \bar{e} is an expletive particle like English 'it', which fills a syntactic argument position in the matrix verb, rather than a complementizer slot in the subordinate clause. The location of commas in the examples above provides some evidence for this approach. In some cases, \bar{e} is separated from the following clausal complement by a comma (e.g. (38), (39)). If the writer follows a general rule of inserting a comma at the end of one clause to delineate it from a subsequent clause, the placement of the comma *after* \bar{e} suggests that the writer considers \bar{e} as part of the matrix rather than the subordinate clause. Furthermore, \bar{e} does not allow the nominative case subject of the subordinate clause to raise, although it is not a necessary condition that a complementizer has this property. We saw above that ināra 'but' and nō te mea 'because' do not license subject preposing.

Given that \bar{e} fills the argument position of a matrix verb only when that argument is a finite clause, there is a possibility that finite clausal arguments cannot be directly located in the syntactic argument positions of the matrix clause. The clausal arguments must then be adjoined, while the canonical argument position is filled within the matrix clause by the expletive \bar{e} . The consideration of this issue requires much further research. However for the purposes of this thesis, we may conclude that \bar{e} is most likely not a complementizer. The consequence of this is that non-interrogative tensed clausal complements, such as in (40) to (42) below, do not have an overt complementizer. They are introduced directly by their tense/aspect/mood marker.

(40) Kua karanga mai tōku māmā ē, [kia 'aere au ki
 TAM tell dir det.O.Isg mum sub TAM go Isg prep
 runga i tōku ro'i moe ei]
 in acc det.O.Isg mattress sleep part
 "Mum told [me] that I must go to bed" {EDU18}

(41) Kua kite te mama ē [ka tāvarevare tāna tamaiti]
 TAM know det mum sub TAM late det.A.IIIsg child
 The mother knows that her child will be late

- (42) Kua 'akarongo 'a Ngarima ē [kua 'aere tōna māmā
 TAM hear pers Ngarima sub TAM go det.O.IIIsg mum
 ki te māketē]
 prep det market
 "Ngarima heard that her mum had gone to the market"

The previous discussion concludes that CI Maori does not have a class of *argument* clause complementizers for non-interrogative clauses (I consider interrogative clauses in section 2). However, there are other types of element which occupy the left periphery of the clause, such as adjunct complementizers, preposed AE agents, preposed time phrases, and the negation particle *kāre*. Some of these elements are able to license raising of a nominative case-marked subject to SpecIP. Commenting on this phenomenon in NZ Maori, Pearce (1998a) considers that movement to SpecIP, where the subject checks its nominative case feature, is licensed only when some phonetic material precedes the subject in its raised position, and when that material has a relationship to tense/time. Although diachronic changes have obscured the temporal relationship in some cases (e.g. *kāre*, the AE agent with *nā*), it remains the case that only a subset of possible clause-initial elements allow subject raising. Furthermore when two clause-initial elements co-occur within a clause, as in (13), (14) above, the subject can raise to a higher specifier position. This suggests that the subject is licensed to raise to any specifier that is immediately dominated by a phrase with lexical content.

In chapter two, I develop an analogy between the nominal and the clausal phrase, and suggest that DP is equivalent to CP, and NumP to IP. The preverbal subject position SpecIP is equivalent to SpecNumP, thus the possibility of raising to SpecIP should be reflected in an analogous raising to SpecNumP. The examples below demonstrate that a pre-nominal and post-nominal position is available for genitive case arguments in a DP. In chapter two (section 4), I treat this pre-nominal position as SpecNumP. Thus subject raising in the clausal phrase has a counterpart in the nominal phrase.

- (43) te papa o te tamaiti
 det dad O det child
 "the dad of the child"

- (44) tō te tamaiti papa
 det.O det child dad
 "the child's dad"

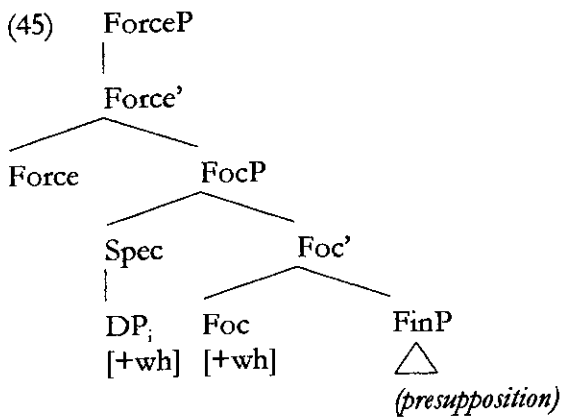
Finally, the possibility was raised in chapter four (section 4.2) that *te* could be a relative clause complementizer. Relative clause complementizers are typically homophonous with argument complementizers, (e.g. English *that*), because they indicate grammatical subordination rather than a semantic relationship (which is indicated instead by the relative operator). The lack of a class of lexical argument complementizers in CI Maori supports the conclusion of that chapter that *te* cannot be the relative complementizer. If it were, it would be the only member of the lexical class of argument complementizers, and we would expect to see it occurring in other types of subordinate clause.

2. *Interrogative Clauses*

In the analysis of relative clauses (see especially chapter three, section 5), an operator is projected in an argument or adjunct position of the relative clause. The operator raises to a left-peripheral position, which I argue to be SpecTopP, in order to c-command its binding domain. The operator seeks the relative noun as its antecedent and binds the relative noun to the appropriate argument or adjunct position in the relative clause. I argue that the operator is non-quantificational and is consistently phonetically null. In many languages, there is a structural similarity between relative clause clauses and Wh-clauses. Both types of clause project an operator which raises to a left-peripheral scope position. The discussion in this section illustrates the form of Wh-clauses in CI Maori. Although I do not intend to offer a comprehensive treatment of interrogative clauses, I propose that the Wh-operator raises to a different A-bar specifier than that of the relative operator. I suggest that this follows from the quantificational nature of Wh-operators. A further implication of this is that there must be (at least) two distinct A-bar specifier positions available in CI Maori clauses, for quantificational and non-quantificational DPs. I examine this proposal further in section 3.

In the articulated structure of Rizzi (1997), movement to the left-periphery of the clause is triggered by various Criteria, which govern feature checking between a head and its specifier. In Wh-clauses, the relevant Criterion is the Wh-Criterion which dictates that a [+wh] phrase must be in a specifier-head agreement relationship with a [+wh] head (Rizzi (1996)). A Wh-operator is specified as [+wh], however we have yet to ascertain which head contains the [+wh] feature. In Rizzi (1997), it is proposed that Wh-operators raise to the Specifier of FocusP. He states (p. 285) that focal elements introduce new

information, while the remaining clause (which he labels the “presupposition”) states information that is known of the focal element. A wh-operator represents the unknown or new information, while the open sentence represents the known event/proposition in which the wh-operator is a participant. Thus, the [+wh] operator raises to SpecFocP, where it satisfies the Wh-Criterion in agreement with a [+wh] Focus head (45). Pearce (1998a) finds that Wh-operators in NZ Maori are also located in the specifier of FocusP. She notes that Wh-operators are in complementary distribution with the preposed Actor Emphatic (AE) agent, also a focal constituent (I consider the AE further in section 3).



In chapter four (section 2), I proposed that a ko-marked equative DP raises to the specifier of FocusP in equative clauses (based on the proposals of de Lacy (1999) for NZ Maori). Support for this position comes from the ability of ko to mark the wh-operator for human referents, 'ai. Equative DPs and Wh-operators are both focal elements. (46) and (47) show main and subordinate interrogative clauses. These are formed using the equative clause construction, which was introduced in chapter four (section 2). Notice that in these, and all interrogative clauses, there is no word order difference between main and subordinate clauses.

(46) **Ko 'ai** tēia tangata²
 eq who det.proxI person
 “Who is this person?”

(47) Nō ātu kua kite te au vaerua kino ē, [ko 'ai 'aia]
 Although TAM see det num spirit bad sub, eq who pers.IIIsg
 “Although the evil spirits saw who he was” {Mark 1:34}

These interrogative clauses have the form [ko 'ai DP]. The examples below differ in that the DP subject is a headless relative clause. Examples (48) and (49) show main and

subordinate clauses, where *'ai* corresponds to the subject of the relative clause following *te*. In (50) and (51) *'ai* corresponds to the object of the relative clause following *te*, and just as in all relative clauses, the clausal agent is expressed as an *a*-genitive possessor.

Wh-Subject:

(48) **Ko** 'ai [DP *tē* ka 'inangaro i te tauturu i ā Pele?]

eq who det TAM want to help acc pers Pele

"Who wants to help Pele?" {EDU19}

(49) Inārā kāre kua tika'anga kia 'iki ē [ko 'ai [DP *te*

but neg TAM right.nom TAM appoint sub top who det

ka no'o ki tōku tua katau e tōku tua kauī]]

TAM sit prep det.O.Isg side right and det.O.Isg side left

"But [I] do not have the right to decide who will sit at my right and at my left

{Mark 10:40}

Wh object:

(50) **Ko** 'ai [DP *tā* kōtou ka 'ārāvei?]

eq who det.A IIpl TAM meet

"Who are you going to meet?"

(51) Mē kāre tēta'i i a rātou e kite, [ko 'ai i

If neg det acc pers IIIsg TAM know eq who prep

reira [DP *tāku* ka tuatua atu?]]

then det.A.Isg TAM talk dir

"If some of them don't know [how to speak Samoan], who then will I talk to?"

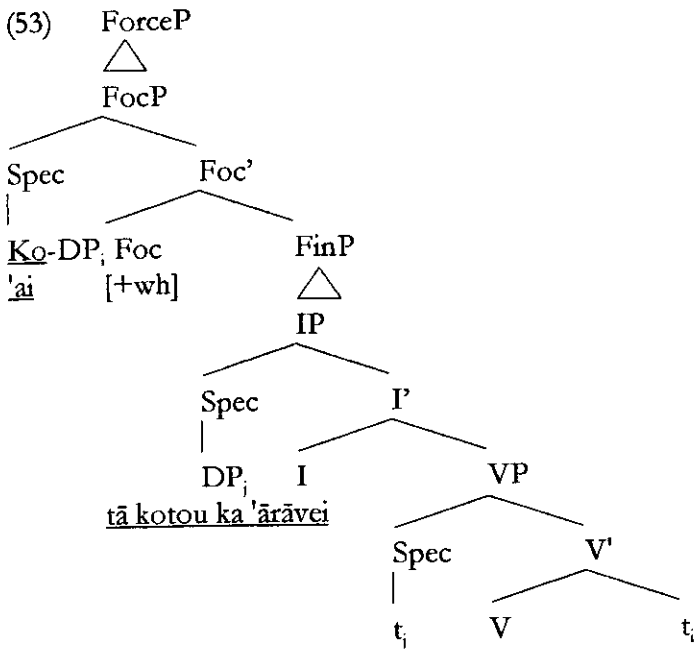
{EDU19}

Following de Lacy (1999), equative clauses are headed by a null copular verb. The focal DP containing the *Wh*-operator in interrogative clauses raises to SpecFocP (53). In section 1, it was shown that some types of pre-verbal element allow the nominative case subject to raise to SpecIP. The word order in 'who' clauses does not indicate whether the subject raises to SpecIP overtly or not, as in either case it follows the *Wh*-operator. We will see in the discussion of 'why' clauses below, that the 'why' *Wh*-operator does license a raised subject. I represent the subject in SpecIP in (53); in any case, it must raise to SpecIP at LF for case licensing.

(52) **Ko** 'ai [DP *tā* kōtou ka 'ārāvei?]

eq who det.A IIpl TAM meet

"Who are you going to meet?"



In chapter four (section 2), I argue that the ko-marked DP in CI Maori equative clauses has a focal interpretation, and I propose that it raises to SpecFocP. I assume that the [+wh] operator in 'who' clauses (53) also raises to SpecFocP, as Wh-operators are focal. On the other hand, de Lacy (1999) proposes that a ko-marked DP raises to the specifier of TopicP even when this DP contains a Wh-operator, as ko-marked DPs in equative predicates are syntactically analogous to DPs topicalized with ko. Rizzi assumes that TopicP houses old information which is salient in the discourse, while Focus houses new information. A Wh-operator is the canonical example of *new* information, as the very nature of a question assumes that the referent of the Wh-operator is unknown. If we maintain de Lacy's syntactic homophony between equative ko and topic ko, we are forced into the unusual situation where ko'ai must raise from SpecFocP to SpecTopP. It is clearly impossible for the same item to be both new and old in the discourse! By following Bauer's (1991) lead in identifying a topic ko and a focal ko, the ability of ko to mark a Wh-operator presents no difficulty.

The Wh-operator for non-human antecedents is a'a. A'a can refer to objects and actions, corresponding to a 'what' and 'why' interpretation respectively. The Wh-operator a'a is most commonly preceded by e (although it is possible for te to precede it). Buse and Taringa (1996) label e the indefinite article, and it also introduces predicate nominal clauses such as (54). In predicate nominals, the subject tērā tangata 'that man', is a member of the class taote 'teacher' described by the noun marked with e. In (55) and

(56) the Wh-operator replaces the noun expressing class membership. Just as for interrogative clauses with *'ai*, there is no difference between main and subordinate clauses.

(54) 'E taote tērā tangata
 det doctor det.dist man
 "That man is a doctor"

(55) 'e a'a [_{DP} tō'ou manako'anga?]
 det what det.O.IIsg think.nom
 "What's your opinion?/What do you think?"

(56) E kimi koe ē, ['e a'a [_{DP} tā māua kai i
 TAM investigate IIsg sub det what det.A Iex.dl eat prep
 tēia pō?]]
 det.proxI night
 "You find out what we're eating tonight" (you find out what is our food tonight)
 {EDU4}

The DP subject in (55) and (56) can be modified by a relative clause. In (57) and (58), the head of the subject DP (in *italics*) is modified by a non-*te* relative clause. The subject DP may also be modified by a *te*-relative clause. In (59), the subject of *a'a* is *tēia kite pakari* 'this knowledge'. This in turn is modified by a *te*-relative clause, and corresponds to the subject position of the relative clause. In (60), the subject of *a'a* is *te 'akaue'anga* 'commandment', which corresponds to the theme argument of a *te*-possessive relative clause.

(57) 'E a'a [_{DP} *tāna* 'apa i rave?]
 det what det.A.IIIsg sin TAM commit
 "What is the sin that he committed?" {Mark 15:14}

(58) Kia rauka i ā koe i te kite ē, ['e a'a [_{DP} *te*
 TAM can acc pers IIsg TAM see sub det what det
au vaito tapa i tā'anga'anga'ia.]]
 num pattern tapa cloth TAM use.pass
 "You can see what the tapa cloth patterns are that were being used"
 {EDU14}

(59) 'E a'a [_{DP} *tēia kite pakari* [_{RC} *te* 'oronga'ia ki a
 det what det.proxI know wise det.TAM give.pass prep pers
 ia?]]
 IIIsg
 "What is this knowledge that was given to him?" {Mark 6:2}

- (60) 'E a'a [DP te 'akau'e'anga [RC tā Mote i 'oronga mai
 det what det command.pass det.A Moses TAM give dir
 ki a kotou?]]
 prep pers IIpl
 "What is the commandment that Moses gave to you?" {Mark 10:3}

The DP subject may also be a headless relative clause. In (61) and (62) a'a corresponds to the subject of the relative clause, while in (63) and (64) a'a corresponds to the object. As usual with an object relative clause, the relative clause agent is preposed and marked with the genitive case (a possessive relative clause).

Wh Subject:

- (61) 'E a'a i reira [DP tē ka ma'ani nō te māunu?]"
 det what prep then det TAM make prep.O det bait
 What will be used for bait? (Lit: What will make for the bait?) {EDU4}

- (62) e 'akakite kātoa mai ['e a'a [DP te ka tupu 'ei
 TAM tell all dir det what det TAM happen TAM
 'akairo kia kite mātou ē, ...]]
 make a mark TAM see lex.pl sub
 "Tell us all what will come about so we see that ..." {Mark 13:4}

Wh object:

- (63) 'E a'a [DP tā te tuna e kai ana?]
 det what det.A det lizard TAM eat TAM
 "What does the lizard eat?" {EDU1}

- (64) E kāre rātou i kite ē, ['e a'a [DP tā rātou ka
 And neg IIIpl TAM know sub det what det.A IIIpl TAM
 tuatua atu ki a ia.]]
 say dir prep pers IIIsg
 "And they didn't know what they should say to him." {Mark 14:40}

The examples show that the DP subject in these predicate nominals with a'a display the various forms of relative clauses discussed in chapters three and four. The table below summarizes the options.

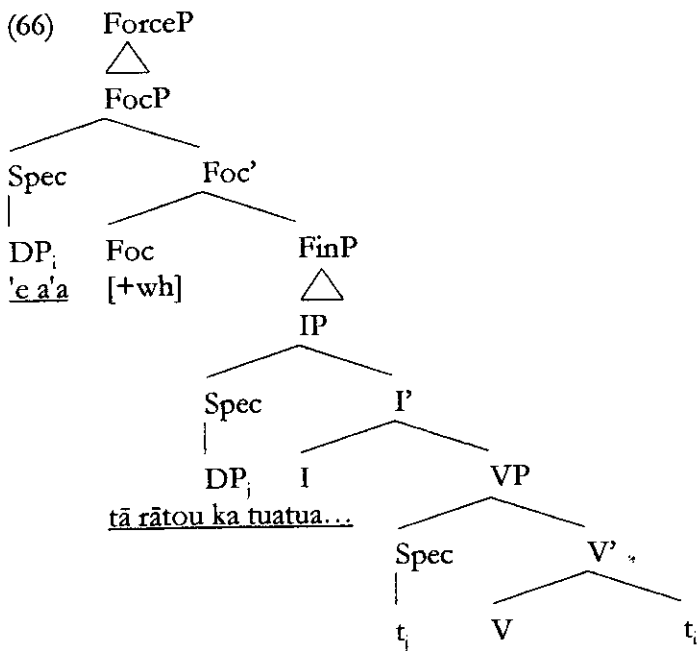
TABLE (2): X = OVERT NOUN; Ø = NO LEXICAL HEAD

'e a'a [DP te X]	(55), (56)
'e a'a [DP te Ø [Forcep non- <u>te</u> relative clause]]	(61), (62), (63), (64)
'e a'a [DP te X [Forcep non- <u>te</u> relative clause]]	(57), (58)
'e a'a [DP te X [Forcep <u>te</u> -relative clause]]	(59), (60)

I noted above that interrogative clauses with 'e a'a 'what' are similar in syntax and interpretation to predicate nominal clauses. The N head marked by 'e defines a class of entities referred to, and takes a member of the class as its subject. The syntactic structure of predicate nominal clauses receives varying treatments in the literature. Buse and Taringa (1996: for CI Maori) and de Lacy (1999: for NZ Maori) label 'e (he in NZ Maori) the indefinite article, and Cook (1999) presents several arguments for treating the Hawaiian cognate he as a determiner in these constructions. However, Waite (1994) considers the NZ Maori cognate he as an inflectional head. He analyzes predicate nominal clauses as composed of a tense marker he, which takes an NP complement.

De Lacy (1999) assumes that predicate nominal clauses and equative clauses are syntactically similar in having a phonetically null copular verb and tense marker. The examples above show that 'who' and 'what' interrogative clauses are formed by the equative and predicate nominal structure respectively. The advantage of de Lacy's proposal is that it enables these interrogative clauses to be assigned a unified syntactic representation. Both equative clauses and predicate nominal clauses have two nominative case-marked arguments. The DP subject, in the specifier of VP, raises to SpecIP for nominative case licensing. In both equatives and predicate nominals, the complement of the null copular verb (ko-DP in equative predicates, the DP headed by the indefinite determiner 'e in predicate nominals) raises to SpecCP for nominative case licensing. (66) below illustrates the syntactic representation of Wh-clauses with 'e a'a. Following Rizzi (1997) and Pearce (1999), I treat the specifier of FocusP as the target of Wh-movement. Thus all CI Maori [+wh] operators raise to SpecFocP. In the paragraphs following, I discuss the differences between my structure and de Lacy's, especially with respect to the role of de Lacy's SpecCP in the articulated CP structure assumed here.

- (65) E k̄are r̄atou i kite ē, ['e a'a [_{DP} t̄ā r̄atou ka
 And neg IIIpl TAM know sub det what det.A IIIpl TAM
 tuatua atu ki a . ia.]]
 say dir prep pers IIsg
 "And they didn't know what they should say to him." {Mark 14:40}



De Lacy identifies two A-bar specifier positions, SpecCP and SpecTopP. He states that the raised DP (the ko or 'e constituent here) in both predicate nominal and equative clauses raises to SpecCP for nominative case licensing. The 'e headed DP remains in SpecCP in predicate nominals, while the ko-marked DP in equative clauses raises to SpecTopP. De Lacy proposes that wh-operators, regardless of the type of clause, raise obligatorily to SpecCP. However the presence of ko with a Wh-operator triggers a further raising of this DP to SpecTopP, as ko always marks a specific constituent, and specific DPs cannot remain in SpecCP in his analysis. The table below shows the differing specifiers and their properties according to de Lacy.

TABLE (3):

SPECIFIER	FEATURE	CLAUSE TYPE
SpecIP	Nominative case	All constructions: nominative case subject
SpecCP	Nominative case	<u>KO</u> -DP and <u>'e</u> -headed DP in equatives and predicate nominals
SpecCP	[+wh]	All <u>wh</u> operators
SpecTopP	[+topic]	All <u>ko</u> -DPs

In this thesis, I follow the analysis of Rizzi (1997) where the CP is composed of various functional projections with a specific grammatical or discourse role. De Lacy assumes that SpecCP plays the dual function of nominative case-checking in equative and predicate nominal clauses, and Wh-licensing in all interrogative clauses. Given Rizzi's

structure, which head of the A-bar structure should carry the nominative case-checking feature in equatives and predicate nominals? De Lacy's SpecCP can check nominative case in both interrogative and declarative predicate nominal and equative clauses, so this case-checking feature must be located in a head that occurs in both interrogative and declarative clauses. Rizzi argues that while TopicP and FocusP are projected for the checking of Topic and Focus features, all clauses contain a Force and Finiteness projection. The relevant nominative case checking head must be either Force or Fin. I assume that SpecFinP is the equivalent nominative case-checking location to de Lacy's SpecCP, largely because the location of SpecFinP hierarchically lower than FocusP enables a [+wh] DP to check its case feature prior to checking of the [+wh] feature.⁹⁷ Thus in predicate nominal and equative clauses, nominative case features are checked in SpecFinP. The other role of de Lacy's SpecCP is checking of the [wh] feature. Here I assume that the relevant checking head for the [+wh] feature is the specifier of FocusP, thus both ko-marked and 'e-headed DPs raise to SpecFocP.

So far we have considered 'who' and 'what' interrogative clauses. 'Who' clauses are formed using the equative clause structure, while 'what' clauses are predicate nominals. However, in both cases the Wh-operator raises to the specifier of FocusP, where it satisfies the Wh-Criterion (Rizzi 1990, 1997). The structure assumed for these clauses is further supported by 'why' clauses. The Wh-operator 'why' is again 'e a'a. 'e a'a comes initially in the interrogative clause. The nominative case marked subject of the clause is indicated here in italics, and comes directly after the Wh-operator, but before the interrogative clause's tense/aspect marker. The Wh-operator, as an adjunct in its clause, binds the anaphoric particle ei/ai.

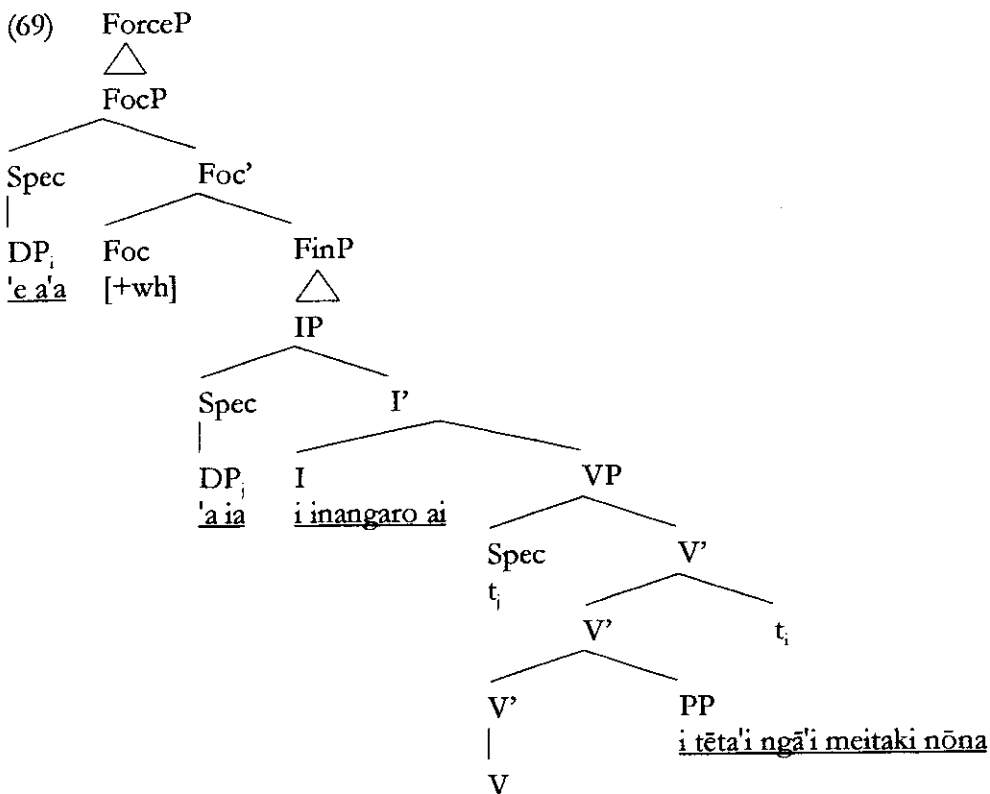
(67) Kā kite 'ua kōtou ē, ['e a'a au i manako
 TAM see adv IIpl sub det why Isg TAM think
 pērā ai i tēia vāito,]
 like that part prep det.proxI pattern
 "You really see why I think like that about this pattern" {EDU14}

(68) Kua kite te kātoatoa ē, ['e a'a 'a ia i
 TAM see det all sub det why pers IIIsg TAM
 'inangaro ei i tēta'i ngā'i meitaki nōna

⁹⁷ The proposal that FinP is a nominative case-checking head is not entirely *ad hoc*. Rizzi (1997) considers that prepositional elements of the complementizer system which have case assigning abilities, e.g. *for* in 'I wished for him to come home', are located in the head of FinP. Thus it is not unprecedented that an element located in Fin will license case on an argument.

want part acc det place nice prep.O.IIIsg {EDU8}
 "Everyone saw why he wanted a nice place for himself"

The syntactic representation of 'why' clauses follows straightforwardly from structures considered elsewhere. The Wh-operator 'e a'a' 'why' raises to the specifier of FocusP to check its [+wh] feature. As a typical clause-initial element, it allows a nominative case-marked subject to raise to SpecIP. Furthermore, as an adjunct DP, it displays the familiar property of binding the anaphoric particle ei. (69) illustrates the structure assigned to (68).

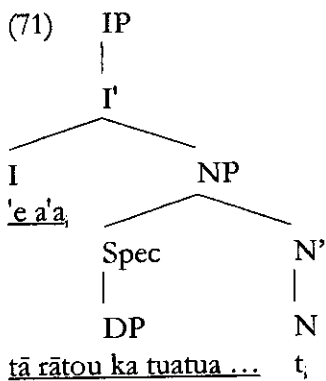


An interesting point of difference between 'who' and 'what' clauses and 'why' clauses is the type of clause in which these Wh-operators occur. Interrogative clauses with the adjunct operator 'e a'a' 'why' are headed by a lexical verb, while 'what' and 'who' interrogatives are headed by a null copular verb. The Wh-operators 'who' and 'what' appear to force a cleft-type paraphrasing, such that the event in which the Wh-operator is a participant is instead represented within a headless relative. On the other hand, the Wh-operator in the 'why' clause in (68) is located directly within the verb-headed clause describing the event over which the Wh-operator ranges. My corpus does not contain examples where ko 'ai 'who' and 'e a'a 'what' are the arguments of an interrogative clause headed by a lexical verb, and I have not tested these forms with my language

consultant.⁹⁸ ‘Who’ and ‘what’ Wh-operators can be formed on verb-headed main clauses in NZ Maori, thus it is difficult to know what significance should be attached to the absence of these clauses in my corpus. This is an issue which requires further research.

The consideration of adjunct operators provides support for de Lacy’s structure for predicate nominals and equative predicates. He states as one of his principle aims, the intention to assign to copular clauses the same syntactic representation as verb-headed clauses. He argues that both copular and verbal clauses contain a V and I projection, however copular clauses differ in that the complement of the null copular verb (the ‘e or ko DP) must raise to a clause-initial specifier for nominative case licensing. By adopting this type of approach for predicate nominal clauses, the syntactic representation of ‘why’ and ‘what’ clauses is identical. In both cases, the Wh-operator ‘e a’a’ ‘what/why’ raises to the specifier of SpecFocP. This provides a more economical approach to these clauses than an approach such as Waite’s (1994) for NZ Maori. He argues that the predicate nominal ‘e’ is an I head, which takes an NP complement. His structure for the ‘what’ clause in (70) is illustrated in (71). The head of N, a’a raises to N, just as the verb raises in I in verbal headed clauses.

- (70) E kāre rātou i kite ē, [e a'a [_{DP} tā rātou ka
 And neg IIIpl TAM know sub det what det.A IIIpl TAM
 tuatua atu ki a ia.]]
 say dir prep pers IIIsg
 “And they didn’t know what they should say to him.” {Mark 14:40}



⁹⁸ In section 3, example (76) shows that the Wh-operator ‘ai’ may occur in a lexical verb headed clause, when it is marked with nā, rather than ko.

Waite's structure provides a simple account of the predicate nominal clause, without the need to pose null copular verbs and tense markers, as de Lacy does. However the problem for Waite's account is the location of the Wh-operator in (71). Here, the Wh-operator is the lexical head of its clause, however the Wh-operator in 'why' clauses appears to be located within a DP. In 'why' clauses (69), the Wh-operator displays characteristics that are typical of preposed adjuncts. It binds the anaphoric particle *ei*, which is bound by nominal constituents elsewhere. The operator also licenses a nominative subject in SpecIP (although this indicates only that it is a clause-initial constituent, not necessarily a DP). The differing locations of the same Wh-operator seems somewhat unsatisfactory. A further problem is the operation of the Wh-Criterion in these clauses. Given that '*e a'a*' in (71) is a head, it is unable to move into a specifier position, as such a movement would render it incapable of binding its trace in I. Thus '*e a'a*' can only move to another head position. We might instead posit that '*e a'a*' raises to the *head* of FocusP. However to satisfy the Wh-Criterion, there must be a [+wh] element in the Specifier of FocusP, so we must further propose a null [+wh] operator. This appears to be a rather complex solution. Using de Lacy's approach on the other hand, these various types of interrogative clause are unified, and the structure predicts a uniform application of the Wh-Criterion in all cases.⁹⁹

The discussion in this section illustrates some types of interrogative clause in CI Maori. The Wh-operator is a focal unit and raises to the specifier of FocusP. Here it satisfies the Wh-Criterion by checking its [+wh] feature against a [+wh] functional head. In the discussion of relative clauses, I showed that the relative operator, a non-quantificational element, raises to the specifier of TopicP, while the Wh-operator here, as a quantificational element, raises to SpecFocP. The following section further establishes the validity of these two types of specifier position.

3. *Two A-bar Specifiers: SpecFocP and SpecTopP*

⁹⁹ It should also be noted at this point that although Waite's analysis does not appear particularly satisfactory for Wh-clauses in CI Maori, any rejection of it has implications on the analysis of DPs and IPs. Waite argues that D and I are analogous categories, which can take lexical complements of any class (NP, VP, and AP). The ability of NP to lexically head a clausal category as complement to the tense marker *he* (*e* in CI Maori) is crucial to Waite's analysis. If predicate nominal clauses with *e* are to be reanalyzed,

In chapter three (section 5) and chapter four (sections 2 and 3) I propose that the relative operator raises to the specifier of TopicP, in order to c-command its binding domain. This is the case for the relative operator in *te*-relatives, non-*te* relatives, and equative relatives. I draw a parallel between the features of operator raising to SpecTopP in relative clauses, and the raising of a topicalized DP marked with *ko*. Both types of *ko* marked DP are also restricted to raising via SpecIP for arguments, and binding of *ei* for adjuncts.

In the discussion of equative relatives and *te*-relatives (chapter four, sections 2, 3), I propose that the equative DP (either with or without *ko*) raises to the specifier of FocusP as it is a focal unit presenting new information. The examination of interrogative clauses in this chapter (section 2) shows that the equative structure is also used for 'who' questions. I propose that the Wh-operator in all interrogative clauses raises to SpecFocP. This predicts that the raised DP in equative and interrogative clauses should share a similar interpretation. This predication is borne out, as the raised DP in these clauses always expresses new information. The differing constructions considered in the thesis predict the existence of two separate specifier positions with differing interpretive values. In this section, I present cases where both SpecTopP and SpecFocP are motivated within the same clause. This establishes that the grammar does indeed make use of two separate specifiers.

Another construction which utilizes the Specifier of FocusP is the Actor Emphatic (AE) (following Pearce (1999) for NZ Maori). This construction has already been discussed in chapters three and four, as it is one of the options for forming a relative clause on the theme argument (see especially chapter three, sections 4,6; chapter four, section 4). The AE is canonically used to emphasize the role of the agent in a clause. The agent is preposed to a clause-initial location and is marked with a genitive case assigning preposition *n-*. *N-* licenses the *a* genitive allomorph on its complement. There are two case-marking options for the theme argument. It may be marked with either the nominative case (72), (73) or with the accusative case (81). When the theme is in the nominative case, it may raise to the preverbal position, SpecIP (73).

(72) **Nā** **Tioni** *i* 'aka'oro *te* *motokā*

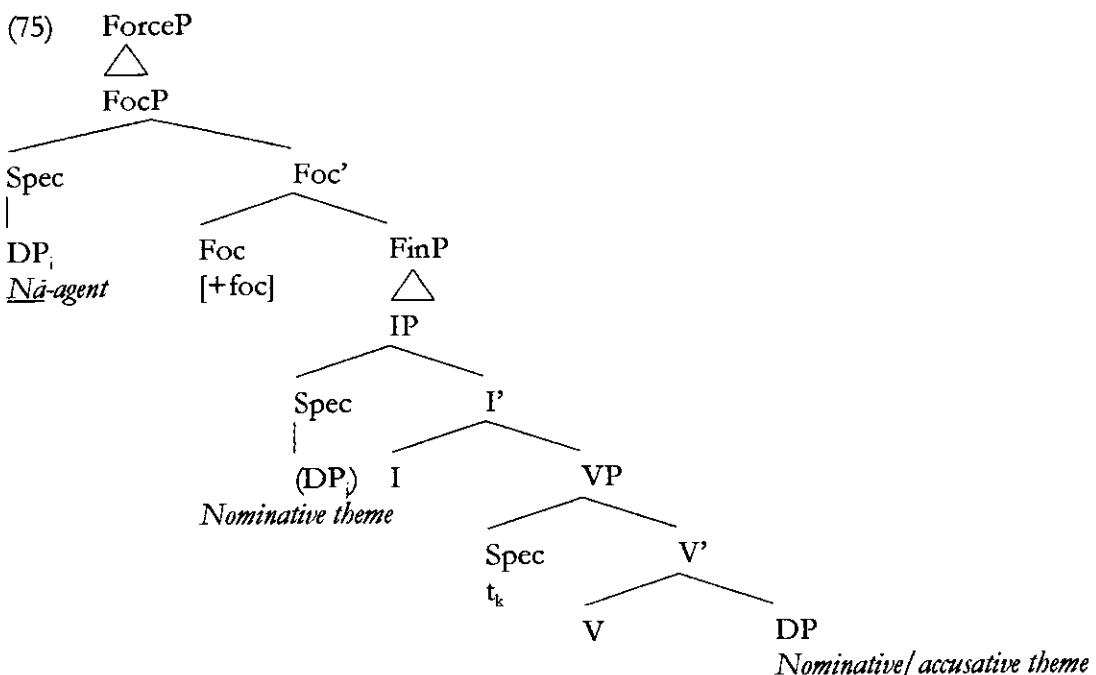
perhaps along the lines suggested by de Lacy (1999), then the phrase structure economy in Waite's argument is considerably reduced.

prep.A Tioni TAM drive det car
 "It was Tioni who drove the car"

(73) **Nā Tere** te tamaiti i moto
 prep.A Tere det child TAM punch
 "Tere punched the child" {Buse and Taringa (1996:263)}

(74) **Nā Papa Tere** e akatika i tō mātou poti
 prep.A Papa Tere TAM sail acc det.O Iex.pl boat
 "It is Papa Tere who sails our boat" {EDU5}

Several authors interpret the agent in the NZ Maori AE construction as a focal constituent (Harlow (1986); Waite (1990); Bauer (1997); Pearce (1998b); Pearce (1999)). Pearce (1999) considers the construction within Rizzi's (1997) articulated A-bar system. She argues that the agent raises from SpecVP to the Specifier of FocusP to check its [+focus] feature. I will assume this to be true also of the CI Maori version of the AE. The examples in (72) - (81) thus have the structure in (75).



As Pearce points out, the location of the AE agent in the specifier of FocP correctly predicts that a preposed Wh-operator and a preposed AE agent are unable to co-occur within a single clause. Both Wh-operators and AE agents compete for SpecFocP. (76) shows that the AE construction may be used with a Wh-operator, when the Wh-operator is the agent of the clause.

(76) **Na'ai** i 'oronga i tēnā tika'anga kia rave koe

prep.A.who TAM give acc det.proxII authority TAM do IIsg
 i te reira?
 acc det that
 “Who gave the authority that you could do that?” {Mark 11:28}

This example supports the claim that the raised AE agent and raised Wh-operators have a similar interpretive value in the sentence and accordingly target the same specifier position, SpecFocP. The specifier of Focus Phrase is thus crucial in the licensing of both Wh-operators and preposed AE agents.

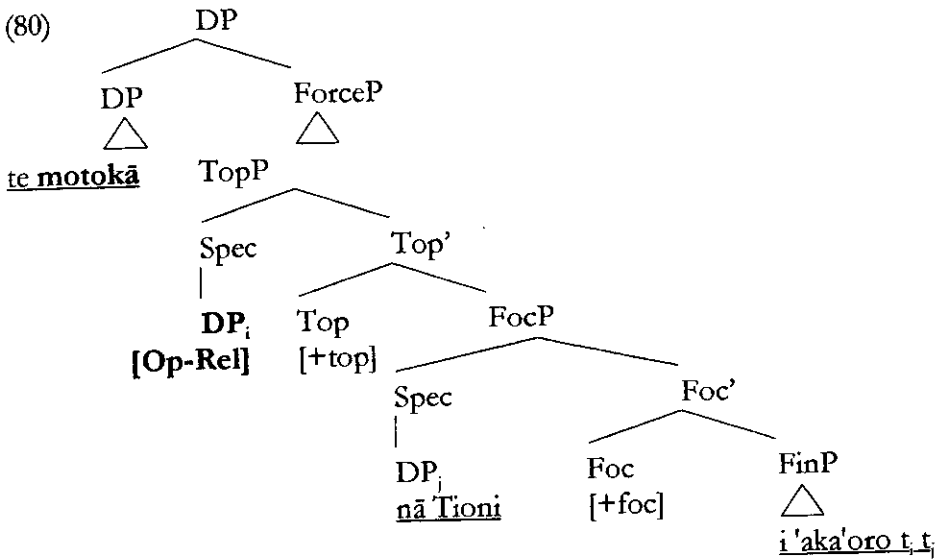
In the discussion of equative relative clauses, I argue that the relative operator is the subject of a null copular verb. As with all relative operators, it raises to SpecTopP. This predicts that SpecTopP and SpecFocP can co-occur within a single clause. Evidence from the AE supports this. The example below illustrates that the theme argument in (77) may be topicalized with *ko* (78).

(77) **Nā** **Tioni** i 'aka'oro te motokā
 prep.A Tioni TAM drive det car
 “It was Tioni who drove the car”

(78) *Ko* te motokā **nā** **Tioni** i 'aka'oro
 top det car prep.A Tioni TAM drive
 “As for the car *Tioni* drove [it]”

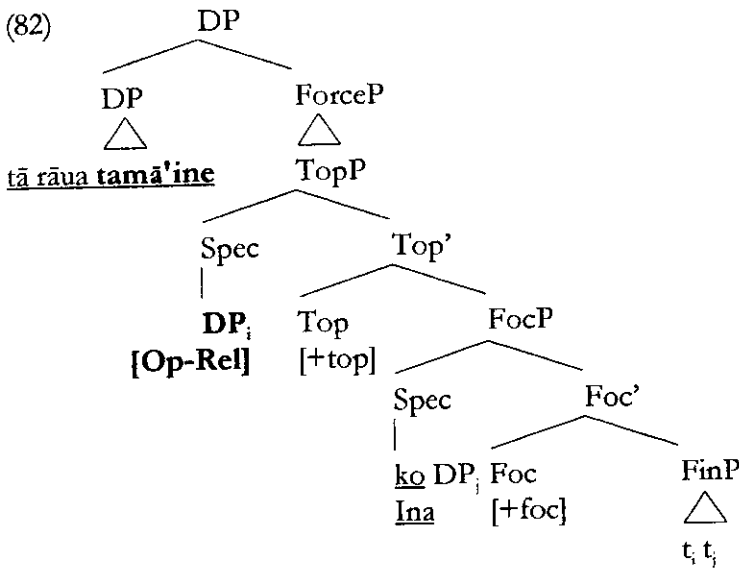
In chapter three (section 3,4), it was shown that a theme relative clause can be formed by marking the agent with the AE *nā* preposition (79). Recall that this enables the theme to be relativized on as the nominative case-marked argument. The co-occurrence of a theme relative operator and an AE agent is essentially the same structural configuration as (78) above. In (80), the relative operator raises to SpecTopP via SpecIP, and the agent is located in SpecFocP below.

- (79) Kua kite au i te motokā [RC nā Tioni i 'aka'oro]
 TAM see Isg acc det car prep.A Tioni TAM drive
 "I saw the car that Tioni drove"



In the structure above, the relative operator raises to SpecTopP, while the agent is located in SpecFocP immediately below. The example in (78) gives evidence that two overt DPs can also stand in this configuration to each other. Another construction that uses this structure is the equative relative clauses. Example (39) and the tree in (41) below show the ko-marked DP raised to SpecFocP, while the Wh-operator is located in SpecTopP above.

- (81) I tēta'i tuatau, te no'o ra tēta'i tangata ē tana
 prep det time TAM live dist det man and det.A.IIIsg
 va'ine ē tā rāua tamā'ine ko Ina
 woman and det.A II.dl daughter eq Ina
 "Once upon a time, there lived a man and his wife and their daughter (called) Ina"
 {EDU7}



The discussion of this section and section 2 shows that the specifiers of TopicP and FocusP are used in a wide variety of constructions. We have seen that raising to SpecTopP is permitted for nominative case-marked arguments only. The constituents that may occupy SpecFocP are Wh-operators, the raised DPs of predicate nominals and equative clauses, and AE agents. These items may be nominative case-marked, but are not restricted to this. For example, the AE agent is marked by a genitive case-assigning preposition nā, and in some cases co-occurs with a nominative case theme (77). Adjuncts which raise to *either* specifier bind the anaphoric ei. The adjunct Wh-operator 'e a'a 'why' binds ei (67), (68), just as the relative operators do. We can conclude from this that ei does not refer to syntactic location. The Table below summarizes the data considered here.

TABLE (4):

	SPECTOPP	SPECFOCP
Main clause - topicalized DP	<u>Ko</u> DP	
AE main clause		Agent with <u>nā</u>
AE main clause with topicalized DP	<u>Ko</u> DP	Agent with <u>nā</u>
Equative Clause		<u>Ko</u> DP
Wh-clause		Wh-operator with <u>ko/nā/'e</u>
Non- <u>te</u> relative clause	Relative Operator (null)	
Non- <u>te</u> relative clause with AE agent	Relative Operator (null)	Agent with <u>nā</u>
<u>Te</u> -relative clause	Relative Operator (null)	Equative DP, no <u>ko</u>
Equative relative clause	Relative Operator (null)	Equative DP with <u>ko</u>

4. *Conclusion*

This chapter reviews some features of the left-periphery. In section 1, it is shown that the complementizer node is not lexically filled in clausal arguments in CI Maori. However, there is nonetheless a syntactically relevant clause-initial position, which in some cases licenses a preposed nominative case-marked argument in SpecIP. I propose that this is an analogous position to SpecNumP within the DP, and further supports the analogy of DP and CP, proposed in chapter two. I also examine some structures which utilize the specifiers of Topic and Focus. It is shown that by identifying two specifiers in the syntax, a concise treatment is allowed of a number of different clause types. All relative clause operators and topicalized DPs raise to the specifier of TopicP; all interrogative operators, preposed AE agents, equative DPs (with and without ko) raise to the specifier of FocusP.

Chapter Six: Conclusions

There are two principal conclusions to be drawn from the discussion and data in this thesis. The first is the parallelism between the clausal CP and the nominal DP in Cook Islands Maori. I illustrate several points on which these two phrasal types compare. The nominal phrase has an inflectional level, where features of the lexical head are checked. This is identified as a Number Phrase. NumP checks the referential, quantificational, and deictic/anaphoric features of the lexical head as well as the genitive case of its argument. The Determiner Phrase, on the other hand, is analogous to the complementizer level. It indicates that its complement is subordinate to a predicate head, and is thus comparable to the complementizer phrase, which canonically marks the relationship between a matrix and subordinate clause. A further parallel is drawn between the preposed genitive case-marked argument in the specifier of NumP, and the preposed nominative case-marked argument in the specifier of IP. In the latter case, the argument may only prepose in the presence of a clause initial element, and this reinforces the CP/DP parallelism, as it indicates that there is a syntactic CP projection, and that it has detectable syntactic effects.

The other conclusion of the thesis is the importance of discourse functions within the syntax. I show that the projection of a Topic Phrase and a Focus Phrase allows a concise account of several clause types. It is shown that topicalized DPs and relative operators share a similar interpretation, and have corresponding syntactic features. Equative DPs, interrogative operators and preposed Actor Emphatic agents likewise share an interpretive and syntactic parallelism. The existence of two function projections for Topic and Focus predicts that the various types of topicalized and focalized phrases may co-occur and this is indeed the case.

The linguistic study of any language takes its direction from the clues provided within the language. The appearance of a determiner leftmost in the *te*-relative clauses initially indicated to me that my identification of the determiner as parallel to the clausal complementizer was correct. I suspected that the lack of a class of complementizer in CI Maori meant that the determiner, an analogous category, could be used as a complementizer in relative clauses. It was a great deal further down the track that this

eventually was shown to be wrong. However, the detailed study of relative clauses and other subordinate clauses instead took me on a path that I had not anticipated. It established the importance of discourse functions within the structure of the left periphery. Although I sense that the two paths I followed will eventually join back up, I have not reached that stage within the temporal boundaries of this thesis. The potential link-up between the articulated CP and the DP/CP parallel raises interesting questions, and it is to some of these questions that I now turn.

Given that the left-periphery of the clause is made up of not one but several functional projections, an interesting issue is to investigate if the same articulation should be reflected within the DP. My thesis comes to the somewhat awkward conclusion that DP is comparable to CP, while I at the same time advocate a multi-layered CP. Exactly which level of the articulated CP is DP comparable to? This issue remains to be examined in more detail. It is to be expected that the nominal phrase will perhaps not allow such an array of left-peripheral functional projections. Preposing of the nominative case-marked argument to SpecIP does not appear to have an impact on the interpretation of the clause overall, however other types of preposing, such as topic and focus, do have such an impact. It would be interesting to establish the conditions that license the preposing of a phrasal genitive case argument, and to see how these may interact with discourse functions of topic and focus. These functions express a distinction of old information versus new information, and this may certainly be reflected within arguments of a nominal phrase.

Another issue that arises is the role of the subordinator in nominal versus clausal constituents. It is shown that CI Maori does not have a class of complementizers to introduce clausal arguments. The lack of such a lexical class is interesting in that the determiner is compared in its subordinating function to precisely this type of element. It is argued that *te* in a DP indicates that its nominal complement is subordinate to a predicate. It appears that the grammar does not require the overt indication of such subordination for clausal arguments however. In fact the grammar does not appear to mark subordination at all, as main and subordinate clauses are completely parallel in their surface syntax. Given that many subordinate clauses are introduced simply by their tense, aspect, or modality markers, it may be the case that these markers indicate the relationship between a main and subordinate clause, for example by the indication of a

presupposition. A related aspect is the role of the subordinating particle \bar{e} , which was identified as an expletive particle. This particle occurs when a tensed clause is the subcategorized argument of a predicate. The presence of this particle raises interesting questions for the syntactic representation of clausal arguments, as it appears that they may not be able to occur in argument positions. Given that clausal constituents are not assigned case, an aspect that could prove fruitful is to examine the possible connection between case marking and the location of these clausal arguments.

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Appendix One: Abbreviations Used in Glosses:

Note: I have largely followed the glossing conventions in Bauer (1997), with variations for language specific morphemes, or where the Bauer gloss does not reflect my analysis.

I	first person
II	second person
III	third person
sg	singular
pl	plural
dl	dual
in	inclusive
ex	exclusive
A	a-class possessive
acc	accusative
adv	adverbial particle
agt	passive agent
caus	causative prefix
det	determiner
dir	directional particle
dist	deictic: distant from speaker and hearer
dup	reduplicated segment(s)
eq	equative predicate particle
ex.	example
neg	negator
nom	nominalizing suffix <i>or</i> nominalizing clitic
num	number marker
O	o-class genitive
part	particle
pass	passive suffix <i>or</i> passive clitic
prep	preposition
pers	person marker
proxI	deictic: near speaker
proxII	deictic: near hearer
reflex	reflexive
rel	relative clause morpheme
sub	subordinator
TAM	tense/aspect/mood marker
top	topic marker

Appendix Two: Corpus Bibliography

- EDU1** Alama, Ester Temukisa Laban. "*Ko te tua i ā Ina 'ē te tuna.*" Translated by Taria Kingstone. Wellington: Learning Media, Tupu Resources. First published: 1995. Translation published: 1995. Original language: Samoa.
- EDU2** Cowley, Joy. "*Kua 'imene a Pati.*" Translated by Anau Aue. Wellington: Learning Media, Tupu Resources. First published: 1983. Translation published: 1988. Original language: English.
- EDU3** Cowley, Joy. "*Te ika ā Pati.*". Translated by Anau Aue. Wellington: Learning Media, Tupu Resources. First published: 1983: Translation published: 1988. Original language: English.
- EDU4** Ama, Aka'iti Tamarua. "*Tākiri ki runga i te matie.*" Wellington: Learning Media, Tupu Resources. 1997. Original language: Cook Islands Maori.
- EDU5** Mato, Manine. "*Ranga pa'ua.*". Rarotonga: Department of Education, Cook Islands. Original language. (pub. date not specified). Cook Islands Maori.
- EDU6** Matangaro, Toumiti. "*Ko Tiaki te Rapiti meangiti.*". Rarotonga: Department of Education, Cook Islands. (pub. date not specified). Original language: Cook Islands Maori.
- EDU7** (Author not specified). "*Ko Ina e te Moko.*" Rarotonga: Department of Education, Cook Islands. (pub. date not specified). Original language: Cook Islands Maori.
- EDU8** Mooar, Sue "*Ko te ngā'i meitaki.*" Translated by Anau Aue. Wellington: Learning Media, Tupu Resources. First published: 1989: Translation published: 1992. Original language: not specified.
- EDU9** Swan, Epi. "*Tipū māтира.*" Translated by Makiutu Tongia. Wellington: Learning Media, Tupu Resources. First published: 1997. Translation published: 1997. Original language: Tokelauan.
- EDU10** Swan, Epi. "*Ko te rā Tū'aka'ou'anga i Nukunonu.*" Translated by Taria Kingstone. Wellington: Learning Media, Tupu Resources. First published: 1996. Translation published: 1996. Original language: Tokelauan.
- EDU11** Burgess, Feaua'i Amosa. "*E vaitata atu tō mātou kāinga ki te 'āua 'animara.*" Translated by Taria Kingstone. Wellington: Learning Media, Tupu Resources. First published: (not specified). Translation published: 1993. Original language: Samoa.

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- EDU13** Nelisi, Lino. "*Rama unga-kaveu.*" Translated by Makiutu Tongia. Wellington: Learning Media, Tupu Resources. First published: (not specified). Translation published: 1996. Original language: Niuean.
- EDU14** Vercoe, Caroline Lolegi. "*Te tatan'anga i te au vaito tapa.*" Translated by Taria Kingstone. Wellington: Learning Media, Tupu Resources. First published: 1996. Translation published: 1996. Original language: Samoa.
- EDU15** Scheel, Ma'ara Taia. "*Kā moe tōku ata.*" Wellington: Learning Media, Tupu Resources. 1996. Original language: Cook Islands Maori.
- EDU16** Mailangi, Elenga. "*Te tautai titomo i Niuafo'ou.*" Translated by Makiutu Tongia. Wellington: Learning Media, Tupu Resources. First published: 1996. Translation published: 1996. Original language: Tongan.
- EDU17** Fakanai, Aue Sabina. "*Te tiōpu māroro.*" Translated by Taria Kingstone. Wellington: Learning Media, Tupu Resources. First published: 1997. Translation published: 1997. Original language: Niuean.
- EDU18** Simona, Ropati. "*I 'akaruke'ia au, ko au anake 'ua.*" Translated by Taria Kingstone. Wellington: Learning Media, Tupu Resources. First published: 1995. Translation published: 1995. Original language: (not specified).
- EDU19** Robertson, Pepe. "*Ko'ai rā te ka 'inangaro i te no'o ki te kainga.*" Translated by Teupoko Ina Morgan. Wellington: Learning Media, Tupu Resources. First published: 1997. Translation published: 1997. Original language: Samoa.
- EDU20** von Reiche, Momoe Malietoa. "*Te tatan ā te au tamariki 'Amao.*" Translated by Taria Kingstone. Wellington: Learning Media, Tupu Resources. First published: 1995. Translation published: 1995. Original language: Samoa.
- EDU21** Lumelume, Sereima. "*Aue! 'Aue!*" . Translated by Anau Aue. Wellington: Learning Media, Tupu Resources. First published: (not specified). Translation published: 1993. Original language: (not specified).
- EDU22** Scheel, Ma'ara Taia. "*Te tāmaru 'ē te tūpāpaku.*" Wellington: Learning Media, Tupu Resources. 1995. Original language: Cook Islands Maori.
- EDU23** Kingstone, Taria. "*Ko te tūpāpaku-kai-toto i te 'uapou.*" Wellington: Learning Media, Tupu Resources. 1999. Original language: Cook Islands Maori.

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- NEV2** "*Nuti Evangeria*", the newsletter of the Cook Islands Christian Church. Rarotonga, Cook Islands. Pepa 2, May 1996.
- NEV3** "*Nuti Evangeria*", the newsletter of the Cook Islands Christian Church. Rarotonga, Cook Islands. Pepa 3, June/July 1996.
- NEV4** "*Nuti Evangeria*", the newsletter of the Cook Islands Christian Church. Rarotonga, Cook Islands. Pepa 5, September/October 1996.