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COMPLEX SENTENCE FORMATION
IN MAORI

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION
OF THE UNIVERSITY OF HAWAII IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY
IN LINGUISTICS

DECEMBER 1979

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Ki taku hoa rangatira, ki a Te Koingo

(To my wife Tilly)
ACKNOWLEDGEMENTS

I would like to express my thanks to my committee members for their guidance and encouragement during the preparation of this dissertation. I am grateful to Professors Andrew Pawley and Roderick Jacobs for the many hours they spent helping me to clarify my thinking on the syntax of Maori and especially to Andrew Pawley for the time spent in trying to improve my expression of that thinking in this dissertation. I am also grateful to the faculty of the linguistics department of the University of Hawaii for their teaching which enabled the completion of this study. My thanks also to Professor Bruce Biggs. While here at the University of Hawaii conducting his own research in the Fall of 1977 he gave much of his personal time to discuss with me many problems pertaining to Maori language. Sandra Chung, in her thought-provoking criticisms of my work through our correspondence, was most helpful. However, the final form of this dissertation is entirely my responsibility and any fault it may contain is in no way to be construed as representing the views of the people mentioned above.

I would like to thank several institutions in New Zealand for the grants that made my study overseas possible: the Department of Education, the State Services Commission, the Martin Te Whiwhi Winiata Memorial
Scholarship Board and the Maori Education Foundation. Persons who have been especially supportive are W.L. Renwick, Director-General of Education, to whom I am grateful for his reassuring confidence in my ability to undertake this study; John Rangihau who coerced and convinced me to 'get going'; and my colleagues in the Department of Education who carried our work during my absence.

And of course, a special mihi aroha to my family, who bore the trials of an absent father for three years, and to my wife, Tilly, for her love, patience, and understanding of the sacrifices entailed.

Ki te iwi, ki ngaa tiipuna, naana nei te taonga, teena koutou.

(To the people, to the ancestors whose treasure it is, thank you.)
This study is an investigation into complex sentence formation in Maori language.

Chapter 1 states the aims of the study, provides background information concerning the Maori language community and previous research on Maori, and discusses the theoretical assumptions underlying the analysis. The analysis is generative-transformational in approach, but the explanations of some of the phenomena observed are given from a more semantically based viewpoint than from a strictly autonomous syntax model.

Chapter 2, on simple sentences, sets out the two main types that have been identified by previous analyses: non-verbal (or equational) and verbal sentences. The problem of subject and predicate identification in equational sentences is investigated and some rules are formulated.

The remaining chapters deal with complex sentences. Chapter 3 introduces some working definitions and illustrates examples of complex sentence processes that are to be investigated. These are coordination, relativization and complementation.

Chapter 4 is on coordination. It investigates the conjunction aa, raaua ko and me all of which express 'and'. Each conjunction joins certain types of conjuncts: noun
phrases, verb phrases, prepositional phrases, and full clauses. The conjunction *raanei* 'or' and *engari* 'but' are also investigated. Syntactic rules such as conjunction reduction, identical subject deletion, and gapping are explored. The effects of the semantic notions denial of expectation and semantic opposition noted by Lakoff (1971) for English are found to be factors influencing the syntax of coordinate structures of Maori also.

Chapter 5 discusses relativization. A review of the various hypotheses for deriving relative clauses put forward in generative treatments of English and other languages are first reviewed in some detail. Then the question of whether Maori has true relative pronouns is broached. The argument presented here (in contrast to Williams) is that certain particles - *nei, naa, raa, ai* and *naana* - function as true relative pronouns in Maori. Though *nei, naa, raa* also function as demonstratives, there is clear syntactic and distributional evidence which differentiates their two functions.

Chapter 6 is on complementation. The complement structures identified are sentential complements, nominalizations of which there are two types (deverbalized, and nominalized complements), and simple noun complements. The complement markers identified and discussed are
Ø, i, ki (or ki te), kia, kia...ai, and hei. The syntactic rule of Equi NP deletion is discussed also and an 'anomaly' (the deletion of the deep structure object NP of the embedded clause) is noted. Some syntactic phenomena of Maori (e.g., the movement and non-movement of certain constituents) are explained within the theory of non-discrete grammar proposed by Ross (1973).
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CHAPTER 1
INTRODUCTION

1.0 Purpose

The purpose of this chapter is to prepare the way for the detailed study which follows. Section 1.1 provides the reader with a brief orientation to the Maori language - to its geographical location, its place within the Austronesian family of languages, its major typological characteristics, and to the body of work which has already been done on Maori grammar. Section 1.2 states the aims of the study, its scope and limitations, and the procedures adopted. Section 1.3 outlines the theoretical assumptions about language that underlie the analysis presented in this study. Section 1.4 gives an explanation of the data sources, orthographic conventions, and abbreviations used.

1.1 Orientation

Maori is a Polynesian language spoken mainly by the Maori people of New Zealand. The Maori people constitute about 10-12% of the New Zealand population which numbers about 3.4 million today. English is the first language spoken by most New Zealanders, and is the language of instruction in schools and of the mass media.
The percentage of the Maori population that speaks or is able to use the Maori language in normal discourse is approximately 25%. I personally know about a dozen non-Maori New Zealanders who speak Maori with reasonable facility. The Polynesian languages form a well-marked subgroup of the Austronesian family. They are distantly related to Malay, Tagalog, and Javanese, and more closely to the languages of Fiji and the Hebrides. Within the Polynesian subgroup, Maori falls into the East-Polynesian branch, having among its closest relations the language of Rarotonga, Tahiti, and Hawaii.

There are fifteen segmental phonemes in Maori, 10 consonants and 5 vowels. The consonants are /p, t, k, m, n, ű, r, w, f, h/ and the vowels are /i, e, a, o, u/. A description of their articulations, allophones, and distributions can be found in Biggs (1961) and Hohepa (1967), while Krupa (1966) provides a still more detailed distributional analysis.

Orthographically, the consonants /ŋ/ and /f/ are represented by ng and wh, respectively. Vowel length is phonemic. Vowel length was largely ignored in early publications during the nineteenth century and in the first half of the twentieth century. But the publications of recent years have used either a macron (as in á) or geminate clusters (as in aa) to indicate vowel length. Potent and
heated arguments often rage over language matters and the Maori community has not escaped that experience. Since the mid nineteen fifties vowel length marking has been a controversial issue, the field being divided into those who prefer no marking, those who prefer the macron, and those who prefer double vowels. For example, today it is the policy of scholars at the University of Auckland to use double vowel marking, while the Department of Education uses the macron mark in all its published materials for schools.

Maori is a predicate-initial language in its basic sentence or clause structure. The predicate consists of either a verb phrase or a non-verbal phrase. The predicate is followed by one or more arguments or noun phrases (see Chapter 2 for definitions of these terms). One argument is always in the unmarked case and is the syntactic subject. The rest of the arguments occur as prepositional phrases. All phrases consist of a central nucleus containing one base (in the underlying structures) and a periphery consisting of one or more particles preceding and following the nucleus.

The verb phrase consists of a set of tense-aspect markers, followed optionally by a small set of pre-verbal modifiers, followed by the verb nucleus, and then followed by a set of ordered post verbal modifiers (see Chapter 2, p. 20).
Non-verbal phrases which function as predicates are preceded by prepositions which have tense-aspect function (see Chapter 2, p. 34).

A noun phrase consists of a determiner followed by a noun and then followed by a set of modifiers.

Various combinations of these phrases generate the simple sentences of the language (see Hohepa 1967). The phrase structure rules on page 34 give a general description of the types of sentences that may be generated.

The case marking of transitive sentences in Maori has been generally characterized as accusative. In transitive sentences with actor subjects the case-marking (zero) on the subject is the same as on the subject of intransitive sentences. Active verbs are transformed into passives by a suffix having the basic shape -Cia. In Maori discourse it has also been observed that there is a preponderance of passive over active structures. I follow the above generally accepted analysis except in viewing -Cia as a stative suffix. (See Chapter 2, note 8, for discussion.) One other suffix which is important in the discussion on complementation in Chapter 6 is the nominalizer with the basic shape -Canga.

Several excellent works by Professor Bruce Biggs are recommended (see bibliography) as introductions to the Maori language.
The most general of Biggs's works on Maori language is his article 'Maori Language Past and Present' (1968). This article deals with Maori dialects and provides a history of the development of written grammars of Maori. The historical survey begins with Thomas Kendall, who was the first to devise a spelling system and to write the first book in Maori published 1815. The article then discusses the grammars of Lee (1820), Maunsell (1842), and the grammatical sketch contained in William Williams's *A Dictionary of the New Zealand Language* (1844). Such early grammars were written in the classical mould, but the grammar of W.L. Williams (1904), son of William Williams, witnessed a significant departure (according to Biggs) from the traditional descriptions based on parts of speech of Western grammars. W.L. Williams introduced categories to describe the characteristics of Maori language on its own terms. The historical survey also covers works by Biggs himself, and Dr Patrick Hohepa—which I will discuss later—and which follow respectively the tenets of the two recent schools of modern linguistics, the structuralists, and the generative-transformationalists. The article then provides a brief and not-overly-technical grammatical description of Maori, and discusses in later sections matters relating to the Maori language and the education system, Maori literature, the long-vowel controversy, the Maori language today, and the future of the Maori language.
There are many works by Biggs and other authors which deal specifically with the grammar of Maori, but the following stand out as landmarks in 150 years of research.

The textbook by the Williams family, First Lessons in Maori, first published in 1862, and now in its Thirteenth Edition (1965), still remains a valuable source. However, its style of presentation is often terse and this tends to obscure many of the deep linguistic insights present.

Several works of a more technical nature have dealt with phonology and syntax.

Biggs (1961, 1974) provide the most detailed analyses of the phonological and morphological characteristics of Maori to date. The first focuses on the structure of the phrase of 'contour word', a unit first identified by Biggs. The 1974 work expands his former analysis, attempting also to describe sentence-structure.

Hohepa's dissertation, A Profile Generative Grammar of Maori (1967), virtually contains two grammars. One (Chapter 3) is formulated in the framework of 'sentence profile analysis'. Sentence profiles are the possible orderings of the several basic phrase types (Hohepa isolates seven types) within a simple sentence which occur without changing meaning or obligatorily changing morphology.

The other grammar is in Hohepa's Chapter 4, entitled 'Transformational Generative Grammar.' It details
rules that would generate at least one profile sentence from which other sentences are derived. This work constitutes the first generative grammar of Maori.

Several other important papers by these writers are as follows: Biggs (1955, 1961, 1971, 1974 b); Hohepa (1966, 1969, 1970).

The works of Williams, Biggs, and Hohepa are important grammars of Maori--each building on previous studies, each breaking new ground. This dissertation, as evidenced by the numerous references made, is obviously indebted to a great many of the insights of these scholars. There have been a number of other recent works concerned with the comparative study of Polynesian languages, which have used Maori examples as part of their data. In particular, studies by Hale (1968), Chung (1970, 1976), Clark (1974) and Chapin (1974) have helped to extend our understanding of Maori syntax.
1.2 Aims of Study

The aim of this study is to describe several types of complex sentence formation in Maori. Previous treatments of Maory syntax have concentrated on the structure of phrases and simple sentences. This study attempts to extend the field of analysis to multi-clause constructions, specifically to coordinate structures and two types of subordinating constructions, those formed by relativization and complementation.

Chapter 2 illustrates the range of simple sentence types of Maori. The classification presented also provides a systematic basis for the investigations of the subsequent chapters, as for example, the treatment of a question such as: Can non-verbal matrix clauses take relative clauses derived from non-verbal simple sentences?

Chapter 3 introduces the study of complex sentences. It assumes that complex sentences arise either from the coordination of simple sentences, or from the subordination of one simple sentence to another.

Chapter 4 provides an investigation of coordinate structures, showing certain conjunctions and their distributional characteristics.

Chapter 5 attempts to describe the structure and derivation of relative clauses.

Chapter 6 is a study of complementation. It identifies markers of complements and specifies the complement
types they occur with.

1.3 Theoretical Assumptions

In general, the theoretical assumptions underlying my analysis are those of transformation-generative grammar as developed by Chomsky and others in the 1960s and 70s. I accept the notions deep structure and transformation as presented in *Aspects of the Theory of Syntax* (Chomsky 1965).

However, in providing some explanations for several phenomena noted in the course of this study, I have also drawn upon the ideas of several scholars who work within a more semantically based theory of generative grammar. I refer, for example, to the discourse related Topic-Comment model of Gundel (1974) (see the Appendix for a summary), to the logical structure model represented by the work of linguists such as McCawley (see Chapter 5 on relativization), and to the theory of non-discrete grammar of Ross (1972, 1973). (See Chapter 6.)

1.4 Data Sources, Orthography, and Abbreviations

I am a native speaker of Maori and the bulk of my data is self-generated. Since I have worked in the absence of other native speakers, and because levels of acceptability sometimes vary considerably--often, even with speakers of the same dialect (as witnessed by the numerous disagreements
among native speakers of English), and other languages—I have tried to support my own examples with textual citations. Such examples are cited in the orthography of the texts they are taken from. Where my intuitions about the status of a usage are shaky, and independent supporting examples are lacking, I acknowledge this by the usual convention of a question mark before the example. (See abbreviations.) My main textual sources were: (See full details in bibliography)


First Lessons in Maori, (FLM) by W.L. Williams, 1965.

He Pitopito Korero, (PK) by T.S. Karetu.


Nga Mahi a Nga Tupuna, (NMT) by Sir George Grey.


Nga Moteatea Part II, (NMII) by Sir Apirana Ngata, and translated by Pei Te Hurinui.


### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-E</td>
<td>Agent-Emphatic</td>
</tr>
<tr>
<td>Agt</td>
<td>Agent</td>
</tr>
<tr>
<td>ana</td>
<td>anaphoric particle</td>
</tr>
<tr>
<td>ARG</td>
<td>argument</td>
</tr>
<tr>
<td>car'j</td>
<td>cause</td>
</tr>
<tr>
<td>Comp</td>
<td>complementizer</td>
</tr>
<tr>
<td>C.M.</td>
<td>case marker</td>
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<td>Conj</td>
<td>conjunction</td>
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<td>dem</td>
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<td>pass</td>
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<td>Topic-Comment</td>
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<td>Topic</td>
</tr>
<tr>
<td>V</td>
<td>verb</td>
</tr>
<tr>
<td>VP</td>
<td>verb phrase</td>
</tr>
</tbody>
</table>

; Morpheme boundary; and space between glosses means word boundary
1 The New Zealand Council for Educational Research has recently completed under the direction of Dr Richard Benton, a Socio-Linguistic Census of all the major areas of Maori population in the North Island of New Zealand. The data has been analysed and this work provides a detailed picture of the current state of Maori language among the Maori people. (See bibliography).

CHAPTER 2
SIMPLE SENTENCES

2.0 Introduction

Before taking up the description of complex sentences in Maori, we must have, as a foundation, an analysis of simple sentences. Simple sentences of Maori have been dealt with in some detail in several works and are much better understood than the structure of complex sentences. It is not my purpose here to reiterate exhaustively the findings of such works. Rather it is to review just those aspects of simple sentence structure which are relevant to the later discussion of complex sentences. In the course of this summary, I will take up some of the problems which have not been dealt with satisfactorily in previous studies. This chapter then will be concerned with providing:

(a) A definition of 'sentence', specifically 'simple sentence'.

(b) A description of simple sentence types found in Maori:
   (1) simple verbal sentences,
   (2) simple non-verbal sentences, and

(c) A discussion of problems of predicate and subject identification in simple non-verbal sentences.

2.1 Definition of Simple Sentence of Maori

I shall define 'simple sentence' as a grammatical unit consisting of a Predicate plus one or more Arguments (hereafter Arguments will be designated as NPs). These NPs
may not be complex in the sense that an NP dominates the symbol $S$.

In a simple sentence consisting only of a Predicate and one NP, that NP always occurs in the unmarked case. In functional terms, this NP will be called the SUBJECT, and will be designated $NP_1$. Other NPs will always be marked by a preposition, and such NPs will be referred to as being in an 'oblique case'.¹ No special designation will be given to the notion 'object' in this work. (Prepositions are glossed simply as prep in the following illustrative examples, but will be glossed more accurately elsewhere.)

(1) Kua mate te wahine.

perf die the woman

'The woman has died.'

(PREDICATE + $NP_1$)

(2) Ka hoki au ki Aotearoa.

inc return I prep A

'I shall/am/was return to Aotearoa.'

(PREDICATE + $NP_1$ + NP)

(3) I haere te tamaiti ma runga i te pahi ki Ruatoria.

past move the child prep on prep the bus prep R

'The child went to Ruatoria (by way of) in the bus.'

(PREDICATE + $NP_1$ + NP + NP + NP + NP)

Thus, every sentence of Maori is assumed to consist minimally of a PREDICATE and an ARGUMENT.
2.1.1 The Predicate

In Maori, the PREDICATE is not always signaled by a verb; therefore the term PREDICATE will be used in the Phrase-structure (PS) rules and Phrase-markers (PM) as a grammatical category label distinct from VERB or VERB PHRASE.

I limit the notion PREDICATE in this work to lexicalized items excluding the deeper 'atomic predicates' to which prelexical transformations apply, as assumed by Gruber (1965) and McCawley (1968).

As will be explained in more detail later, a verb phrase (VP) or a noun phrase (NP) may function as the predicate of a sentence. The category PREDICATE will always be expanded as either NP or PP (PP = a prepositional particle with aspectual function followed by a NP). With equational sentences, it is not always easy to determine when an NP is the predicate or the subject, but it will be shown in section 2.4 that in such structures, the predicate is signaled by the presence of aspectual particles, such as ko 'identification', he 'attributive', kei 'present-location', hei 'future-location', naa 'possession-real is', maa 'possession-irrealis', and so on.

2.1.2 Arguments

The ARGUMENTS of the predicate are always noun phrases (NPs) and will be represented directly in the PS rules by the category label NP. An NP is a constituent, typically
of a noun *tangata* 'man', *whare* 'house', or *Hoone* 'John', which is normally preceded by any of the determiners,³ examples of which are:

- **a**  
  'person/proper noun' marker

- **te**  
  'singular determiner', 'the:sg'

- **ngaa**  
  'plural determiner', 'the:pl'

- **teenei**  
  'this:here'

- **eneei**  
  'these:here'
2.2.1 Simple Sentence Types

There are two types of simple sentence constructions in Maori: verbal sentences and non-verbal sentences.

2.2.2 Verbal Sentences

As examples (1)-(3) suggest in Section 2.1, verbal sentences consist of a verb phrase plus one or more noun phrases. The following verbal sentences are further examples which will introduce (see Chart, p. 24):

(a) the two main classes of verbs used in this analysis, that is, intransitive and transitive verbs,
(b) the notion 'nuclear sentence' - that is, the core NP(s) assumed essential for an adequate representation in deep structure of a simple sentence, and
(c) the notion (+ control) by the Patient NP (PAT) of intransitive verbs like kite 'to see' and titiro 'to look at.' (This notion is used in this study to explain the semantic difference between i and ki marking of their following NP constituents. It is explained more fully in Chapter 6 on complementation.)

(4)(a) Ka mate to poaka (i te kariri) {i ki}
       roongahere.

       inc die the pig caus the bullet {loc goal} bush.
       'The pig died (from the bullet) (in the bush).'
(b) Ka noho a Mere (i{ki} te tuuru).
inc sit pers M (i{loc} the chair).
'Mary sat (on the chair).'</n>

(c) I paru taku potae (i te peita) (i taku kaainga).
past dirt my hat (caus the paint) (loc my home).

Lit. 'My hat was dirtied (by the paint) (at my home).'</n>

(5)(a) Ka hiahia a Hoone (i te ataahua o te kootiro ra).
inc desire pers John (caus the beauty of the girl there).

'John desires (because of the beauty of the girl).'</n>

(b) Ka kite a Hoone (i{ki} te pukapuka ra).
inc see pers John (obj/caus the book there).

'I look (t/to/because of that book).'

(c) Ka titiro au (i{ki} te moana).
inc look pers I (i{loc/cause} the sea)

'I look (at/because of the sea).'</n>

(6)(a) Ka tahu te tangata i tana hikareti (i te whare-nui).
inc light the man (obj his cigarette loc the meeting house).
'The man lights his cigarette (at/in the meeting house).'

(b) Ka pana a Tamahae i te motoka (ki Rotorua).
inc push pers T. obj the car (goal loc R.)
'Tamahae pushes the car to/at Rotorua.'

### 2.2.3 The Verb Phrase

Most analyses of Maori (e.g., Biggs, 1961; Hohepa, 1967) agree that a minimal definition of the verb phrase consists of:

| VP = Tense-Aspect Markers + Pre-verbal Modifiers + Verb + Post-verbal Modifiers |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| (mutually exclusive)             | (several order classes)           |                                  |                                  |
| ka 'inceptive'                   |                                  |                                  |                                  |
| kia 'desiderative'               |                                  |                                  |                                  |
| i 'past'                         | aata 'carefully'                 | moe 'sleep'                      | rawa 'intensive' atu 'away'      |
| kua 'perfective'                 |                                  |                                  |                                  |
| me 'prescriptive'                |                                  |                                  |                                  |
| kei 'warning'                    | tino 'very'                      | patu 'strike'                    |                                  |
| ina, ana 'conditional'           |                                  |                                  |                                  |
| e 'non-past'                     | maatua                           |                                  | raa 'there'                      |
| e...ana 'imperfect'              | 'first'                          |                                  |                                  |
2.2.4 Verb Classes

There are two major classes of verbs: INTRANSITIVES and TRANSITIVES. These can be further classified according to semantic criteria, the derivational processes that apply to them i.e., affixation, reduplication, the case marking, and syntactic behaviour of their nuclear (obligatory) and satellite (non-obligatory) NPs.

The chart (p. 24) on verb classes shows the two major classifications of verbs, and the NPs that may function as arguments of those verbs.

Intransitive verbs are divided into three classes: stative, adjectives, and experience verbs. The division for Class I and II is tentatively adopted from Hohepa's (1969:14-17) subdivision of the class stative into these two categories. It also appears that Class II statives may not take ki-marked NPs. Class III is based on the fact that these verbs must have an animate NP, whereas this restriction does not occur for Class I and II verbs. The only obligatory NP that is assumed for the formation of a nuclear sentence for intransitive verbs is the Patient NP. I have designated this NP as Experiencer (EXPR) for Experience type verbs. All satellite NPs may occur as adjuncts to the nuclear sentence, either singly or in a concatenated sequence (see Hohepa, 1967).
Transitive verbs are divided into two classes. The main reason for this is that verbs like *hoatu* 'give - in the direction away from the speaker' and *homai* 'give - in the direction towards the speaker' take as their unmarked agents the form e + NP, and their PAT or Object NP is without the oblique case marker i. However, the possibility of complying with the other transitive sentence pattern (that is, for the verbs in the Chart which are Class I transitives) exists, and is indicated by the bracketed symbol (e) and Ø.

I am somewhat dubious about the label 'Di-transitive', for Class II transitives. That is, I am uncertain that these verbs obligatorily require three NPs as seems to be the case with their English equivalent 'give'. The fact that these verbs of Maori have the directionals atu 'away from speaker' and mai 'towards speaker' in these frozen morphological forms suggests that a third NP is not an obligatory element. And indeed, it would be a redundancy in a sentence like:

Ka homai e Hoone taku pukapuka (ki a au).

John gave my book to me (to pers I)

In the following English equivalent, to me is not deletable.

John gave my book to me.

Furthermore, the fact that the unmarked form of the agent NP is e + NP, a case marking used for the agents of stativized verbs suggests that a specified goal---NP marked
with *ki*- is a satellite NP rather than a nuclear sentence element. That is, when transitive verbs are stativized by -Cia suffixation (see note 8), deletion of either the agent or object NP is possible. On this basis then, a *ki*-marked phrase must be assumed to be more dispensible than the other two, hence making questionable its occurrence as a obligatory NP of a nuclear transitive sentence.
# Chart on Verb Classes showing Obligatory and Optional NPs

## Chart 1

### INTRANSITIVES

#### CLASS I

**Stative Verbs**

<table>
<thead>
<tr>
<th>VERB</th>
<th>NP&lt;sub&gt;1&lt;/sub&gt; = PAT [animate]</th>
<th>SATELLITE NPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>hemo 'died'</td>
<td>te poaka 'the pig'</td>
<td>i/ki te kariri 'the bullet'</td>
</tr>
<tr>
<td>mutu 'finished'</td>
<td>te mahi 'the work'</td>
<td>i te kore kai 'no food'</td>
</tr>
<tr>
<td>oti 'completed'</td>
<td>ngaa whare 'the houses'</td>
<td>i te kaamura 'the carpenter'</td>
</tr>
<tr>
<td>riro 'took/taken'</td>
<td>te moni 'the money;'</td>
<td>i ki roo ngahere 'the bush'</td>
</tr>
<tr>
<td>kaa 'burn'</td>
<td>te ahi 'the fire'</td>
<td>i/ki taku kainga 'my home'</td>
</tr>
<tr>
<td>noho 'sit'</td>
<td>a Mere 'Mary'</td>
<td>te tuuru 'the chair'</td>
</tr>
<tr>
<td>hana 'go'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NP&lt;sub&gt;1&lt;/sub&gt; = CAUSE/AGENT</th>
<th>(CM other NPs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i ngaa kiinaki 'the relish'</td>
<td></td>
</tr>
<tr>
<td>i te kai 'the food'</td>
<td></td>
</tr>
</tbody>
</table>

### CLASS II

**Adjectival Verbs**

<table>
<thead>
<tr>
<th>VERB</th>
<th>NP&lt;sub&gt;1&lt;/sub&gt; = PAT [animate]</th>
<th>SATELLITE NPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>paru 'dirty'</td>
<td>aku kaakahu 'my clothes'</td>
<td>i/?ki te toa 'the shop'</td>
</tr>
<tr>
<td>reka 'sweet'</td>
<td>te akei kai 'this food'</td>
<td>maa + NP = BENEF</td>
</tr>
<tr>
<td>tika 'correct'</td>
<td>te manuhiri 'the guests'</td>
<td></td>
</tr>
<tr>
<td>ora 'healthy/well'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CLASS III

**'Experience' Verbs**

<table>
<thead>
<tr>
<th>VERB</th>
<th>NP&lt;sub&gt;1&lt;/sub&gt; = EXPR/PAT [animate]</th>
<th>SATELLITE NPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>hiahia 'desire'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rongo 'perceive' (i.e., hear, feel, taste)</td>
<td>a Hoone 'John'</td>
<td></td>
</tr>
<tr>
<td>tittiro 'look'</td>
<td>te tamaiti 'the child' etc.</td>
<td></td>
</tr>
<tr>
<td>moothio 'know'</td>
<td>'te poohatu 'the stone'</td>
<td></td>
</tr>
<tr>
<td>kite 'see'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TRANSITIVES

#### CLASS I

**Object Affecting Verbs**

<table>
<thead>
<tr>
<th>VERB</th>
<th>NP&lt;sub&gt;1&lt;/sub&gt; = ACT/ACTOR</th>
<th>SATELLITE NPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>tahu 'light'</td>
<td>te tangata 'the man'</td>
<td></td>
</tr>
<tr>
<td>hordi 'wash'</td>
<td>ngaa wahine 'the women'</td>
<td></td>
</tr>
<tr>
<td>patu 'strike, kill'</td>
<td>a Tamahae 'Tamahae'</td>
<td></td>
</tr>
<tr>
<td>pana 'push'</td>
<td>etc.</td>
<td></td>
</tr>
<tr>
<td>kuru 'throw'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NP = PAT/OBJ</th>
<th>(CM other NPs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i ngaa kaakahu 'the clothes'</td>
<td></td>
</tr>
<tr>
<td>i te poaka 'the pig'</td>
<td></td>
</tr>
<tr>
<td>i te motokaa 'the car'</td>
<td></td>
</tr>
</tbody>
</table>

#### CLASS II

**Di-transitives away from speaker**

<table>
<thead>
<tr>
<th>VERB</th>
<th>(e) te tangata 'the man'</th>
<th>SATELLITE NPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>hoatu 'give - away from speaker'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>homai 'give - towards speaker!'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NP = PAT/OBJ</th>
<th>(CM other NPs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>e Hohapa 'Joseph'</td>
<td></td>
</tr>
<tr>
<td>Ø te poohatu 'the stone'</td>
<td></td>
</tr>
</tbody>
</table>

| te whare-nui 'the meeting house' |                                        |
| te wai 'the water'               |                                        |
| i/ki te taone 'the town'         | as above                                |
| a Mere 'Mary'                    |                                        |
2.2.6 Derivational Processes

The following section shows how the status of the verb changes with the various derivational processes applicable, how the various NPs interact with the verb, and what changes in the case-marking are affected by such processes. The phenomena reflected here are important since they influence the types of complex sentences generated.

2.2.7 Prefixation

All intransitive verbs may be prefixed with whaka-'causative/transitive' with the resultant being a derived transitive verb. This derivational process brings the oblique CAUSE NP into the unmarked Agentive NP role, while the PAT NP is moved into the oblique PAT/OBJ case. For example:

(7)(a) Ka oti te whare (i te tangata). = INTRANSITIVE.
    inc complete the house agt the man
    'The house is/was finished (by the man).'

(b) Ka whaka-oti te tangata i te whare.=
    TRANSLATIVE.
    inc caus complete the man obj the house
    'The man finishes/?finished (causes to finish) the house.'
(8)(a) Ka hiahia a Hoone (i te tangata raa)

(ki te ika). = INTRANSITIVE
inc want pers John (agt the man dem) (goal the fish)

'John desires (caused by that man) (the fish).'

(b) Ka whaka-hiahia te tangata raa i a Hoone

(ki te ika). = TRANSITIVE
inc caus-want the man dem obj pers John
(goal the fish)

'That man caused John to desire (the fish).'

The fact that all these verbs can be causativized to become transitive suggests that they belong to a uniform class and are inherently intransitive. Note that basic transitive verbs cannot be causativized.  

(9)(a) *Ka whaka-pana te tangata i te motoka

inc caus-push the man obj the car
(The man pushes the car.)

(b) *Ka whaka-patu te tangata i te poaka

inc caus-strike the man obj the pig
(The man strikes the pig.)

But note that if we want to say 'Someone caused someone to kill the pig,' this requires the use of a complex sentence. For example: (Note the effect of the two verbs.)
(10) Ka \(\text{whaka-mahi}\) te tangata i a Mere \(\text{ki te}\) patu \\
\(\text{mahi}\) \(\text{kia}\) \\
i te poaka.

inc \(\text{caus-act}\) the man obj pers Mary comp \\
do \\
strike/kill obj the pig

'The man made/caused Mary to hit/kill the pig.' \\

\(=\) whaka-mahi

'Mary made/caused the man to hit/kill the pig.' \\

\(=\) mahi
2.2.8 **Suffixation**

Two major suffixes occur with the verb. They are:

(i) **-Cia**: usually termed the 'passive' marker which I refer to as 'stative' (st ) in my glosses.  

(ii) **-(C)(a)nga**: noun-deriving marker.

Transitive verbs (including any with a causative/transitive prefix) may have either of these suffixes. Sentence (11) below has no suffix but (12) and (13) do.

(11) Ka whakahemo te tangata i te poaka.  
inc caus:die the man  obj the pig  
'The man cause(s) the pig to die.'

(12) Ka whakahemotia e te tangata te poaka.  
inc caus:die:st agt the man the pig  
'The man made the pig die.'

(13) Ka tangi au i te whakahemotanga i te poaka.  
inc cry I caus the caus:die:nom obj the pig  
'I cried because of the causing of the pig to die.'

Sentence (11), (12), and (13) all contained derived transitive verbs. Notice now the same suffixes with the canonical transitive verb **patu** 'to hit' or 'kill'.

(14) Ka patu a Hoone i te poaka.  
inc hit/kill pers John obj the pig  
'John hits/kills the pig.'

(15) Ka patua e Hoone te poaka.  
inc hit:st/kill:st agt John the pig
'John hit/killed the pig.'

(16) Ka haere au \{i\} te patung a Hoone i te poaka. 
\{ki\} the strike/kill:nom pers John obj the pig 
'I left because of/for the killing by John of the pig.'

It will be demonstrated in Chapter 6 that \textit{i} and \textit{ki} in structures like (13) and (16) function as complementizers.

2.2.9 Reduplication

This process generally has a modifying effect (intensive, diminutive, distributive, etc.) on the semantics of the verb. Some examples are:

noho 'sit' (one person) nohonoho 'sit' (several persons)

mahara 'think' maaharahara 'worry'

whero 'red' wherowhero 'reddish'

(17) Kua noho \textit{te} tangata. 
perf sit the man
'The man has sat.'

(18)(a) Kua nohonoho ngaa taangata. 
perf sit:sit the:pl men
'The men have sat.'

(b) Kua nohonoho \textit{te} tangata. 
perf sit:sit the:generic man (people) 
'The people have sat.'
(c) *Kua nohonoho a Mere.
'Mary has sat.'

(19) Kua whata te miiti.
perf hang the meat (generic)
'The meat (or carcass) is hanging.'

(20)(a) Kua whatawhata ngaa miiti.
perf hang:hang the:pl meat
'The carcasses are hanging.'

(b) *Kua whatawhata te miiti.
perf hang:hang the meat
'The carcass is hanging.'

The above examples show the verb inflected for number depending on the number indicated by the subject. Incidentally, it has sometimes been assumed that this process occurs only in non East Polynesian languages, but the above examples clearly illustrates its existence in Maori.

2.2.10 Morphological Problems

With the classification of verbs as shown and discussed earlier, there are some further issues that require attention, but will not be pursued here. For example: in the classification of the categories verb, nouns, etc., Biggs (1974) states that there is a distinct demarcation between nouns and verbs, in that words like ngaru 'wave', raakau 'tree', ika 'fish' cannot occur as verbs. But this strict categorization cannot hold since we can have:
(21) Ka raakau katoa ngaa taha o te maunga ra.
    inc tree all the:pl side of the hill there
    'The slopes of that hill are all covered with
    trees.'

(22) E ngaru (ngaru) ana te moana i te ra nei.
    nonpast wave (wave) prog the sea loc the day
    this
    'The sea is rough today.'

(23) Kua tangata te tamaiti. (Hohepa 1967:49)
    perf man the child
    'The child has become a man.'

2.3.0 Non-Verbal Sentences

Simple non-verbal sentences of Maori, sometimes referred to as equational sentences, are of the following types:

2.3.1 Attributive non-temporal

(24)(a) He ataahua te pua nei.
    Pred beautiful the flower here
    'This flower is beautiful.'

    (b) He kai-whaka-ako taku hoa.
    Pred agt:caus:learn friend
    'My friend is a teacher.'

2.3.2 Identifying non-temporal

(25)(a) Ko te aha teenei?
    Pred the what this
'What (exactly) is this?' (i.e., This is the what?)

(b) Ko te wharenui teenei.
Pred the house big this
'This is the meeting-house.'

(26)(a) Ko wai te tangata raa?
Pred who the man there
'Who is that man?'

(b) Ko te maahita teeraa.
Pred the teacher there
'That's the teacher.'

2.3.3 Locational-temporal

(27)(a) Kei te pikitia ngaa tamariki.
pres:loc the picture the:pl children
'The children are at the pictures (movies).'

(b) I te moana te roopu waahine raa.
past:loc the sea the group women that
'That group of women was at the sea.'

(c) Kei a Piri te motoka.
past:loc pers Bill the car
'Bill has the car.' (The car is located with Bill.)

(d) I a Hoone te hooiho.
past:loc pers John the horse
'John had the horse.' (The horse was with John.)
(e) Hei te Wenerei te hui.
   fut:loc the Wednesday the meeting
   'The meeting will be on Wednesday.'
(f) Hei ngaa whare-nui ngaa moenga.
   fut:loc the:pl house big the:pl bed
   'The beds will be inside/at the meeting-house.'

2.3.4 Possessive-temporal

(28)(a) Naa te wahine teenaa momo mahi.
   poss:real the women that kind work
   'That kind of work is women's (work).'
(b) Maa te tamaiti nei ngaa rare.
   poss:irre the child here the:pl sweet
   'The sweets are for this child.'
(c) Noo ngaa hooia eeraa poohatu whakamaharatanga.
   poss:real the:pl soldier those stone memorial
   'Those memorial stones are (of) the soldiers.'
(d) Moo ngaa kaummatua eeraa whare hou.
   poss:irre the:pl elders those house new
   'Those new houses are for the elders.'

2.3.4 Temporal

(29)(a) Aa te Mane te hui.
   fut the Monday the meeting
   'The meeting will be on Monday.'
(b) I taenehi nei ngaa taakaro.
past yesterday this the:pl game

'The games were yesterday.'

2.3.6 Some Phrase-Structure Rules

The following is a set of phrase-structure rules.

The set is by no means exhaustive.

(30) S → PRED NP (NP)

PRED → \{VP\}

PP → kei 'pres-loc.'

he'i 'fut-loc.'

i 'past-loc'

ki 'fut-loc.'

naa/noo 'possessive' \(/_NP\)

maa/moo 'possessive' \(/_NP\)

a 'future'

i 'past'

ko 'identifying'

he 'existential, attributive' \(/_V\)
2.4.0 The Problem of Predicate and Subject Identification

A serious problem which has plagued descriptions of Maori language is that of identifying which of the two NP constituents in equational sentences functions as the predicate and which as the subject. The following section on "Previous Analyses" will show that the problem is especially acute in equational sentences whose constituents are introduced by the particles ko and he. Identification of the predicate and subject is less of a problem where NP constituents indicate location, possession, and time, but since ko-marking also occurs in such constructions, an adequate description needs to provide an explicit account of the role of ko. Following the section on Previous
Analyses, and the discussion on the problem of predicate identification, an explicit set of rules describing the function of ko is given.

In order to predict that constituents function as predicate and subject in equational sentences, the analysis of these sentences must be carried out with recourse to their appropriate contexts, or discourse functions. We especially need to know which is functioning as topic or comment of the sentence. The terms topic and comment, are used here in the sense of Gundel (1974) (see Appendix for a summary of Gundel's Topic-Comment Theory) and are synonymous with the terms subject and predicate respectively, used in this thesis. Gundel points out that the identification of topic and comment is dependent on 'the type of speech act that the sentence is used to perform'. The identification of the subject and predicate of Maori will be carried out within that framework.

After discussing in the next section the problems of subject and predicate identification in equational sentences of Maori, we shall examine those problems within the framework of the Topic Comment model mentioned above.

2.4.1 Previous Analyses

2.4.2 Williams's Analysis

Williams (1965:28-30) describe sentences without verbs this way:
It will be sufficiently accurate . . . to consider the Predicate identical with the most emphatic member of the sentence. In an affirmative sentence, the predicate stands first, and the subject after it; and two nouns, or an adjective and a noun, placed in these relative positions, form a sentence although without a verb.

He then illustrates predication in such sentences, with the predicate being signaled by the use of ko, as in:

(31)(a) Ko ia tenei.
    pred he this (my glosses)
    'This is he.'

(b) Ko Hamo tona ingoa.
    pred H. his name
    'His name is Hamo.'

by the use of the indefinite article he with adjectives, as in:

(32)(a) He pirau enei kumara.
    pred rotten these sweet-potato
    'These kumara are rotten.'

with a verb in the infinitive, as in:

(b) He hanga i te whare te mahi a Horo.
    pred build obj the house the work of H.
    'Horo's work is to build the house.'
or by the use of various prepositions preceding nouns, pronouns, verbs, or adjectives, as in:

(33)(a) Kei Tauranga a Turi.

loc:pres T. pers Turi

(b) Mo ratou tenei whare.

poss:irre they that house

'That house is for them.'

(c) Hei runga i te puke te whare.

fut:loc top of the hill the house

'Let the house be on the hill.'

Williams comments that in the case of he-predicates the 'verbs and adjectives are treated as nouns.' Therefore if we represent Williams's description of verbless sentences by tree diagram, (31), (32), and (33) would look like the following (ko and he are glossed 'particle' and 'indefinite article' respectively as Williams defines them):
(31)

S

PRED

NP

Prt

NP

Det

N

(a) ko ia teneti

(b) ko he tona ingoa

prt Hamo his name

(32)

S

PRED

NP

INDEF-ART

Det

N

(a) he pirau enei kumara

rodden these sweet potato

(b) he hanga l te te mahi a Horo

build obj the house the work of H.
Some immediate problems arise from Williams's analysis.

**Problem 1**

His definition of verbless-sentence formation - and interpretation - is inadequate and ambiguous. Pairs of sentences like (34)(a)-(b) cannot be accounted for.

(34)(a) He tahito te whare.

'pred old the house
'The house is old.'

(b) Ko te whare he tahito.

'The house is old.'

Nor can the relationship between sentences like (35)(a)-(c)
(35)(a) Ko Hare taku paapaa.
   pred H. my father
   'My father is Harry.'

(b) Ko taku paapaa ko Hare.
   'My father is Harry.'

(c) Ko taku paapaa a Hare.
   'Harry is my father.'

According to the definition given, the 'predicate stands first and the subject after it.' So in (34)(a) he tahito is the predicate, and te whare is the subject. However, (34)(b) and (35)(b) presents two sources of conflict. The conflict is best illustrated by the following tree diagrams which represent (34)(b) and (35)(b) according to the definition given.

(34)(b) Ko te whare he tahito.
First, in (34)(b), we must take ko te whare as the predicate since it stands first in the sentence and he tahito as the subject; yet he phrases are predicates by Williams's definition. Second, we must assume also that ko te whare is the predicate on the grounds that this constituent is initiated by 'the specific particle ko' (Williams's example (31)). What this description leads to then, is the conclusion that there is no significant difference in the way the constituents are ordered in constructions like (32)(a)-(b). Either constituent can be predicate or subject. Sentence (35)(b) presents us with a problem of two ko-phrases. We assume by his definition that the first ko-phrase is the predicate and the second the subject. However, the role of the second ko occurring in the sentence is not explained by his definition. Ko fits the roles of both subject and predicate.

We will attempt later to provide a principled explanation for the co-occurrence of such ko-phrases in equational
sentences, one which shows that the choice of predicate and subject of these and other verbless sentences is not an arbitrary one, as the above definition might suggest.

Problem 2

A further problem in Williams's description lies in the statement 'verbs or adjectives are treated as nouns when they follow the particle he.' Thus, in his example:

(32)(b)  He hanga i te whare te mahi a Horo.

'Horor's work is to build the house.'

the morpheme hanga 'build' must be treated as a noun although there is a productive nominalizing process in the language which clearly identifies nouns which are derived from verbs. In Maori, gerunds are formed by suffixing verbs or adjectives with a nominalizing suffix -(C)(a)nga, as in these examples:

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Derived Nominals</th>
</tr>
</thead>
<tbody>
<tr>
<td>moto 'to strike/hit'</td>
<td>moto-(ka)nga 'hitting, punch'</td>
</tr>
<tr>
<td>wero 'to pierce'</td>
<td>wero-(ha)nga 'poking'</td>
</tr>
<tr>
<td>hemo 'to expire, die'</td>
<td>hemo-(ta)nga 'death'</td>
</tr>
<tr>
<td>hanga 'to build'</td>
<td>hanga-(ta)nga 'building'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adjectives</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>whero 'red'</td>
<td>whero-(ta)nga 'reddening'</td>
</tr>
<tr>
<td>mamae 'pain'</td>
<td>mamae-(ta)nga 'the pain'</td>
</tr>
</tbody>
</table>
Williams claims that these verbs and adjectives are nouns when they follow he. This implies that they may occur in free variation with their nominalized forms. But this is not the case, as the examples below indicate:

(37) *He hanga-tanga i te whare te mahi a Horo.
    art build nom obj the house the work of H.
    'Horo's work is to build the house.'

(38) (a) He whero taku konohi.
    art red my face
    'My face is red.'

    (b) *He whero-tanga taku konohi.
    art red nom my face

Yet we know that nominalized forms of the verbs can occur after the particle he, as in complex equational structures like:

(39) He hanga-\{tanga\} whare no te puungaawerewere
    \{nga\}
    pred build:nom house by the spider
    ra i tana taha te take i neke ai te rango.
    dem loc 3:pers:sg side the reason past move ana
    the fly
    'The reason that the fly moved is because of the
    spider's house-building next to him.'

(40) He mahinga kai teenaa naaku.
    pred work:nom food that mine
    'That's my food-workings (i.e., garden).'
Problem 3

Associated with the above problem is that of William-

s's classification of he as an 'indefinite article.'

2.4.3 Biggs's Analysis

Biggs (1974) adopts an analysis much like Williams's. However, he calls sentences without verbs "nominal sentences", which he says Maori makes "by juxtaposing two nominal phrases" to give us constructions like examples (41)-(46) (from Biggs, 1974:24-25).

(41) He taamure teenei ika.

'This fish is a schnapper.'

(42) He mere te mea nci.

'This thing is a green-stone club.'

The above, he says, are called "indefinite nominal sentences" as they begin with the "indefinite article he." Sentences like

(43) He aataahua ngaa kootiro.

'The girls are beautiful.'

(44) He kino teeraa tikanga.

'That custom is evil.'

are also indefinite nominal sentences which contain "phrases that require translation by English adjectives." He then goes on to describe the ko-type sentences such as Williams described them. These nominal sentences, Biggs says, "may consist of two definite nominal phrases" and in such cases, "correct Maori requires that the focus-marking particle ko be preposed" (1974:25) as in
(45) Ko te taariana te hoiho tere.
'The stallion is the fast horse.'

(46) Ko te hooro teenei.
'This is the hall.'

Biggs explains that in sentences like (41)-(44), the he-phrase is "always the predicate . . . (which) usually precedes the subject in a Maori sentence." (1974:26)

However, in order to emphasize the subject of a sentence it may be put before the predicate. Instead of He maunga a Pirongia 'Pirongia is a mountain' we may find Ko Pirongia, he maunga 'Pirongia is a mountain'.

He also shows that other types of simple nominal sentences can be constructed by the juxtaposing of prepositional phrases with other nominal phrases in the manner of the examples (33)(a)-(c) given by Williams.

However, the main problem in this analysis, as in Williams's is the failure to account for cases where both nominal phrases are preceded by ko and cases where the second nominal phrase is preceded by ko and not the first. For example, (45) and (46) above may be paired with sentences like the following:

(45') Ko te hoiho tere ko te taariana.
'The stallion is the fast horse.'

or (45") Te hoiho tere ko te taariana.
'The stallion is the fast horse.'

(46') Ko teenei ko te hooro.
'This is the hall.'

(46") Teenei ko te hooro.

'This is the hall.'

Furthermore, Biggs's analysis gives no account of the predicates noticed by Williams (example (32)(b)), those of the 'infinitival verb' type.

Like Williams's analysis, that of Biggs implies that certain morphemes in he phrases, like those in (43) and (44), are not really adjectives. They are nouns, because they follow the indefinite article he. We have already noted this problem in our discussion of Williams's analysis. If we nominalize the verbs in (43) and (44), we have ungrammatical sentences.

(43) *He aataahua-tanga ngaa kootiro.
    'The girls are beautiful.'

(44) *He kino-tanga teera tikanga.
    'That custom is evil.'

2.4.4 Hohepa's Analysis

Hohepa (1967:40) says of the verbless sentences of Maori: "For the string NN (NS above and ff.), the second always functions as (subject) or topic and the first as the comment." After presenting the sentence types given by Williams and Biggs, he adds a further predicate type, T(time) Phrase + S Phrase, which he illustrates with these examples:
However, like Williams's and Biggs's analyses, Hohepa's analysis does not allow for the occurrence of the double ko construction either; that is, he does not allow this sentence of his

(49) Ko Pita teenei.
    specifier:non:time Peter this
    'This is Peter.'

to be transformed to Ko teenei ko Pita, but allows all other types of equational constructions to permute, with the fronted subject phrase now initiated by ko. Thus, the time-predicated sentences (47) and (48) may have their subjects fronted to derive:

(47') Ko te hui aapoopoo.
    'The meeting will be tommorrow.'

(48') Ko toona huritau inanahi kee.
    'On the contrary, his birthday was yesterday.'

Furthermore, it is stated that a sentence like

(50) Ko te rangatira teenei.
    specifier:non:time the chief this
    'This is the chief.'  (Hohepa, 1967)
and its 'permuted form' Ko teenei te rangatira do not contrast in message. It will be shown in the following section that these are two different sentences, since each serves to distinguish between what is topic or subject of the sentence and what is being commented on or being predicated; furthermore, it will be shown that each type of ko sentence arises from different sets of presuppositions.

2.4.5 Summary of Problems

The problems with these analyses then, are summarized as follows:

1. In verbless sentences, how do we know which of the two constituents is serving as subject or predicate? Is this indicated by the order of the constituents or by other means?

2. Is there some way of resolving the categorization problem that arises from Williams's and Biggs's analyses: the claim that all morphemes that occur immediately after he function as nouns?

3. Related to this is the question, 'Is he really an indefinite article?'

2.4.6 The Ko-Problem

In this section, I will attempt to provide an explanation for both the syntactic functions and the semantics of ko.
I believe that an explanation of the ambiguity of the role of ko is provided by adopting a Topic-Comment (T-C) theoretical framework like that developed by Halliday et al., and refined by Gundel (1974).\textsuperscript{10} Basically, T-C represents sentences as information structures, and seeks to clarify the pragmatics of the speech acts involved. That is, it identifies the role of particular sentences, or constituents of a sentence, by defining the contexts they are appropriate to. Such clarification is obtained by asking questions like 'What about . . . /who . . . / which . . . ?' Such a strategy enables us to distinguish clearly whether a whole sentence is a Comment (i.e., a predication about the subject) or a Topic.

The IDENTIFYING-TYPE constructions of Maori like

(51)(a) Ko te wahine raa te maahita.  
pred the woman there the teacher  
'The teacher is that woman.'

(b) Ko te kereruu te manu reka.  
pred the woman the bird sweet  
'The sweet bird is the pigeon.'

are appropriate responses to questions like

(52)(a) Ko wai te maahita?  
pred who the teacher  
'Who is the teacher?'

(b) Ko teehea te manu reka?  
pred the which the bird sweet
'Which is the sweet bird?'

The NPs te wahine raa 'that woman' and te kereruu 'the pigeon' are understood to be comments or predications about the topics te maahita 'the teacher' and te manu reka 'the sweet bird'. The comments are preceded by ko: hence ko is glossed in the above as 'pred' (i.e., predicate). The topic NP is unmarked, and corresponds with the subject NP (i.e., NP₁).

Note that the topic NP may be deleted. We are then left only with the comment, and under these circumstances, the predicate marker ko may be omitted. Thus, the response to (52)(a) and (52)(b) may be:

(53)(a) (Ko) te wahine raa.

'That woman.'

(b) (Ko) te kereruu.

'That pigeon.'

However, if the addressee chooses to respond to the question (52)(a) (the same holds for (53)(b)) with the topic in sentence-initial position (we shall call this rule Topic/Subject Fronting) the following options are open. (ko will be glossed 'top')

(54)(a) Ko te maahita ko te wahine raa.

top the teacher pred the woman there

'The teacher is that woman.'
(b) Te maahita ko te wahine raa.
"The teacher is that woman."

but not

(55)(a) *Te maahita te wahine raa.
"The teacher is that woman."

(b) *Ko te maahita te wahine raa.
"The teacher is that woman."

In *ko*-equational sentences, the unmarked constituent order is PREDICATE followed by the TOPIC/SUBJECT (which reflects the VSO typology of Maori), and the predicate phrase is marked by *ko*. Predicate *ko* cannot be deleted, unless the context is clear as to which of the unmarked NPs is Topic. To avoid ambiguity in this case, the Topic NP is usually deleted. If Topic Fronting occurs, the Topic NP is marked by *ko*. But *ko* is deletable, except when it precedes proper nouns and pronouns.

2.4.7 The He-Problem

The foregoing account of the function of *ko* in equational sentences clears some ground in the area of subject and predicate identification. We can now reconsider the status of *he*-phrases in sentence initial position.

We have noted the confusion which occurs when one tries to identify the predicate or subject phrase in Williams's analysis. Although Biggs (1974) says that *he* marks the predicate of equational sentences, he gives no formal justification for calling the *he*-marked constituent
predicate except for the fact that "it stands first in the sentence," and that "the predicate usually precedes the subject in Maori." We have seen the unfortunate consequences of loosely defining predicate and subject by position in the equational structures.

Adopting the same procedures for resolving the ko dilemma, we note that all ATTRIBUTIVE-TYPE constructions (see examples in Section 2.3) are responsive to questions initiated by:

(56)     Peehea . . .?
    like:what . . .
'What about . . .?'

or

(57)     He aha . . .?
    pred what
'What . . .?'

The following pair of sentences in (58)

(58)(a) He toa-mau-raakau ngaa taangata raa.
    pred expert wield-weapon the pl:men there
' Those men are warriors.'

(b) He heekeretari ngaa waahine raa.
    pred secretary the pl women
' Those women are secretaries.'

are responsive to such questions as He aha ngaa taangata/waahine raa? 'What are those men/women?' or Peehea ngaa taangata/waahine raa? 'What about those men/women?'
The phrases *he toa mau-raakau* 'are warriors' and *he heekeretari* 'are secretaries' are the predications of the Topics which have been 'activated' (i.e., already mentioned) by the questions.

However, note that (59) cannot be a response to such questions.

(59) (a) *He toa-mau-raakau ko ngaa taangata raa.*
       pred expert wield weapon top the:pl men dem
       (Those men are warriors.)

(b) *He heekeretari ko ngaa waahine raa.*
       pred secretary top the:pl women dem
       (Those women are secretaries.)

This shows that *ko* cannot mark topics in post-predicate position, since any *ko* occurring thus must be predicating. However, when Topic-Fronting occurs, *ko* optionally precedes the topic NP (with the usual restrictions on its deletion when preceding proper nouns, etc.) Hence we may have as responses to the questions above:

(60) (a) Ko ngaa waahine raa, he heekeretari.
       top the:pl women dem pred secretary
       'Those women are secretaries.'

(b) Ngaa waahine raa, he heekeretari.
    the:pl women dem pred secretary
    'Those women are secretaries.'
(c) He heekeretari.

pred secretary
'Secretaries.'

The above sentences then clearly agree with the facts about ko discussed in the previous section. They also provide evidence (e.g., (60)(a)-(c)) for deciding, when both ko and he appear in the same equational sentence, which is predicate or subject.

2.4.8 The Status of He: 'Indefinite Article'?

It appears that because he often translates as 'a(n)' or 'some,' it has been always defined as 'indefinite article' and since articles are used in nominal constituents, all he phrases have then assumed the status of 'indefinite nominal phrases.'

In Biggs (1961:21), he is listed in 'decade class 20' which has a set of eight members. Seven are a paradigmatic set marking tense and aspect. He places he outside of that membership because it "never substitutes for any member of 21-27." However, this view is untenable since he may substitute for tense-aspect (T/A) markers in attributive equational sentences.

(61)(a) Kei te mate te tangata raa.

pres:loc sick the man there
'That man is sick.'

(b) He mate te tangata raa.
'That man is sick.'

(62)(a) Kua paruparu oona kaakahu.

perf dirty his clothes

'His clothes are dirty.'

(i.e., have become dirty)

(b) He paruparu oona kaakahu.

'His clothes are dirty.'

In (61)(a) I have indicated kei te as a single constituent meaning 'present location' and when it is followed by a stative verb like mate 'die' we can appreciate why the meaning and functions of the two constituents — kei te and he — intersect. Kei te locates the subject te tangata raa 'that man' in the state of being sick, and he asserts a state, which is sickness, of 'that man'.

In (62), kua 'perf' indicates a change of state of the clothes from 'clean' to 'dirty'. However, kua still has an assertive or attributive meaning, and provides the reason why he may replace kua. Note that in answer to a question like

(63) He aha te mate o oona kaakahu?

pred what the problem of pl:poss:3pers clothes

'What's the matter with his clothes?'

we may say,

(64) Kua paruparu. 'Are/have become dirty.'

or

(65) He paruparu. 'Are dirty.'
Like the T/A markers, he may also precede the negative kore. Sentence (66) shows the negative kore 'not' preceded by the T/A marker kua 'perf'.

(66) Kua kore maatou e haere.
    perf not we nonpast go
    'We will not be going.'

In Maori, negatives (as in (66), and (67) below) are considered to be true verbs. (See Hohepa (1969a) and Chung (1970)). This is borne out by the fact that the negative morphemes -kore, -hore, -hara have cliticized T/A particles ka 'inceptive' and e 'nonpast'. Furthermore the anaphoric particle ai (as in (67) (c)) always occurs only in post-verbal position, never after nouns—which confirms the verb-like nature of the morpheme kore following he.

(67) (a) ka + kore . . .
    inc + not
    'be not.'

(b) e + kore . . .
    nonpast + not
    'be not.'

(c) He kore ai no te tangata raa e kite i a koe
    pred not ana caus the man there nonpast see
    obj art you
    S  PRED
The reason for my anger is because that man doesn't see you (habitually).

All of the above facts then attribute an aspectual function to he rather than the pure indefinite article function as all the past analyses have shown.

2.4.9 The Function of he

In these equational type constructions then, the function of he is to indicate attributive predication. These predicate types can be classified as shown below:

(68)(a) He Katorika a Hoone.
    pred Catholic pers John
    'John is a Catholic.' (class-membership type)

(b) He Karaitiana te Katorika.
    pred Christian the Catholic
    'Catholics are Christians.' (Class inclusion type)

(c) He reka te aaporo.
    pred sweet the apple
    'Apples are sweet.' (Characterizing types)

(d) He hua-raakau te pea.
    pred fruit-(of)-tree the pear
'Pears are fruit.' (Sortal type)

In these attributive sentences, there is the requirement that the less specific phrase be marked syntactically with he. This phrase predicates the more specific phrase (i.e., topic phrase) which is always marked by a determiner, e.g., te 'the:sg' 'generic marker', ngaa 'the:plural', or a 'personal article.' This explains why definite NPs are incompatible with he, by contrast with ko.

(69)(a) *He te tangata.
    the man
  *He ngaa whare.
    the:pl house

(b) Ko te tangata.
    the man
  Ko ngaa whare
    the:pl house

(c) *He a Mere c.f. Ko Mere
    pers Mary
  *He Hoone c.f. Ko Hoone
    John

We noted in the previous section that definite NPs are predicated by ko. However, that fact does not justify he being called an 'indefinite article', marking 'indefinite nominal phrases'. 
2.4.10 **Summary of Predication in Equational Sentences**

*Ko* predicate and topic marking in equational sentences follow these rules:

(70) (a) When both NP constituents are present (in surface structure), and the first NP is preceded by *ko*, the first NP is the predicate.

(b) When both NPs are preceded by *ko*, the second NP is the predicate: Topic-Fronting has occurred. *Ko* is optional with the first NP.

(c) When only one NP is present, it is the predicate. *Ko* is optional (except of course with proper nouns and pronouns: neither topic-*ko* nor predicate-*ko* is deletable.)
Ko marking in all other types of equational sentences (i.e., he-predicates, locatives, possessive, temporal) is topic marking. It is optional (subject to the NP constraints above, in (70)(c)). Ko marked Topics can only occur with Topic-Fronting (i.e., in sentence-initial position).

(71)

```
(he) NP
\{V\}
Loc
\{NP\}
Poss
\{NP\}
Time

S
PRED
SUB/TOPIC

\*ko
NP

S
SUB/TOPIC
PRED

(ko)
NP

Topic Fronting

\rightarrow
```
NOTES TO CHAPTER 2

1 Ross (1973:230) explains that the dominating node for "oblique phrases" or prepositional phrases are NPs rather than PP, because "prepositional phrases are almost always islands." He explains that only in a few languages is it possible for prepositions to be stranded. Of the two examples he cites:

(ii) Of what does your Greas-o Shortening consist?
(iii) What does your Greas-o Shortening consist of?

He says that in most languages only the first of the pair is possible. In Maori, no prepositions can be stranded.

2 cf. Chomsky (1968:68)

3 See Biggs (1974:48), Hohepa (1967:23), and Williams (1965:19) for listings of these elements.

4 See Parisi and Antinucci (1976:24) for a clear exposition of the term "nuclear sentence." As they show, the difference between the verbs "knit" and "put" in the sentences (44) and (45) is quite clear.

(44) Mary knits the sweater in the living room.
(45) Mary puts the sweater in the living room.

In (44), the prepositional phrase "in the living room" is not an intrinsic constituent of the verb, as are "Mary" and "the sweater." In (45), it is.

5 I say "tentatively" for the reason that I am not certain that there is a clear demarcation between these two classes. The only plausible criterion I can think of on which to base the subdivision is that stative adjectives do not appear to be able to take a ki marked complement or adjunct. Hence my marking of ki in the Chart as questionable. For example:

Ka paru taku koti/ i te peita.
    {*ki te peita.
    {ki te poharu o te awa raa.
inc dirty my coat/ caus the paint
    {goal the paint.
    {goal the mud of the river dem
Lit. 'My coat was dirtied by the paint.'
    {by the mud of that river.'
Hohepa provides five specific arguments for the separation of these two classes, but four appear weak (which he admits) or incorrect. Only the first - "stative adjectives cannot precede stative verbs" - appears valid, but the verb categories require modification. For example, haere "move to" is in his class stative adjective and oti "complete" is in the category stative verb. But an expression like:

...haere oti atu... "gone completely, gone to is common in the language. And so, is the expression ...
mate oti atu... "died finally".

He lists the verb mate 'to die' in the stative adjective class. The removal of these verbs (and there may be others) to the stative verb class, makes the subdivision more tenable. This change is shown in my Chart. I do not intend to cover all of Hohepa's arguments here, and will discuss only one other.

His second argument: "Only stative adjectives and a few general verbs" show reduplicative processes is not correct. A glance at Williams's Dictionary will show that:

mau 'catch, hold firm' maumau (WD:96)
matara (i) 'untangle' maataratara (my example)
   (ii) 'prickly, rough' maataratara (WD: 90)

Though Williams does not show these following examples in the reduplicative forms I give, they are nevertheless common.

makere 'free, fall, drop...' maakerekere

e.g. Kua maakerekere ngaa whurutu i te hau.
   perf drop:drop the:pl fruit caus the wind
   'The fruit has all fallen because of the wind.'

hemo 'pass, expire, pass away' hemohemo
e.g. Kua hemohemo katoa ngaa kaumaatua o te marae nei.
   perf die:die all the:pl elder of the marae dem
   'All the elders of this marae have died.'

6. Experience verbs have been referred to in recent literature (see Clark, 1974; Chung, 1976) as middle verbs, and transitive; I differ on the latter point for the reason that the derivational processes that
operate on other intransitives, apply to these verbs also.

Neither Williams's Dictionary nor any of the relevant literature that I have looked at note this fact.

Much debate surrounds the function of the -Cia as a passive suffix. See, for example, Chung, 1976; Clark, 1973; Hohepa 1969c; Biggs, 1974b; Pawley, 1973; n.d. While the suffix generates structures similar to English passives, especially those with an 'unexpressed agent' as in 'John was murdered,' there are however, many textual -Cia sentences of Maori in which the agent (marked by e 'by') is present, and the unmarked NP or subject is not present. For example:

(i) na, tango-hia ana e Pare
    'and Pare caught (it) up' or '(It) was caught up by Pare.' (MF:2)

(ii) Ka mahi-a e ia, ka huahua-ina hei kai maana.
    'He cooked and preserved (it) as food for him.' (MF:14)
    or '(It) was cooked by him, and preserved as food for him.'

Such sentences as the above, with agents only, are not possible in English.

(iii) *Was caught up by Pare.

(iv) *Has been killed by John.

For this reason then, and others expressed in Reedy (n.d.) concerning the dubious nature of this suffix as a true passive marker, I adopt the interpretation 'stative' of Pawley (1973), (n.d.) which appears to characterize more precisely the semantics and syntactic behaviour of -Cia-suffixed verbs than do the interpretations 'passive' and 'transitive.' I shall therefore gloss the -Cia suffix 'stative' (st.). However, where English passive translations are more appropriate than active sentence translations, then the passive voice will be used.

Two further reasons are provided in Reedy (n.d.) where it was argued that there are 'relic' structures like
(1)-(4) in Maori, which do not require the -Cia suffix, when followed by e + NP agent.

(1) Me patu e Hoone te poaka apoopo.  
John will/must/should/kill the pig tomorrow.'

(2) Maa Hoone e patu te poaka apoopo.  
'John will/etc kill the pig tomorrow.'

(3) ka mea atu e te toroa kahore!  
inc dir Agt the albatross, no!  
'The albatross said, No!' (Orbell, 1968:24)

(4) kau pau te paraoa te kai e te kuri  
perf consumed the bread Comp eat Agt the dog  
'The bread is all consumed by the dog.'

There are also structures like (5) and (6) in Tongan, one of the more distant Polynesian relatives of Maori. Sentence (5) below show the verb kai 'eat' followed by the e + NP agent. When the agent occurs in sentence initial position, it is marked by ko, as in (6). It is said (Shumway: 1971:185) that in (5) the action is emphasized, and in (6), the agent is emphasized. (This is the same type of explanation given by Williams (1965:42) for the A-E constructions of Maori, like (2) above).

(5) Na'a kai 'e Sione e fo'i moli.  
T/A eat John orange  
'John ate the orange.'

(6) Ko Sione na'a ne kai e fo'i moli.  
John T/A he ate orange  
'John ate the orange.' (Shumway:425)

In arguing against the position that the passive of Maori rather than the ergative is the original Proto-Polynesian structure (see Hohepa 1969c, Clark 1976, Chung 1976), I offered the view that on the basis of the observations presented above, the spread of the -Cia suffix in Maori to a more 'obligatory' nature with transitive verbs like patu 'hit, strike, kill' in the synchronic grammar of the language appears to be a recent phenomenon.

Therefore, if the ergative reflects the older state of the Polynesian languages, the question then is, what was the function of the -Cia suffix?
Pawley (1973), and more fully, (n.d.) has argued convincingly, I think, for the historical function of the -Cia suffix as a stative marker.

He states in the unpublished paper (n.d.):

"My position is that PPN *-Cia was indeed analysable as Clark suggests, into an element -Ci and an element -a. The source of -a was the PEO suffix _a which derived stative verbs from nouns or from transitive verbs. -a was suffixed directly to nouns, but with transitive verbs it followed the _Ci suffix, giving the familiar -Cia form. This PEO distribution was retained by PPN. In PPN -Cia verbs were derived stative verbs. As in PEO, they did not need an overt agent NP, or rarely did so. The -Cia suffix was fairly productive in PPN, but probably not completely predictable in its distribution; similarly it probably showed some idiosyncratic variation in its semantic effects, while generally marking a completed change-of-state, or a persisting condition, brought about by an action or process."

He then provides the following evidence:

"*-a in PEO [Proto Eastern Oceanic]. Let us call the common ancestor of PN, Fijian, and Southeast Solomons language PEO. PEO had a suffix *-a that was added to nouns to derive stative verbs denoting possession of an abundance of, being characterized by, covered with whatever was denoted by the noun. This suffix survives in various languages of the EO group, including the PN group, and it can be safely attributed to PPN.

*-Cia in PEO. PEO had two sequences of this form. One consisted of the transitive suffix *-Ci plus the 3rd person singular object marker *-a. This form has been discussed quite extensively in the literature. The other *-Cia has not been previously described, to my knowledge, but it is this second *-Cia which can be equated with the PPN suffix of the same form. In *-Cia2 the analysis is again into the transitive suffix *Ci plus *-a; the *-a is the adjective-deriving *-a spoken of above.

In Southeast Solomons languages of both the Cristobal-Malaitan group and the Guadalcanal-Gelic group (which are scarcely closer to each other lexicostatistically than either is to PN or Fijian), *-Cia2 is widely
reflected. Compare

Nggela

vonu 'to fill' vonu-gia 'filled'

ndolo 'to love' ndolo-via 'loved'

aho 'to tie' aho-ria 'tied' 'fixed'

According to Fox (1950:145-7) where the transitive verb has no suffix, the -a is attached directly to the word base, as in ngiti-a 'broken'. In the earlier examples the transitive verb stem occurs as vonu-gi, ndolo-vi, aho-ri. But note one useful example supplied by Fox:

vonu-a 'full'

Evidently vonua denotes the state of being full, while vonu-gia 'filled', denotes the results of the act of filling. An agent or cause is implied. It cannot, however, be expressed by a following NP, i.e., Nggela lacks a full passive.

The Nggela pattern is matched exactly in Arosi, of San Cristobal. Arosi -Cia forms are glossed 'past participles' in Fox's dictionary. They number hundreds, though the dictionary doesn't always list them where expected. No agents.

The same pattern occurs in several other Cristobal Malaitian languages. For Bugotu, the Guadalcanal-Nggelic language best-known after Nggela, Iven's sketch mentions -a as a derivational suffix added to verbs, e.g.,

havi 'to live' havi-a 'alive' 'living'

talapono 'to hide' talapono-a 'be secret'

According to Paul Geraghty (forthcoming), some E. Viti Levu dialects in Fiji show what seems to be the reflex of *-Cia, with stative verbs. The form is *-Ce (I think), this being also the outcome of *-Cia_2 with the -i of the transitive suffix lost.

The Southeast Solomons material compares well with the Tongan uses of -Cia. They suggest that in PEO *-Cia_2 derived stative verbs, or rather that *-a derived
stative verbs from transitive verbs, such verbs with a few exceptions having the \(*\text{-Ci}\) transitive marker. I have no objection to calling constructions with \(V\text{-Cia}\), Reduced Passive. In seems unlikely that an agent was allowed, the expression of the agent (being confined to PN languages) among those EO languages which reflect \(*\text{-Cia}_2\).

It is not clear whether (33)(c) is meant to be an illustration of a verbal or adjectival prepositional predicate.

See Appendix.

Bruce Biggs, in 'notes' compiled by us jointly in the Fall 1977 semester at the University of Hawaii, concluded that in normal fast speech any \(\text{ko}\) is deletable in front of any constituent introduced by a determiner (but not before proper nouns and pronouns). In my speech, I could accept in answer to \(\text{ko wai te maahita?}\) 'Who is the teacher?' the following: \(\text{Te wahine raa te maahita 'That woman's the teacher'}\). This is probably due to either the predicate-subject linear ordering of the constituents, or the heavy stress on \(\text{wahine} '\text{woman'}\) of the predicate NP. But these explanations do not account for unacceptable responses like (55).

Furthermore, the fact is that \(\text{ko}\) is not deletable, or cannot be substituted by a 'person article,' when functioning as predicate marker in sentence-medial position, as in

\[
\text{Ko wai te maahita?} \\
\text{pred who the teacher} \\
'\text{Who's the teacher'}\]

\[
\text{Ko Hera te maahita.} \\
\text{pred Sarah the teacher} \\
'\text{The teacher is Sarah.'} \\
\]

If Topic-Fronting occurs, we may have

\[
(\text{Ko}) \text{ te maahita ko Hera.} \\
\text{top the teacher pers Sarah} \\
\]

But we cannot have

\[
*(\text{Ko}) \text{ te maahita a Hera.} \\
\text{top the teacher pers Sarah} \\
\]

However, the following
Ko te maahita a Hera.
(pred the teacher pers Sarah
'Sarah is the teacher.')

is a perfectly good sentence, provided that 'Sarah' is the topic NP and not the predicate phrase of the sentence. The question would be:

Ko teewhea a Hera?
(pred the which pers Sarah
'(Exactly) which (one) is Sarah?'

Note that they do not intersect, however, in cases where real location and not a state is implied, for example:

(a) Kei te marae te tangata raa.
   'The man is at the marae.'

(b) *He marae te tangata raa.
    (The man is at the marae.)

He can only assert 'existence' and not 'location'.

See Reedy (1977).

This classification is from Lyons (1968:387)
CHAPTER 3
COMPLEX SENTENCES

3.0 Introduction

In the previous chapter, I defined and discussed the simple sentences of Maori. This chapter will provide an introduction to the types of complex constructions in this thesis. After defining 'complex sentences' I cite examples illustrating the range of complex sentence structures that will be investigated in the remaining chapters.

3.1 Definitions

In 2.1 I defined a simple sentence as a complete clause, i.e., as a construction consisting of a predicate plus one or more NPs in a case or equational relationship with it. In the PS rules a clause is represented by an S containing no embedded or conjoined Ss.

A sentence containing two or more clauses, is a complex sentence. That is, one or more Ss occur under the domination of the initial S (i.e., $S_1$, see diagram below) generated by the PS rules. The two main types of complex construction are traditionally referred to as 'compound' and 'complex' sentences, but here I use the term 'complex' to cover both types. In these two types, the clauses stand in a relationship of:

(i) coordination, i.e., the clauses are independent and of equal status,
(ii) domination - subordination, i.e., one clause is independent or dominant, and the other is dependent on the dominant clause, or subordinate to it.

The diagram (1) and (2) below show these relationships

(1) Coordinating Sentence Structure

(2) Subordinating Sentence Structures

I shall limit investigation of complex sentences of Maori to coordinate structures, and to two types of subordinate structures - relative clauses and complements.

3.2 Examples of Coordination

Some preliminary examples of coordination from Maori follow below.

Examples (3)-(4) show different ways of coordinating equational sentences. Note that 'and' is signaled with aa, me, and raaua. Sentence (3) shows two complete equa-
tional sentences which are conjoined by `aa`. Sentence (4) shows two NPs conjoined by `me`, and (5), two NPs conjoined with `raaua ko`.

(3) He pirau te aaporon nei, `aa`, he kawa ngaa reemana.
    pred rotten the apple this and pred bitter the:
    pl lemon
    'This apple is rotten and the lemons are bitter.'

(4) He ngohengohe te tuuru `me` te moenga
    pred soft the chair and the bed
    'The chair and the bed are soft.'

(5) Ko Tamahae `raaua ko` Rewi ngaa toa o te tiima nei.
    Pred T they:dl pred R the:pl champion of the
    team dir
    'The champions of this team are Tamahae and Rewi.'

Sentences (6) and (7) are examples of conjoined verbal structures.

(6) Kua hapuu a Mere, `aa`, e mutu ana tana mahi.
    perf pregnant pers Mary and nonpast finish
    prog her work
    'Mary has become pregnant and she is leaving
    her job.'

(7) Ka ngaro ngaa kaakaa-waha-nui o te pae, `aa`,
    kua kore ngaa koorero.
    inc lost the:pl parrot-mouth (voices)-large
    of the perch and perf not the:pl talk
'The orators are gone and the tales are no more.'

3.3 Examples of Subordination

3.3.1 Relativization

The equational sentences (8)-(10) below contain relative clauses. These are clauses which are syntactically subordinate to a preceding clause (called a matrix or higher clause - see Chapter 5) or an NP constituent of that clause. They function as modifiers, either expanding or restricting the meaning of an NP in the matrix clause. Sentence (8) and (9) show relative clauses modifying the subject NP. In sentence (10) both the predicate and subject phrases have relative clauses embedded in them.

(8) He mate-kai te kurii i hemo raa.
   pred suffer-food the dog past die ana
   'That dog which died was starved.'

(9) Ko ngaa tamariki ngaa mea i maatakitaki tiiwii.
    pred the:pl children the:pl thing past watch television
    'The ones who watched television were the children.'

(10) Noo Hoone e kore nei e whakarongo, te motokaa kua tahuri.
    'real:poss John nonpast neg ana:nonpast cause listen the car perf turn-over lit. 'The car which has overturned is John's who
would not listen.'
'The car which has overturned belongs to John who would not listen.'

Sentences (11)-(13) are examples of relative clauses embedded in an intransitive, a transitive, and an Agent-Emphatic (A-E) sentence.

(11) Kua riro ngaa taangata naana nei i ararhi te iwi.
perf gone the:pl men Agt:poss:3pers last lead the tribe
'The men who it was that guided the tribe have gone.'

(12) Ka puuhia e Hoone te poaka e ngau ai i ana tamariki.
inc shoot:st Agt John the pig nonpast bite ana obj pl:poss:3pers children
'John shot the pig which bites his children.'

(13) Naa Hoone i moe raa i a Mere i whakahaere te hui.
real:poss John past sleep ana prep pers Mary past caus:move the meet
'John, who married Mary, conducted the meeting.'

3.3.2 Complementation

Complements are Subordinate clauses or nominalizations, or simple nominals whose semantic dependency relationship is with the predicate of the matrix clause.
Complement types of Maori and their syntactic marking are discussed more fully in Chapter 6. The following examples show some of the overt 'complementizers' (underlined) in the language.

Sentences (14) and (15) below show complement clauses that may occur with equational sentences. Note that (14) has no overt marker.

(14) He pono raa he tangata pai a Hoone.
    pred true ana pred man good pers John
    'It is true that John is a good man.'

(15) Ko Apirana Ngata te Maori tuatahi ki te whiwhi
    i te tohu maatauranga o te whare wananga o Niu
    Tirani. (TWK:12:20)
    pred Apirana Ngata the Maori first Comp achieve
    obj the sign knowledge of the house learn of New
    Zealand
    'The first Maori to achieve a degree of (from)
    the University of New Zealand was Apirana Ngata.'

Sentences (16)-(19) show complement clauses with verbal matrix clauses. Notice that (16) and (17) have no overt complementizers but (18) and (19) do. Furthermore, sentence (19) (a)-(b) show a complement clause embedded in another complement clause.

(16) E whakaae ana au maa Mere e taataki taa taatou
    haka.
'I agree (that) Mary should lead our haka.'

(17) ... naana i whakaatu ka eketia e te tangata Maori ngaa taumata o te maatauranga kua eketia e te Paakeha. (TWK:12:20)

'It was he who showed that a Maori (person) could climb the heights of knowledge that the Paakeha had climbed.'

(18) Kua hiahia raatou kia haua he waka mo raatou.

'They wanted a canoe to be hewn for them.'

(Biggs, Hohepa, and Mead, 1967:83; quoted by Chung 1976:126; but my glosses)

(19)(a) Ka tono au i te koorero ki a Mere kia haere mai (ia) ki te tao-kai maaku.

'I sent word to Mary to come to cook food for me.'

(b) Ka tono au i te koorero ki a Mere kia haere mai (ia) hei wahine maaku.
inc send I obj the talk to pers M. Comp move
dir she wife for:me
'I sent word to Mary to come to be my wife.'

3.4 Notes on Previous Research on Complex Sentences of Maori

The foreword to Williams (1965) says: "First Lessons in Maori was first published in 1862. It has been constantly revised and kept up to date." However, the revisions have hardly extended to the treatment of complex sentences. The only references to complex sentences in Williams (1965) are those referring to adverbial particles and clauses, and the conjunction 'and'. These syntactic features are briefly commented on in the final section entitled "Miscellaneous". Apart from these references the description of complex sentences is limited to one other section (of 3 pages) on relative clauses. While there are some useful data given, some of Williams's statements are questionable such as "there are no relative pronouns in Maori". He recognises "relative clauses" but it is not always clear why some examples cited are considered relative clauses. These problems will be dealt with in the chapter on relative clauses.

Hohepa (1967:92-95) has a section on "Complex Sentences." The matters dealt with are:

(a) "Understood Subject Phrase" deletion in imperative sentences, and in related sentences. For example (Hohepa 1967:93; but my glosses)
(228) Is this yours? (It's) mine.
real:poss:you:sg this real:poss:I

(b) Sentence "imbedding" which he illustrates with examples like (again, my glosses)

(230) The soldiers, trucks, guns, and prisoners returned.
inc return dir the:pl soldier the truck
ngaa puu// me ngaa taangata mau herehere
the:pl gun and the:pl man take prison

and

(231) Ka haere a Hoone, a Pita raatou ko Mere ki
inc move pers John pers Peter they pred Mary to
te taone
the town.
'John, Peter and Mary went to town.'

(c) Conjunctive links, which are used to "combine two sentences with differing phrase profiles, or introduce new sentences."

No examples are given by Hohepa.

Kenneth Hale (1968), in a long and constructive review of Hohepa's dissertation on Maori, discusses the nature of the passive construction in Maori. A significant part of Hale's contribution to the study of Maori syntax is his statement of the conditions for the controllers that affect
pronominalization and deletion in the embedded sentence: /kia/ involves optional deletion, and /ki te/ obligatory deletion.

Hohepa (1969) and Chung (1970, 1976) deal with negation in Maori and show convincingly that negative sentences are indeed complex sentences and not simply adverbs. That negatives in Maori are 'higher verbs', is reflected not only in their morphology, but also by the operation of certain syntactic rules (see Chung 1970:27, 1976:171) like Subject-raising.

Biggs (1974) has a section on 'Subordinate Clauses with kia', and another section on subordinate constituents which deals mainly with conditional clauses. His section on 'Nominal Subordinate Constituents with naana, noona, maana, moona' are relative clause types not listed by Williams. There is a section on 'Explanatory Pseudo-Predicates to Stative Sentences'.

Chapin (1974), in a detailed analysis of Proto-Polynesian *ai, gives many examples from Maori to illustrate the function of ai as a relative marker. Sentence (33) is one of Chapin's examples: (Antecedent and relative pronoun are underlined.)

(33) Koira hoki nga wahi e haere ai a Kawana Kerei that also the:pl place non past go ana pers K. K.
'Those are the places that Governor Grey went at that time.'

In the chapters which follow we will review some of these earlier studies in detail. For the most part, however, these chapters will investigate territory not previously charted in the literature on Maori syntax.
NOTES TO CHAPTER 3

1. There is a definitional problem here in that Hohepa calls (228) "a sentence" and indicates this so by enclosing all constituents within the symbols # . . . #. The symbol #, he defines as "sentence boundary" on page 97.
CHAPTER 4

COORDINATION

4.0 Definition

Coordination is the joining of conjuncts through the use of various coordinating conjunctions.

Gleitman (1965) has described a coordinating conjunction as 'one that marks equal grammatical rank between words or word groups that it connects.' Lakoff (1971) however has shown that the concept of 'equal grammatical rank' is valid only in some instances of coordination. She demonstrates in the use of the coordinating conjunctions and, but, and or that other considerations such as presupposition and deduction, sharing a common topic, symmetric and asymmetric conjuncts, semantic notions like 'denial of expectation' and 'semantic opposition' must be taken into account when describing the function of coordinating conjunctions. In the description of coordinating conjunctions studied in this chapter--which are aa, me, raaua ko types, all meaning 'and', raanei 'or', and engari 'but'--it will be seen that the notions of the above scholars do provide a useful basis for explaining some of the observed phenomena in coordinate structures of Maori.

The conjuncts of a coordinate construction may be full clauses or they may be phrases or words in surface structure. However, it will be seen that in Maori words or phrases which are conjoined may be derived from full clauses in deep
structure, that is, clauses which have been reduced by deletion or reduction rules.

4.1 Previous Studies

In Williams (1965:58-9) we find the following list of words or methods for expressing 'and':

(a) `äh (=aa) 'and', 'and at length', 'until'
(b) me 'concomitancy' (i.e., 'with')
(c) ma only with numerals; e.g., tekau ma rua 'ten and two'
(d) hoki 'also', 'too'
(e) by the use of personal pronouns plus ko
(f) by juxtaposing two or more verbal clauses introduced by the same tense, or two or more prepositional phrases introduced by the same preposition.

In so far as Williams comments at length on any of these particles I will refer to his views in the later sections - especially to (a) aa, (b) me, (e) the use of personal pronouns plus ko, and (f) which is assumed in this work to result from reduction rules. (c) ma will not be included in this study, since it is restricted in function and distribution to numerals. (d) hoki, it should be noted, is much more complex in its behavior than Williams's statement and the one example he cites imply.

Hohepa (1967:95) calls the following 'conjunctive links' elements which combine two sentences or introduce new sentences. `äh 'and', 'and so', 'after a while': noo reira, naa reira 'therefore', 'and finally', 'and so';
heoi raa, heoti raa 'therefore', 'accordingly'; mehemea 'if', 'when'; kaatahi 'and then'; haa 'and then'; aae 'yes'; taihoa 'wait'. He does not go into detail concerning, or provide examples illustrating the use of the above 'conjunctive links,' only some of which are coordinating conjunctions.

Biggs (1974a:102) describes 'conjunctive phrases' that begin with a, o, me and i (after a locative): "They are always part of a constituent and never the whole." For example, within the constituent te waka me te hoe 'the canoe and the paddle' occurs the phrase me te hoe 'and the paddle'.

In the following sections, I shall deal with the use of me 'and' but not a, o, and i 'of' that Biggs lists. me is a coordinating conjunction in terms of Gleitman's definition given earlier, but the last three do not mark constituents of 'equal rank', but rather a dependency relationship. In a separate section, Biggs (1974) shows hoki occupying the final position in a number of phrases both verbal and nominal. The complex nature of hoki is conveyed in Biggs's comment, "It is best learned from examples." I shall not be discussing hoki in any depth in this study, but I do make passing reference to it later, e.g., in 4.4.1.
4.2 Conjunctions to be Investigated

In this study, I shall limit investigations to the use of the following conjunctions of Maori. The English glosses are approximate.

(1)(a) Conjunctive elements

\underline{aa} 'and'

\underline{me} 'and'

personal pronoun plus \underline{ko} 'and'; e.g., \underline{raa\text{ua ko}}. '2 pers:dl pred' (see section 4.4.2 for full list)

(b) Disjunctive and contrastive elements

\underline{raanei} 'or'

\underline{engari} 'but'

The following data show the main types of conjuncts that may be conjoined by \underline{aa}, \underline{me}, and a personal pronoun plus \underline{ko}, i.e., conjoined equational sentences, conjoined predicates of equational structures, conjoined verb phrases, conjoined prepositional phrases, and conjoined noun phrases which function as subjects or objects. Detailed discussion of their use follows in section 4.4.

4.3 Types of Conjoined Structures

4.3.1 Conjoined Equational Sentences:

(2) Ko te wahine raa toku hoa, \underline{aa}, ko te tangata raa taku paahi. (Identifying)

pred the woman dem sg:poss mate and pred the man dem sg:poss boss

'My wife is that woman and that man is my boss.'
(3) \(\text{Kei} \, \text{te whare karakia te maarena, aa, } \text{ki} \, \text{te marae te haakari.} \) (Locative)

\{\text{pres:loc}\} \text{the house pray the wedding and } \{\text{fut:loc}\} \text{the marae the celebration}

'The wedding is at the church and the celebration is at the marae.'

'The wedding is to be at the church and the celebration is to be at the marae.'

(4) Noo Hoonei teenei whare, aa, moo ana kai-mahi teeraa. (Possessive)

real:poss \text{H. this house and irreal:poss pl:his Agt-work that}

'This house is John's and that one is to be/for his workers.'

4.3.2 Conjoined Predicates of Equational Sentences

(5) He maahita, aa, he tumuaki a Mere. (Attributive)

pred teacher and pred principal pers M.

'Mary is a teacher and a principal.'

(6) He reme, aa, he raame ngaa mea hei kutitanga aapoopo. (Attributive)

pred lamb and pred ram the:pl thing fut shear:nom tomorrow

'The ones to be shorn tomorrow are lambs and rams.'
(7) Ko Henare raaua ko Piri ngaa kaamura. (Identifying)
pred H 2:pers:excl pred P the:pl carpenter 'The carpenters are Henry and Bill.'

(8) *Ko Henare, aa, ko Piri ngaa kaamura.
pred H. and pred P. the:pl carpenter 'The carpenters are Henry and Bill.'

Notice in the preceding examples that aa 'and' has obligatory phonological pauses, orthographically indicated by commas, before and after it. Note also the conjunction in (7), aa, is unacceptable here as shown by (8). Instead, the raaua ko form is used. The reason for this is given in the discussion in section 4.4.

The following sections provide examples that illustrate the conjunction of verbal sentences, verb phrases, and prepositional phrases of verbal sentences.

4.3.3 Conjoined Verbal Sentences

(9a) Ka mutu te hui, aa, ka hoki te manuhiri.
inc finish the meet and inc return the visitor.
'The gathering/meeting ends and the visitors leave.'

(9b) Ka patua te poaka, aa, ka whakareritia te haangi.
inc kill:st the pig and inc caus:ready:st the cooking:oven
'The pig was killed, and the haangi prepared.'
4.3.4 Conjunction of Coordinate Verb Phrases
(with identical subject deletion. This is discussed in section 4.4)

Notice that the form raaua ko cannot serve as a conjunction for verb phrases.

(10) Kua hinga, aa, kua mate te raakau nei.
    perf fall and perf die the tree this
    'This tree has fallen over and died.'

(11) (a) Ka horoi, aa, ka kai te whaanau.
    inc wash and inc eat the family
    'The family washed and ate.'

    (b) *Ka horoi raaua ko ka kai te whaanau.
        they:dl
    'The family washed and ate.'

4.3.5 Conjunction of Coordinate Prepositional Phrases
with Identical Subject and Verb Phrase Deletion.

Again, raaua ko cannot join prepositional phrases as shown in (13)(c). (See explanation on page 99.)

(12) (a) Ka tuhi tako tipuna ki ngaa awa, aa, ki
    inc point my grandparent to the:pl river and
    nga maunga.
    the:pl mountain
    'My grandparent pointed to the rivers and to
    the mountains.'

    (b) Ka tuhi tako tipuna ki ngaa awa me ngaa
    inc point my grandparent to the:pl river and
    maunga.
    the:pl mountain
'My grandparent pointed to the rivers and mountains.'

(13)(a) Ka whaangai e Tahi te kaanga ki ngaa poaka. 
inc feed Agt T. the corn to the:pl pig aa, ki ngaa manu. 
and to the:pl bird
'T. fed the corn to the pigs and (to) the birds.'

(b) Ka whaangai e Tahi te kaanga ki ngaa poaka 
me ngaa manu. 
and the:pl bird
'T. fed the corn to the pigs and birds.'

(c) *Ka whaangai e Tahi te kaanga ki ngaa poaka 
raaua ko ngaa manu. 
'T. fed the corn to the pigs and birds.'

4.3.6 Coordinate Noun Phrases as Subject

The following conjoined noun phrases show that the use 
of raaua ko and me is grammatical but aa is ungrammatical.

(14)(a) Kua hoki a Witi raaua ko Heni ki Rotorua. 
perf return pers W. they:dl pred H. to R. 
'Witi and Heni have gone back to Rotorua.'

(b) Kua hoki a Witi me Heni ki Rotorua. 
perf return pers W. and H. to Rotorua 
'Witi and Heni have gone back to Rotorua.'

(c) *Kua hoki a Witi, aa, ko Heni ki Rotorua 
and
(15)(a) I noho ngaa tamariki *raatou ko nga maatua* they:pl pred I taua waahi.

(b) I noho ngaa tamariki *me* nga maatua i taua waahi.

past stay the:pl children and the:pl parents
loc the:ana place
'The children and the parents stayed at that place.'

(c) *I noho ngaa tamariki, *aa, nga maatua i taua waahi.

4.3.7 **Coordinate Noun Phrases as Object**

Note that *raaua ko* in (16)(c) is questionable and is possibly due to its restriction to human conjuncts. (See exceptions on page 99.) *aa* is ungrammatical.

(16)(a) Ka hoatu e au taku pukapuka *(me)* taku pene inc give agt I my book and my pen

me taku ruuri maa Hoone.

and my ruler for John.

'I gave my book (and) my pen and my ruler for John.'

(b) Ka hopukia e au te hoiho *(me)* te kau.

inc catch:st agt I the horse and the cow

'I caught the horse and the cow.'

(c) ? Ka hopukia e au te hoiho *raaua ko* te kau.

(d) *Ka hopukia e au te hoiho, *aa, te kau.
4.4 Aa, raaua ko, and me

The following section will discuss the use of the above conjunctions with both equational and verbal sentence types, and also the effects on such structures of certain syntactic rules that may apply: conjunction reduction, Equi-NP deletion, predicate deletion or gapping. More specifically, it will be shown that aA, raauako, and me, all translated as 'and', have different distributions and functions.

Williams (1965:58) observes: "a is used to connect consecutive actions or circumstances, with the notion of the lapse of time."

e.g., (a) Hoe ana mai rātou, ā ka ū ki Mōkāu.
'They rowed hither and landed at M.'
(b) I kainga ngā ika, ā pau noa.
'The fish were eaten until they were quite consumed.'

While it is true that ā connotes the "notion of the lapse of time" in the examples Williams cites, ā provides no such connotation in many examples of its use. For example:

(17)(a) He kurii eenei, aa, he hipi eeraa.
pred dog these and pred sheep those
'These are dogs and those are sheep.'
(b) Tokorima oona tuaakana, aa, kotahi
human:five his:pl older:siblings and one
o raatou he wahine. (SR:12)
of them pred female.
'He had five older siblings and one of them was female.'

Hence the notion of the 'lapse of time', it is suggested is not an inherent feature of $aa$. In Williams's examples the 'lapse of time' appears to be an inference consequent upon the change of action between rowing and landing, and eating and finishing.

Lakoff (1971:127) has demonstrated that in English if the two conjuncts are symmetric (as in (39)(a) below) and are conjoined by and (and also but) each conjunct may replace the other as in (39)(b). But with asymmetric conjuncts (as in (40)(a)) the two cannot switch, or if they are able to, the resultant sentence makes very different assumptions about causality. Lakoff illustrates all of this with these pairs of sentences:

(39)(a) Mary is eating toast and Fred is chasing the aardvark.

(b) Fred is chasing the aardvark and Mary is eating toast.

(40)(a) The police came into the room and everyone swallowed their cigarettes.

(b) Everyone swallowed their cigarettes and the police came into the room.

For Maori then, (17)(a) is an example which is symmetric because the two conjuncts may replace each other and (17) (a) remains a grammatical sentence. But (17)(b) which is
asymmetric produces an odd output (c.f. (40)(b) above) if the two conjuncts are switched. For example:

(18)(b) *Kotahi o raatou he wahine, aa, tokorima oona tuaakana.
        'One of them was female and he had five older siblings.'

The examples cited by Williams are also asymmetric, and as Lakoff points out, it is with structures of this kind that and has a temporal or a causal sense.

The complex *raa/a ko conjunction represents a range of other similar forms which are discussed later. (See 4.4.2)

In some contexts me is translatable as 'with'. For example:

(19)(a) Ka haere *raa/a ko tana kurii ki te mahi.
        inc move they:dl pred his dog to the work
        'He and his dog went to work.'

(b) Ka haere ia me tana kurii ki te mahi.
    inc move he and his dog to work
    'He, with his dog, went to work.'
    'He and his dog went to work.'

4.4.1 Equational Sentences Conjoined by aa

We now turn to a discussion of equational sentences conjoined by aa and their derivations.

Examine the following sentences: (Attributive type)
(20)(a) He tangata pai a Hoone, aa, he wahine pred man good pers John and pred woman kino a Mere. 
bad pers Mary 
'John is a good man, and Mary is a horrible woman.' 
(b) He kurii eenei, aa, he hipi eeraa. 
pred dog these and pred sheep those 
'These are dogs and those are sheep.' 

The above illustrates the conjunction of two sentences whose subjects NPs are not coreferential. We may represent their deep structures in the following way. Sentence (20) (a) would be:

(21)

The conjunction aa may be deleted, leaving two separate simple sentences. Or, we may form a single 'conjoined' sentence which is indicated by non-falling intonation on Hoone 'John'. Thus, we may say that Ø is also a conjunction of Maori, similar to that in English structures like
Tom, Dick and Harry.

The next examples show conjoined sentences with coreferential subjects. They illustrate the left-to-right deletion process which may operate with such structures: the subject NP is deleted except in the last clause of a conjoined sequence.

(22) He poohatu, aa, he raakau ngaa taonga whawhai.
    pred stone and pred stick the:pl weapon fight
    'The weapons are stones and sticks.'

(23) He paru, aa, he kino, aa, he whakarihariha
    pred dirty and pred bad and pred disgusting
    ngaa whakaaro o Hoone.
    the:pl thought of John.
    'John's thoughts are dirty, bad, and disgusting.'

For (22) we might posit a deep structure like

(24) S
    \   /\
   S  CONJ S
  /   \
He poohatu ngaa taonga whawhai, aa, he raakau ngaa taonga whawhai.

    'The weapons are stones, and the weapons are sticks.'

and left-to-right subject deletion produces (22).

However, note that if the deletion order is right to left, the output is strange or ungrammatical.

(25) ?*He poohatu ngaa taonga whawhai, aa, he raakau.
    pred stone the:pl weapon fight and pred stick
    'The weapons are stones and sticks.'
The second predicate phrase *he raakau* has the semantic force of contradicting the preceding clause rather than being a conjunctive phrase with the meaning of 'sticks and stones'. That is, on the one hand *he poohatu* 'stone/s' are described as the weapons, and on the other, the occurrence of *he raakau* 'stick/s' appears to contradict or modify the previous assertion. It has the semantic effect of producing a relative clause like 'the stones which are sticks...' However, if *hoki* 'also' (see Williams' list in 4.1) is added after the second reduced conjunct, then the sentence becomes grammatical.

(26) *He poohatu ngaa taonga whawhai, aa, he raakau hoki.*

pred stone the:pl weapon fight and pred stick also

*hoki* 'also' 'too' is unambiguously interpreted as a pro-form, with the subject of the preceding clause as its antecedent.

Left to right deletion, or what might be termed 'backward deletion' and pronominalization are possible if we adopt a Topic-Comment theoretical approach, which would explain the above phenomenon in this manner. Left-to-right deletion is possible since the subjects of such constructions are topics or 'definite referring expressions'. They are already activated elements in the discourse and therefore deletable, and the *he* phrases are simply predications of those topics.
Sentences like (22) and (23) may be part of a narrative, or be responses to questions like He aha ngaa taonga whawhai? 'What are/were the weapons?' and He peehea ngaa whakaaro o Hoone?' 'What are John's thoughts like?'

Topics are already given or old information thus enabling left-to-right deletion. The occurrence of the topic in the sentence-final clause may be compared to right-dislocated sentences in English, such as the following:

(a) It's a great place, Hiruhārama.

(b) I don't like that, the red snapper.

Furthermore, the aa conjunction may also delete along with the identical subject, as in

(27) He paru, he kino, he whakarihariha ngaa
    pred dirty pred bad pred disgusting the:pl
    whakaaro o Hoone.
    thought poss John.
    'John's thoughts are dirty, bad, and disgusting.

4.4.2 Equational Sentences Conjoined by aa, raaua ko and me

Now we may compare the characteristics of aa with raaua ko and me in attributive sentences. It will be seen with (28) below that only aa may conjoin these structures.

(28) He tangata pai a Hoone (aa, he wahine kino a Mere. 
    \{ me ... \})
    \{ raaua ko ... \}
    pred man good pers John and pred woman bad pers Mary
    'John is a good man and Mary is a bad woman.'
Though *me* must be obligatorily followed by a definite article except before proper nouns\(^5\) (in the manner that *raaua* must be followed by *ko* 'predicate' when functioning as a conjunction) it cannot replace *aa* in the above example.

Now compare the following:

(29)(a) He poohatu, *aa*, he raakau ngaa taonga whawhai.
   pred stone and pred stick the:pl weapon fight
   'The weapons are stones and sticks.'

(b) He poohatu *me* te raakau ngaa taonga whawhai.
   pred stone and the stick the:pl weapon fight
   'The weapons are stones and the stick.'
   ('the stick' may have specific or generic meaning.)

(c) *He poohatu raaua ko te raakau ngaa taonga\(^6\)
   they:dl pred the stock
   whawhai.
   'The weapons are stones and sticks.'

While *aa* may delete without distortion of the meaning of the sentence in (29)(a) or rendering the sentence ungrammatical, to delete *me* in (29)(b) would result in an ungrammatical sentence.

It is clear from (29)(b) (see also (7), (8), (9)) that *me* may join two or more conjuncts, but the non-initial conjuncts must always be definite—that is, preceded by a determiner.
For example:

(30) Ko te hoeha, (me) te pune, (me) te naihi, ?(me) pred the saucer and the spoon and the knife and te whaaka, naa Hoone.
    the fork real:poss John
    'John's (dishes) are the saucer (and) the spoon (and) the knife and the fork.'

(me) may be deleted in a series of conjuncts with the effect of placing the conjuncts in apposition. The deletion of (me) in final position (as above) is uncertain. Its deletion between two conjuncts is also odd.

(31) Ko te pune ?(me) te hoeha, naa Hoone.
    pred the spoon and the saucer real:poss J.
    'John's (dishes) are the spoon and the saucer.'

Sentence (29)(c) shows the incompatibility of raaua ko conjunctions with non-human NPs.

Williams (1965:15) points out that raaua ko constructions are used "when speaking of a number of persons collectively". But it should be added that such constructions are frequently used when inanimate objects are spoken of as personifications, as in (32)(a) below, or in a metaphorical sense, as in (32)(b)-(c).

(32)(a) Ko Hikurangi raaua ko Aorangi aku maunga.
    pred H. they:dl pred A. my:pl mountain
    'Hikurangi and Aorangi are my mountains.'

(b) Ko te pene raaua ko te koorero ngaa taonga
    pred the pen they:dl pred the talk the:pl
'That man's fighting weapons are the pen and words.'

We will now look at coordination in identifying (ko-type) sentences. Sentences (33) and (34) below have non-coreferential subjects.

(33) Ko te kapu te mea nei, aa, ko te hoeha te mea raa.
    pred the cup the thing here and pred the saucer thing there
    'This thing is the cup and that thing is the saucer.'

(34) Ko te wahine raa te kai-mahi, aa, ko te taane te kai-whakahaere.
    pred the woman there the agt-work and pred the husband/male the agt-cause:move
    'The worker is that woman, and the boss is her husband/the man.'

Conjunction deletion operates with the effect of turning the above into independent sentences. For example (34) becomes:
We might also presume that such constructions have a semantic or deep structure representation like the attributive (he-type) sentences in the previous section.

However, note the following examples the effect of coreferential subject deletion.

(36) *Ko te wahine raa, aa, ko te taane te kai-mahi.
   pred the woman that and pred the man/husband
   the worker
   (Left-to-right deletion)

(37) *Ko te wahine raa te kai-mahi, aa, ko te taane.
   (Right-to-left deletion)

(38) *Ko te wahine raa, aa ko te taane ngaa kai-mahi.
   (The workers are that woman and her husband/
   the man.)

Sentence (38) is intended to show that ungrammaticality is not due to a violation of predicate-subject agreement rules, i.e., te 'the:sg' \(\Rightarrow\) ngaa 'the:pl.' It is apparent then that the reduction rule (Identical-Subject Deletion) witnessed with attributive sentences generates ungrammatical identifying sentences.
However, note now how such constructions are conjoined.

(39) (a) Ko te wahine raa raaua ko te taane
pred the woman that they:dl pred the man/
ngaa kai-mahi.
husband the:pl agt:work
'The workers are the woman and the man/her
husband.'

(b) Ko te wahine raa me te taane ngaa kai-mahi.
'The workers are the woman and the man/her
her husband.'

(40) (a) Ko ngaa tamariki raatou ko nga kuia ngaa
pred the:pl children they:dl pred the:pl
moorehu o te pakanga.
old:women the:pl survivor of the battle

(b) Ko ngaa tamariki me ngaa kuia ngaa moorehu
and
o te pakanga.
'The survivors of the battle were the old
women and children.'

(41) (a) Ko wai maa eeraa? Ko Ripi raatou ko Pau,
pred who pl those pred R. they:pl pred P.
ko Maui.
pred M. (FLM:16)
'Who are those? (They are) Ripi and Pau
and Maui.'

(b) Ko wai maa eeraa? Ko Ripi me Pau me Maui.
'Who are those? (They are) Ripi and Pau and
Maui.'
To maintain the generality that these conjoined structures have a common origin, we might hypothesize that the above identifying sentences ((39)-(41)) are derived from their deep structure by a similar reduction process to that seen operating in the attributive sentences. However the difference being that with examples like (39)-(41) a conjunction replacement rule as well as a subject-predicate agreement rule operate obligatorily, In this hypothesis the deep structure of (39) would be:

\[(42)\]

\[
\begin{array}{c}
S \\
ko te wahine raa te kai-mahi \\
pred the woman that the \text{agt:work} \\
\end{array} \quad \begin{array}{c}
CONJ \\
\end{array} \quad \begin{array}{c}
S \\
ko te taane te kai-mahi \\
pred the man/husband \text{the agent:work} \\
\end{array}
\]

'The worker is that woman and the worker is the man/husband'

The deep structure (42) is transformed into surface structure (30) by deleting the subject of the first sentence (as with the attributive sentences) and then by replacing \textit{aa} with \textit{raaua} and changing the determiner \textit{te} 'the:sg.' to \textit{ngaa} 'the:pl' in accordance with the subject-predicate agreement rules. The replacements are shown in (43) below (Identical Subject Deletion has already taken place).
While such a derivation provides a satisfactory solution in that we maintain a single deep structure for both attributive and identifying structures which undergo coordination, there are strong arguments to show that the raaua ko conjoined structures like (43) may be considered basic rather than derived. That is, the raaua ko conjunction is already present in deep structure and the conjoined NPs are already a single NP.

First, we note the following contrast between identifying sentences like (33) and (34) and other identifying sentences of the type of (43). For example, recall

(34) Ko te wahine raa te kai mahi, ko te taane te kai-whakahaere.
    'The worker is that woman and the boss is the man/her husband.'
Sentence (34) can be derived simply by conjunction deletion from an assumed basic structure like (44).

The condition for sentences like (33)-(34) is that $S_2 \neq S_3$. We may omit $aa$ and be left with two independent and acceptable sentences. We have already noted that attributive constructions behave similarly. However, to assume that the underlying structure for sentences like (43) is one like (42) or (44) leads to the following difficulties.

1. If $aa$ is deleted from a deep structure like (42) we cannot get two independent sentences in apposition, as we can with all the other equational sentence types when conjunction deletion occurs. The reason why (42) would be bad appears to be due to two different predicates $ko \ te \ wahine \ raa$ 'that woman' and $ko \ te \ tanne$ 'the man/her husband' predicking the same topic $te \ kai-mahi$ 'the worker'.

2. The derivation of (39), (40), (41) from a deep structure like (42) requires obligatory replacement rules:

$$aa \rightarrow raaua \ / \ raatou \ / \ etc$$

and they:pl they:pl
and a subject-predicate agreement/adjustment rule:

\[
\text{te} \quad \longrightarrow \quad \text{ngaa}
\]

the the:pl

We have noted however that none of the other surface structure derivations requires replacement rules.

3. The **raaua ko** conjunction (unlike **aa** and **me**) is not deletable. For example:

(45) *Ko te wahine raa te taane te kai-mahi

pred the woman dem the man the worker.

Note however, that **raatou ko**, unlike **raaua ko**, can be deleted: the reason is not clear to me at present.

(46) ?*Ko ngaa tamariki, ko ngaa kuia ngaa moorehu o te pakanga.

pred the:pl children pred the:pl old-woman the:pl survivor of the battle

'The survivors of the battle are the children and the old women.'

(47) Ko Ripi, ko Pau, ko Maui (maa eeraa).

pred R. pred P. pred M and others those

'They are Ripi, Pau, and Maui.'

With the exception of **raatou ko** deletion, then, the foregoing observations support a hypothesis that any pair of NP conjoined by **raaua ko** correspond directly to a basic structure. This structure, and the conditions for
the use of raaua ko, are represented diagramatically in (48)

(48)

```
(48) NP
   / \                     / \                     / \                     / \
  NP  CONJ  NP              NP  CONJ  NP              NP  CONJ  NP
    /   \                 /   \                 /   \                 /   \
   [ ]  [ ]               [ ]  [ ]               [ ]  [ ]               [ ]  [ ]
  +prop  +human            +prop  +human            +prop  +human            +prop  +human
Hoone raaua ko Pita John they:dl:excl pred Peter
```

The remaining members that form a paradigm of 'pro-nouns of conjunction' are listed below in (49). raatou ko may have a proper noun preceding it. However, no proper noun may precede the other members of the set.

(49) raatou ko 'they:pl:excl'
    maaua ko 'we:dl:excl.'
    maatou ko 'we:pl:excl.'
    koorua ko 'you:dl:excl.'
    kootou ko 'you:pl:excl.'
    *taaua ko 'we:dl:incl.'
    taatou ko 'we:pl:incl.'

What precedes the first of the elements dominated by the highest NP code in (48) depends on the function of that NP. When that NP functions as PRED, as in (50)(a) it will be preceded by ko:

(50)(a)

```
(50)(a) S
   / \                     / \                     / \                     / \
  PRED  NP  NP              NP  CONJ  NP              NP  CONJ  NP
    /   \                 /   \                 /   \                 /   \
   ko  raaua ko Pani ngaa kaimahi Pani are the workers.
```
If it is dominated by S as above, (i.e., is functioning as NP$_1$) it will be preceded by a 'pers. art.':

(50)(b) He kaimahi a Pani raaua ko Hoone

'Pani and John are workers.'

However, if NP$_1$ is initiated by one of the pronouns of conjunctions a is not used.

(50)(c) He kaimahi (*a) maatou ko Hoone, ko Piri,
pred agt:work We:pl:excl pred John pred Bill
ko Hau.
pred Hau

'John, Bill, Hau and I are workers.'

Although these raaua ko forms have conjunctive function, it is clear that they serve identifying functions as well. In particular, they specify the number of individuals referred to by the conjoined NP (i.e., whether dual or plural), and also that these individuals are human. The above observations also suggest that raaua ko coordinate structures may be derived from even more complex NP structures than that shown in diagram (48). Structure (53) (which will be discussed later) is a suggested alternative representation of these complex NP structures.

Observe the following examples: (51) shows the conjunction raatou ko within the subject NP$_1$, and (52) shows the conjunction within the predicate NP.
The NP dominating such complex NP constructions is represented by (53). S or PRED are the dominating nodes of the complex NPs in (51) and (52) respectively.
Structure (53) shows each of the individuals after \texttt{raatou ko} identified as sentential conjuncts in deep structure. We noted in Chapter 2 that any \texttt{ko} phrase not in sentence initial position is considered to be a predicate phrase. This then provides one reason for positing sentential conjuncts in the deep structure of sentences like (51) and (52) which contain a sequence of \texttt{NP} conjoined by \texttt{raatou ko}.

The \texttt{NP}_1 \texttt{te mea} 'the one' of these sentential conjuncts is deleted under identity with the \texttt{NP} in the predicate phrase. Justification for this deletion is the existence of sentence like (54) from which \texttt{te mea} can be deleted.

(54) Ko Hoone te mea i haere.
    \begin{verbatim}
    pred John the one past go
    \end{verbatim}
    'The one who went is/was John.'

Sentence (54) contains the presupposition that 'someone went' which forms the topic (see Appendix I) of the discourse. The predicate or new information of (54) is \texttt{Ko Hoone} 'John'. The subject \texttt{NP te mea} 'the thing' is deletable since it is identified by the predicate phrases \texttt{Ko Hoone} 'John'. This deletion derives

(55) Ko Hoone i haere.
    \begin{verbatim}
    pred John past go
    \end{verbatim}
    '(The one) who went is/was John.'

Note that this sentence is the same in surface form as (57) below, but (57) is assumed to be derived from (56)
simply by the Topic-fronting rule (discussed in Chapter 2) rather than a te mea deletion rule. That is:

(56) I haere a Hoone (*te mea) past go pers John the one 'John went.'

Topic Fronting

(57) Ko Hoone i haere. top John past go 'John went.'

Notice that we cannot have te mea in a sentence like (56) as we can in (54), and so we assume that each sentence has a different underlying structure. Te mea cannot be posited as sister to, or be under the domination of the subject NP1 a Hoone 'John' in the deep structure of (56) (see 59) below) as we can the te mea in the deep structure of (54). That is, (54) is assumed to have a deep structure like (58)

\[
\begin{align*}
S_1 & \quad \text{PRED} \\
\text{NP} & \quad \text{ko Haone} \\
S_2 & \quad \text{PRED} \\
\text{VP} & \quad \text{T/A} \quad \text{V} \\
& \quad \text{haere te mea} \\
& \quad \text{i haere te mea} \\
& \quad \text{The one who went is/was John.}'
\end{align*}
\]

and (54) is assumed to be derived by relativization.
If a deep structure like (59) below is posited for sentence (56) it is difficult to justify the inclusion of the extra NP te mea since it has to be obligatorily deleted in the surface structure (56).

(59)

The above observations then provide reasons for the successive ko conjuncts noted in (51)-(52) being derived from sentential conjuncts as in (53). It was also argued that such ko structures are basic and are not derived by Topic fronting. Though (53) is a more complex structure than (48), (53) is the favored solution since it is more general, i.e., the ko predicates are explained in (53) whereas they are not in (48).

4.4.3 Verbal Clauses with aa

The following examples illustrate verbal sentences conjoined by aa. The raaua ko and me conjunctions cannot function as coordinators here, as shown in (60)(b).

(60)(a) Ka tangi te pere, aa, ka hoki mai ngaa tamariki ki te kainga
inc cry the bell and inc return dir the:pl children to the home
'The bell rang and the children came home.'

(b) *Ka tangi te pere raaua ko ka hoki mai ngaa tamariki ki te kainga.*

'The bell rang and the children came home.'

(61) I kau mai ai te wahine nei ki uta i ngaa ahiahi, i te toonga o te raa, aa, hei te ata poo, i mua atu i te putanga mai o te raa, ka hoki anoo ki tana iwi i te moana. (MF:11)

past swim dir pron the woman this to shore loc the evening, loc the set:nom of the sun, and fut:loc the morning night, past before dir loc the emerge:nom dir of the sun, inc return again to her people loc the sea

'This woman used to swim ashore at dusk, at sunset, and at dawn, before sunrise, she would return to her people in the sea.'

The sentences may have related constituents, as in the following. In these examples the process of identical subject deletion operates.

(62) Ka hongitia e Tama tana tipuna, aa, ka awhitia.

in greet:st agt T. his grandparents and inc embrace:st

'Tom greeted and embraced his grandparent.'

(63) Naana i whakatipu te tamaiti nei, aa, naana hoki i ako ki te waiata. (MF:13)
agt:3pers past caus:grow the child this and
agt:3pers also past learn/teach to the song
'She raised this child and it was she who also
taught (it) to sing.'

4.4.4 Gapping

So far, then, we have seen the effect of identical subject deletion and conjunction reduction on coordinate non-verbal and verbal sentences. The following section illustrates the process of gapping, or identical VP deletion. The discussion follows the data.

(64) (a) Ka kainga e Hoone te keke, _aa_ e kainga e Mere te hanawiti.
inc eat:st agt John the cake and inc eat:
st agt Mary the sandwich
at agt Mary the sandwich
'John ate the cake and Mary ate the sandwich.'

(b) Ka kainga e Hoone te keke, _aa_, e Mere te hanawiti, _aa_, e Pita te pikhikete.
inc eat:nom agt John the cake and agt M.
the sandwich and agt P. the biscuit
'John ate the cake and Mary the sandwich
and Peter the biscuit.'

(c) Ka kainga e Hoone te keke, e Mere te hanawiti, e Pita te pikhikete.
'John ate the cake, Mary the sandwich,
Peter the biscuit.'
(65)(a) Naa Hoone i taraiwa te karaka, aa, naa Mere i taraiwa te motoka.
Agt John past drive the truck and agt Mary past drive the car
'John drove the truck, and Mary drove the car.'

(b) Naa Hoone i taraiwa te taraka, aa, naa Mere te motoka, aa, naa te tamaahine te tarakihana,
... and agt the daughter the tractor
'John drove the truck, and Mary the car, and the daughter the tractor.'

(c) Naa Hoone i taraiwa te taraka, naa Mere te motoka, naa te tamaahine te tarakihana.
'John drove the truck, Mary the car, the daughter the tractor.'

Conjunction deletion turns (64)(a) and (65)(a) into independent sentences. However, non-falling intonation at the end of conjoined clauses, except the final clause of course, has the effect of coordination. We noted this earlier with equational sentences also.

Sentences (64)(b) and (65)(b) represent gapped conjuncts. Conjunction deletion of these sentences (shown by the (c) sentences) is possible, and the effect is to place the constituents in apposition, as with their English equivalents. A slight pause after the agents of the gapped sequences appears to effect greater clarity. That is, the pause has the anaphoric effect of pointing back to the VP
of the initial clause.

4.5 The Conjunction raanei 'or'

This section discusses the behavior of the 'disjunctive' morpheme raanei 'or'.

4.5.1 The Use of raanei with Equational sentences

Notice in the following examples that the occurrence of raanei is optional except with the final conjunct.

Note also that raanei occurs between the predicate phrase and the subject NP of the equational conjuncts. The subject NPs of the non-sentence initial conjuncts are gapped.

(66) He raa hauangi (raanei) aapoopoo, he raa makariri (raanei), he raa marangai raanei.
    pred day breeze or tomorrow, pred day cold or, pred day rain or
    'Tomorrow will either be a breezy day, or a cold day, or a rainy day.'

(67) Ko te marae (raanei) te waahi hui, ko te kura raanei.
    pred the marae or the place meet, pred the school or
    'The meeting place is to be/will be the marae, or it will be the school.'

(68) Naa Piri (raanei) te tamaiti nei, naa Hoone raanei.
real:poss P or the child this real:poss John or
'This child is Piri's or John's.'

(69) Hei aapoopoo (raanei) te nehunga, hei te Wene­rei raanei.
   fut:loc tomorrow or the bury:nom fut:loc the Wednesday or
   'The funeral will be either tomorrow or Wednesday.'

4.5.2 The Conjunction raanei with Verbal Sentences
We note in these verbal sentences the same environ­ments and conditions for deletion of raanei as with the equational sentences.

(70) Kua mate (raanei) i te kurii taa taaua poti,
    kua kitea raanei e ia he kaatinga kee moona.
    perf dia or caus the dog sg:poss our:dl:incl cat, perf find:st or agt it pred home other irre:poss:3pers
    'Our cat has either been killed by a dog, or it has found another home for itself.'

(71) Kua hoki Tawa (raanei), ko Hemi (raanei),
    ko Piri raanei ki Aakarana.
    per return pred T. or, pred H. or, pred P or to Auckland
    'Either Tawa or Hemi or Piri has returned to Auckland.'
(72)(a) Kua hoki (raanei) a Piri, kua noho raanei (ia).

perf return or pers P. perf stay or he

(b) *Kua hoki a Piri raanei, kua noho a ia raanei.

'Piri will/has either return(ed) or (he) will/has stay(ed).'

Notice that the NP a Piri in (72)(b) cannot be followed by raanei. The reason is that a Piri is not a predicate. By contrast, the ko + NPs of (71) are predicates. In other words, a sentence like (71) has a deep structure something like (73). (See page 119 for tree).

(73) and all the preceding examples show that raanei must follow a predicate phrase whether the predicate is a verb phrase as in (72)(a) or an equational sentence predicate as in (66)-(69).
(73)

S

PRED

VP

Perf

kua

V

hoki

ko Tawa

raanei

tame

PRED

S

NP

NP

S

NP

S

NP

PRED

ko Hemi

raanei

tame

PRED

ko Piri

raanei

tame

pred

return

pred

T

or the one

pred

H

or the one

pred

P

or the one

kua hoki ko Tawa raanei tame

pred return pred T or the one pred H or the one pred P or the one
Either Tawa or Hemi or Piri have already been discussed. See section 4.4.2. Like (73), but the grounds for preferring a structure like (74) 'alternatively, we may posit a deep structure'

\[(74)\]

\[4.4.2\]
4.6 The Conjunction engari 'but'

This section will illustrate the behavior of engari, which has 'contrastive' meaning and is translated as 'but'.

4.6.1 engari with Equational Sentences

The following data illustrate the use of engari in a range of equational sentences. Engari occurs in clause initial position in the non-initial clause of a pair of conjuncts.

(75) He kaamura a Hoone, engari he hoia (kee) a Hare.
    pred carpenter pers John, but pred soldier otherwise pers Harry
    'John is a carpenter but Harry is a soldier.'

(76) Ko te piikaokao te manu rahi, engari ko te kereruu te manu reka.
    pred the chicken the bird big but pred the:sg pigeon the bird sweet
    'The big bird is the chicken but the sweet bird is the pigeon.'

(77) Noo Maarama ngaa huu nei, engari noo Mere aku tookena.
    real:poss M the:pl shoe this, but real:poss M pl:poss:lpers sock
    'These shoes are Maarama's but my socks are
Mary's.

(78) [Aa] te ata te poowhiri, engari [aa] te poo [Hei] ngaa whakangahau.

{fut } the morning the welcome, but {fut } the night the:pl caus:dance

The welcome is/will be in the morning but the entertainment is/will be at night.'

(79) *Kei te kura ngaa tamariki, engari kei te kaainga ngaa kookaa engari kei te whutupooro ngaa paapaa.

pres:loc the school the:pl children, but pres:loc the home the mother but pres:loc the football the fathers

'The children are at school but the mothers are at home but the fathers are at the football (match).' 

In all of these examples, engari serves to link clauses which are contrastive. Unlike aa 'and' and raanei 'or', engari 'but' is restricted to coordination of two clauses, as shown by (79) above.

4.6.2 engari with Verbal Sentences

(80) Kua mate taku kurii, engari e ora tonu ana taku hoiho.

perf die my dog but nonpast live still prog my horse

'My dog is dead but my horse is still alive.'
Lakoff (1971:131-142) discusses the use of but in English and among its various meanings, she identifies two that are primary. The first indicates semantic opposition—that is, where no conclusion about the second member of the conjunct is derivable from the first. (75) and (76) in Section 4.6 are examples in Maori: their translations also serve as examples for English. The second principal meaning that but provides is denial of expectation and an example from Lakoff is:

(59) John is tall but he's no good at basketball.

(Lakoff 1971:133)

This type of sentence is composed of an assertion plus a presupposition. That is, the whole sentence (59) is an assertion but it also involves the presupposition that "if X is tall, then X is good at basketball". It is the denial of this presupposition that conditions this use of but.

Sentence (80) above is a parallel example in Maori. The sentence makes an assertion, and the presupposition implicit is "Both my dog and horse should be dead" (because of old age, a calamity, etc). This knowledge is shared by the hearer. Engari in (80) effects a meaning of

(81) Kua mate taku kurii; engari taku hoiho, (e ora tonu ana).

Lit. 'My dog is dead; but my horse (is still alive)'.
or 'My dog is dead; but not my horse'.

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denial of expectation like that shown for English but by Lakoff.

A further interesting finding by Lakoff is that but with the semantic-opposition meaning allows symmetric conjuncts, as and does. (We noted this similarity with the equational sentences of Maori in section 4.4.) However, but with the denial of expectation meaning does not allow this. Lakoff shows that if the conjuncts in (59) are switched the resultant sentence is ungrammatical, as in

(59)(a) *He's no good at basketball but John is tall.

However, note that with (80) above, engari (which we have noted has the meaning denial of expectation) may switch its conjuncts to give:

(82) E ora tonu ana taku hoiho engari kua mate taku kurii.

nonpast live still prog my horse but perf die my dog

'My horse is still alive but my dog is dead.'

The apparent reason why the conjuncts of (80) may switch, as shown in (82), lies with the fact that the semantic opposition meaning is also present in the lexical items ora 'live' and mate 'die'. (See Lakoff 1971:133)

With sentence (81), four things need to be noted. Firstly, there appears to be the requirement for a stronger phonological pause than that indicated by a
comma. This implies an independent status for each of the conjuncts.

Secondly, denial of expectation meaning, or the negative aspect inherent in engari figures prominently in the interpretation of the second clause. Note that the VP in the second clause is deletable. This is probably due to the fact the VP stands in semantic opposition to the VP in the first conjunct and can therefore be inferred.

Thirdly, engari cannot be deleted or replaced by aa 'and'.

Fourthly, with the VP of the second conjunct present, the subject NP precedes the VP. We have already noted that negatives in Maori are true verbs, and it appears in (81) that engari, with its negative meaning 'but not', is functioning like a verb or predicate. Negatives in Maori can effect raising. A possible deep structure for the second conjunct of (81) then would be:

\[ (83) \]

\[ \begin{array}{c}
S_2 \\
\downarrow \\
S_1 \\
\downarrow \\
PRED \\
\downarrow \\
\vdots \\
\end{array} \]

\[ \begin{array}{c}
PRED \\
\downarrow \\
NP \\
\downarrow \\
S_3 \\
\downarrow \\
NP \\
\downarrow \\
S_4 \\
\downarrow \\
\vdots \\
\end{array} \]

\[ \begin{array}{c}
\text{engari e ora tonu ana taku hoiho} \\
\text{but:not still alive my horse} \\
\end{array} \]
Raising gives the following output,

(84)

\[
\begin{array}{c}
S_1 \\
\text{?} \\
S_2 \\
\text{PRED} \\
\ldots \ldots \text{engari} \\
\text{taku hoiho} \\
\text{e ora tonu ana} \\
\text{PRED} \\
\end{array}
\]

but: not my horse T/A live still prog

hence, the alternative translation given for (81) 'My dog is dead; but not my horse'. Such an analysis gives a plausible explanation for the differences seen in (80) and (81), with regards to the phonological/pause demands, the semantics, and syntax (i.e, non-identical predicate deletion, and the non-deletability of engari).

The question mark in the tree indicates that the two clauses conjoined by engari may indeed be separate clauses, as the strong pause seems to indicate.

Finally, although Stockwell et al. (1973:68) show "that more than one but may occur in a sentence; for example,

(214) 'Mary is beautiful but (she is) dumb, but Helen is perfect.'"

such use of engari is not possible for Maori:
(85) He aataahua a Mere \{engari\} he rorirori, \{engari ahakoa\} a Herena, kaaore oona hee.
pred beautiful pers M \{but\} pred stupid \{although\}
but pers H. neg pl:poss:3pers fault
'Mary is beautiful but stupid but Helen, she is without fault.'

However, the use of ahakoa 'although' renders the sentence grammatical, and correctly indicates the subordinating nature of the embedded sentence he rorirori a Mere 'Mary is stupid'. It further highlights the purely coordinating and contrastive functions of engari.

4.6.3 Identical NP Deletion with engari

In the following examples, with verbal sentences, the effects of Identical NP Deletion, and further (see 4.6.2) types of clauses that can be conjoined by engari are discussed.

Sentences (86) (a) and (87) (a) below show that Identical NP Deletion applies to the agent, whether in an oblique case or not. But (86) (b) and (87) (b) show that deletion of an identical object NP is not possible—again whether the object is in an unmarked ((86) (a)) or marked ((87) (a)) case. It is apparent then that semantics—imposed by the verbs in these transitive constructions—and the contrastive meaning of engari prohibit the deep semantic object\(^9\) from deletion, as in (86) (b) and (87) (b).
(86)(a) Ka kainga e Tamahae te paraoa, _engari_ ka tohungia (e ia) te keke.
inc eat:st agt T. the bread, but inc keep:st the cake
'Tamahae ate the bread, but (he) kept the cake.'

(b) *Ka kainga e Tamahae te paraoa _engari_ ka tohungia e Tamahae.
inc eat:st agt T. the bread but inc keep:st agt T.

(87)(a) Ka whakapoko a Mere i te kaanara, _engari_ ka tahu (ia) i te maati.
inc caus:extinguish pers M obj the candle,
but inc light obj the match
'Mary extinguished/extinguishes the candle but (she) lit/lights the match.'

(b) *Ka whakapoko a Mere i te kaanara, _engari_ but ka tahu ia.
inc light she
'Mary extinguishes the candle but she lights.)

Since _engari_ has a contrastive meaning the predicates in the two conjuncts cannot be identical. This is indicated by (88) an equational sentence, and (89) a verbal sentence.

That is,
(88) *He kootiro aataahua a Mere, engari he kootiro aataahua a Hera.

pred girl beautiful Mary, but pred girl
'Mary is a beautiful girl, but Sarah is a beautiful girl.'

(89) *Kua pakaru te wini, engari kua pakaru te pounamu.

perf break the window but perf break the bottle
'The window is broken, but the bottle is broken.'

Sentence (90) below shows identical NP₁ (in this case the subject) deletion, where the two conjuncts are intransitive verbal sentences.

(90) (a) Ka moemoea a Piri, {engari} ka oho tonu.

inc dream pers Piri, {but} inc awake {although}
still

'Piri dreamed {but} (he) remained awake.'

(b) Ka maakona a Hoone, engari ka kai tonu (ia).

inc satisfy pers John, but inc eat still (he)

'John was full but (he) still ate.'

It further illustrates the use of ahakoa 'although' as coordinating. Prospesel (1974:23) points out that though the expressions but, however, although, in English "are not completely synonymous, there is a common factor
in their meanings". (See also Lakoff (1971:141).) It appears from the examples and discussion given that engari and ahakoa (and heoi 'however', not discussed in this chapter) possess a number of semantic and syntactic characteristics similar to their English counterparts.

4.7 Summary

The following were noted as conjunctions of Maori, and each had these distributional properties.

aa 'and' is a free form, preceded and followed by pause.

Syntactically, aa may conjoin almost all types of conjuncts except complex NP [+human] conjuncts. It is deletable and has the effect of placing reduced clauses in apposition, i.e., if some identical constituent NP, or predicate phrase has been deleted. Otherwise, aa deletion renders unreduced clauses to the status of either independent sentences or sentences conjoined by non-falling intonation. (See ø below.)

me 'and' can substitute for aa in most of its environments but the conjunct following me, if predicating, must be definitized. me can occupy the raaua ko slot. It differs from raaua ko conjunctions in that it can be repeated; raaua ko cannot. Also, me cannot conjoin verbal conjuncts.
raaua ko 'and'

(1) If it is transformationally derived, it replaces aa as a sentential conjunction in surface structure. Predicate-subject agreement rules operate obligatorily.

(2) If raaua ko structures are basic constituents, then raaua ko occupies a phrase-internal position. The dual raaua ko conjunction is not deletable, but the plural raatou ko conjunction is.

The conjunctions of the form raaua ko are used to conjoin proper nouns or common nouns with the semantic feature [+human].

ø 'and' is indicated by non-falling intonation and pause between conjuncts. It arises by deletion of aa.

raanei 'or' is always attached postpositionally to the predicate phrase.

The conjunction raanei in multiple conjunctions may be deleted from left-to-right except from the last conjunct. raanei is also a question morpheme.
engari 'but' is the initial element of the second of two conjuncts. engari is purely a two clause conjunction. It has contrastive meaning, i.e., semantic opposition, as well as a denial of expectation meaning. It also appears to function like an underlying predicate.
NOTES TO CHAPTER 4

1 See Ross (1970) and Stockwell et al. (1973) for discussions of these rules in English, and also Langacker (1972) for other languages.

2 This distinction has not always been indicated; for example, compare *Nga Mahia Nga Tupuna* by Sir George Grey (ed. by H.W. Williams, 1927) with the work of Biggs et al. (1967), and Orbell (1968).

3 See Gundel's Summary in Appendix 1.

4 Note the manner in which questions seeking adjectival or stative predicates are asked: *He peehea?* and not *He aha?* The latter, *He aha?*, is an incorrect form of question for a response like (23). This of course further disproves the uniform nature (i.e., noun-ness) of all morphemes following predicate *he*.

5 For example,

...Ki a Ngati Raukawa me Ngati Whakaue.  
(NMT:xiii)

'...To N.R. and N.W.'

...Ko Ira Rangiaho (o Tuhoe) me Marie Brištowe (o Te Araroa).

'...is Ira R. (of Tuhoe) and Marie B. (of Te Araroa).'  
(T.W. 13:19)

Also, see Mahuika (1974:52) for further examples on the use of *me* in conjoining proper nouns.

6 The conjunction *raanei* is also a question morpheme, and so the sentences, isolated from their contexts, may be interpreted as either questions or disjunctive statements. They are the latter here.

7 See Bellert, I (1966) in Stockwell et al. (1973:369), for a discussion on the negative semantics of *but*.


9 Chung (1976), following a Relational Grammar model, argues for the notions of "subject of" and "object of" as primitives in grammar, rather than resulting from surface case-relations to which certain syntactic rules (e.g., Passive) may have applied. The above findings are consistent with that hypothesis.
CHAPTER 5
RELATIVIZATION

5.0 Introduction

The purpose of this chapter is to investigate relativization in Maori—specifically to identify structures that qualify as relative clauses and to determine what relative pronouns there are, if any, and how they function.

The plan of this chapter is as follows. Sections 5.1 - 5.3 deal with preliminaries. Section 5.1 provides a definition of 'relative clause', while Section 5.2 summarizes our findings concerning relative clauses of Maori. One conclusion of this study—in contrast to Williams's (1965) view—is that there are 'relative pronouns' in Maori, namely, naana, maana, nei, naa, raa, and ai. The term 'relative pronoun' will be clarified in 5.1. Section 5.3 gives a brief review of different theories of relative clause formation. The purpose of this review is to assess the theory or theories that might best provide for an explanation of problems of relative clause formation in Maori which are treated in the later sections. The remaining sections deal with Maori. Section 5.4 deals with relative clauses of verbal sentences and Section 5.5 with relatives of equational sentences.

5.1 Definitions

This section will be concerned with clarifying the
notions 'relative clause', 'relative pronoun', restrictive clause, and the use of various other terms used in the present study.

5.1.1 Relative Clause

A relative clause is a reduced sentence embedded as a modifier of a noun or noun phrase (NP). The notions 'reduced sentence' and 'modifier' will be explained later. The NP modified is located in a 'higher' clause and is often referred to as the antecedent or head nominal. For example, in the sentence People who build sandcastles will be disappointed, the 'higher' clause is people will be disappointed, and the relative clause is who build sandcastles. This relative clause modified the antecedent people and is 'linked' to the higher clause by the relative pronoun who.

5.1.2 Relative Pronoun and Relative Marker

A relative pronoun, or relative marker, is a subordinating conjunction which links the head noun phrase and its modifying clause. However, there is a distinction between relative pronoun and relative marker, as drawn in the following discussion. Furthermore, this distinction is relevant to the subsequent discussion of Maori relativization.

Sohn (1973), in a study on relative clause formation in Micronesian, distinguishes between a relative pronoun and relative marker in the following way. Relative
pronouns, he says, are like the WH- forms of English *who*, *whom*, *which*, and *where*, which "reflect the syntactico-semantic features of the coreferential embedded noun phrase" --meaning that relative pronouns carry information such as whether the head NP is human or not, what case the coreferent of the head NP holds in the embedded clause, and so on.

Relative markers are like certain conjunctions found in several Micronesian languages he studied. These markers link the head NP and relative clause, but reflect no syntactic-semantic features of the embedded or head noun phrases. Some relativized NP leave a trace pronoun in their original position but the relative marker carries no traces. Thus in Micronesian languages there is no evidence for a movement rule like that posited for some WH- forms of English, e.g., *whom*, *where*. Because of these observations, Sohn concludes that the function of the relative markers is "that of a conjunction and not that of a pronominal (i.e., relative pronoun)... [A relative marker] merely conjoins an antecedent and its relative clause." (Sohn 1973:358).

This is an important distinction since the pronominal forms we will see in later discussions on Maori will show those forms as having characteristics of both relative pronouns and relative markers. For consistency of usage I shall refer to those forms as relative pronouns.
5.1.3 Relative Clause: a Reduced and Dependent Sentence

Because a relative clause modifies an NP of a higher clause, it has been generally assumed that the head is also represented in the deep structure of the relative clause. (The views regarding the head NP in deep structure is seen in Section 5.3.) In many languages the co-referential NP leaves a pronominal trace, or it is said to be deleted in surface structure. For example, WH-relative pronouns of English (as discussed above) are said to be pro-forms of the NPs modified by the relative clauses, but may also not appear in surface structures. So a sentence like The story which I heard was spooky may be derived from a suggested deep structure like:

It is then transformed into a structure like
The coreferential NP of the subordinate sentence is transformed to an appropriate WH-form, e.g., who (+human), which (-human) or that (+human) and that pro-form must then be moved between the head noun phrase and the embedded sentence. Or it may be deleted, leaving 'The story I heard was spooky.' This pronominalization or deletion of the relativized NP then, is the reduction referred to earlier when we defined a relative clause as a reduced sentence.

It should be further noted that such a reduction process places a dependency relationship upon a relative clause and its antecedent. That is, constructions like... which I heard, ...whom he saw cannot stand alone.

We will note the process of reduction and the dependency relationship discussed above operating in Maori relative clauses also.

5.1.4 Relative Clauses as Modifiers

Modification is a semantic function of expanding or restricting the meaning/reference of the head modified. Such modification, among different languages, has resulted in the recognition of two kinds of relative clauses: restrictive and non-restrictive (or appositive clauses).

For English, Jacobs and Rosenbaum (1968:259-260) explain the difference in the structure of restrictive and non-restrictive relative clauses with a pair of sentences like:
Professors who enjoy poetry are idealistic.
Professors, who enjoy poetry, are idealistic.

Apart from the pausal difference indicated by the commas, the first sentence makes a single assertion about a certain section of professors who enjoy poetry (the assertion being that they are idealistic). In the second sentence, two separate assertions are made: all professors are idealistic and all professors enjoy poetry.

From the examples of Jacobs and Rosenbaum, we note that a restrictive relative clause is a dependent clause which is used to specify or clarify the 'head' NP. On the other hand, a non-restrictive relative clause is used to add a separate proposition about the head NP. Because of this difference in meaning and function, it is claimed by some linguists that the difference reflects deep structure origins of these constructions: a restrictive relative clause is dominated by the nominal it modifies, while a non-restrictive relative clause derives from conjoined clauses in deep structure. See 5.3 for fuller discussion.

5.1.5 'Higher' and 'Matrix' Clauses

One final point of clarification is made here with respect to the terms 'higher clause' and 'matrix (or main) clause.' The former is used to refer to the clause that contains the antecedent of the relative clause, since the antecedent and its relative clause may be subordinated several 'layers' down' in a sentence. For example, in a
sentence like It is assumed that the troubles will end if John marries Betty who no longer loves Bill the relative clause who no longer loves Bill is embedded in the noun phrase Betty which is in a 'higher' subordinate clause if John marries Betty. That subordinate clause is further embedded in another higher clause that the troubles will end which is the complement of the matrix clause It is assumed. The matrix clause is the main clause of the sentence. The tree diagram below illustrates the multiple embeddings discussed here.

5.1.6 Noun Phrase: Accessibility Hierarchy

Keenan and Comrie (1972) in a study of relative clause
formation in over 40 languages, concluded that there was an Accessibility Hierarchy in the way that NPs of the embedded clause were 'ordered' for relative clause formation. They summarized their findings in what they termed the ACCESSIBILITY HIERARCHY (AH).

(i) \( \text{sub} \rightarrow \text{DO} \rightarrow \text{O} \quad \text{Prep} \rightarrow \text{Poss-NP} \rightarrow \text{O} \rightarrow \text{Comp-P} \)

(ii) if \( X \rightarrow Y \) and \( Y \) dominates \( Z \) then \( X \rightarrow Z \).

The major claim of the AH is that "subject NPs are easier to relativize than any other major constituent"\(^2\) despite the many differences in the strategies adopted in languages for relative clause formation. Some languages present the relative clauses before the head noun phrase (Strategy 1), e.g., Finnish; some after the head noun phrase (Strategy 2), e.g., English; and some fix the relative pronoun internal to the clause (Strategy 3), e.g., Basque, which fixes the pronominal copy to the verb.

We will note in the following discussion that Maori adopts predominantly the third strategy--that of placing the 'relative pronouns' nei, naa, raa and ai after the verb (though not as affixes) but it also adopts the post-nominal strategy (c.f. English) in the special use of naana.

5.2 Findings of This Study

Williams (1965:51) states:

There are no relative pronouns in Maori. Their place is supplied by the position of the words forming the relative clause; or by the personal pronoun of the third person singular; or again by the use of certain particles.
What Williams appears to be looking for is a relative pronoun or system of pronouns with a constant distribution like the WH- forms of English. He finds none. However, he recognizes that "their place is supplied by the personal pronoun of the third person... (i.e., naana, maana) and certain particles (nei, naa, raa, and ai)" but provides no explanation why the same morphemes cannot be the relative pronouns of Maori.

The major conclusion arrived at in this study is that all of the above—the personal pronouns naana and maana, and the particles nei, naa, raa and ai, function as relative pronouns in Maori. They are semantically anaphoric in that they refer to an antecedent NP in a higher clause, and are syntactically derivable by the rule of pronominalization under coreference.

Specifically, the 'relative pronoun' in the personal pronouns naana and maana is -na 'third person.' This clitic morpheme is the pronominalized form in the relative clause of the antecedent NP. It is significant that naana and maana, when they are the initiators of independent sentences, have only singular referents, i.e., 'he/she/it', but as relative pronouns they can represent 'plural' antecedents as well. Naana/maana follows the antecedent NP directly and, therefore, introduces the relative clause in the same way that the WH- relative pronouns of English do.
The 'relative pronouns' nei, naa, raa, however, occupy a post verbal position and are replacement copies of the subject NP. While they may serve as 'relative pronouns', nei, naa, raa are more widely known in the grammars of Maori as 'demonstrative pronouns'. As demonstrative pronouns they occur with nominals only. Thus nei, naa and raa serve a dual function—in the same way that English that may serve as a relative pronoun and demonstrative pronoun. Clauses containing nei, naa, and raa post-verbally may not stand as independent sentences.

The relative pronoun ai is also found post-verbally. It is the pronominal copy of an oblique NP.

Both verbal and non-verbal (i.e., equational) clauses may function as relative clauses. Verbal relative clauses are restrictive, in the sense that no strong phonological pause is allowed between the antecedent and the relative clause. On the other hand, equational relative clauses are non-restrictive (or appositive). However, adjectival equational relatives show preference as restrictive relative clauses in surface structure.

The two major alternative theories of relative clause formation are compared. Both appear to be compatible with the facts of Maori.

5.3 Some Theoretical Views on Relative Clause Formation

In transformational-generative theory,
several types of analyses have been assumed in the formation of relative clauses. By and large these analyses have focused on the analysis of restrictive relatives. Three main types of structures have been posited for relative clause formation. They are generally known by the names:

(1) Det or Art-S Analysis (e.g., Lees, 1960; Smith, 1964) which has a deep structure:

```
NP
  Det

Art S
```

(2) NP-S Analysis (e.g., Ross, 1967; Pawley and Syder, 1976) which has a deep structure:

```
NP
  NP

S
```

(3) NOM-S Analysis (e.g., Stockwell, Schachter, and Partee, 1973; McCawley, 1978) which has a deep structure:

```
NP
  Det

Nom S
```

The merits and weaknesses of each are well documented by Stockwell and others (1973, 421 ff) and also by Bach (1974). Pawley and Syder's claims for an NP-S Analysis are discussed in Section 5.5.1. I shall touch briefly upon the
essential arguments claimed for each structure.

Bach (1974: 268-269) shows that a phrase like the house that is on the left under the Det-S Analysis would have a deep structure:

(1) The surface form is derived by these rules: movement of the clause around the head noun house, introduction of that, and deletion of the NP from the clause.

The basic problem with this analysis as Bach points out is that of coping with 'stacked' relatives; e.g.,

(2) *the house [that is on the left [that has three windows]]

He shows that the result of applying the rules above results in an ungrammatical form like:

(3) *the house [that that is on the left]

has three windows.
However, the NP-S Analysis adopted by Ross and others, accounts for sentences like (2) above and (4) (i.e., stacked relatives):

(4) The dog that barked all night that annoyed the neighbors was impounded the next day.

The relative clause that annoyed the neighbors modifies the head NP plus the lower relative clause; i.e., the dog that barked all night. (The sentence is acceptable for some dialects of English; others require and in the place of the second that.) So the deep structure for (4) would be

(5)

Relativization is not blocked since identity conditions can be stated on the coreferential NPs, the dog in $S_1$, $S_2$, and $S_3$, and this provides the conditions for WH-pronominalization. $S_3$ is extraposed (i.e., moved around the higher
clause after pronominalization) and sister-adjoined to $S_2$, to provide the output (5) above.

One of the problems of this analysis stems from the coreferentiality condition. Stockwell et al. (1973:428) show that this condition cannot be met by generic NPs acting as head NPs for relative clauses. The reason is that a generic paraphrase cannot be entailed by the shared NP of any relative clause. They show this in (10) below:

(10) (a) All students who can spell decently will pass the course.

(b) All students can spell decently (Stockwell et al:429).

That is, sentence (10)(a) does not entail (10)(b).

To overcome this problem they suggest that a constraint like "generic relative clauses must be derived from if-then conditional clauses" is required, but there are problems related to this also. We will not discuss these here.

One other problem Stockwell and others discuss is that relative clauses never appear with nominalizations (e.g., gerundives, infinitivals), unlike derived nominals like proposals, claim, etc. They point out that the structure for true nominalizations (see Chapter 6 for Maori) is:

\[
\begin{array}{c}
\text{NP} \\
\mid \\
S
\end{array}
\]

and therefore the possible expansion of NP-S to
had to be blocked by some *ad hoc* condition.

The NOM-S Analysis (much like the NP-S Analysis) adopted by Stockwell and others accounts for generic-NP relativization by changing the node labels of the relative clause/s to NOM. This appears to avoid the identity-condition between shared NPs which created the problem noted in the NP-S Analysis. The NOM-S Analysis requires identity only between NOMs and also a constraint that the Determiner be \[-\text{definite}] \ [+\text{specific}]. (See Stockwell et al., (1973:438-439) for motivations for the latter constraint.)

So the deep structure for (1)(a) below would be (1)(b).

(1)(a) John knows few people who like Hawaii.

(1)(b)

This solution thus side-steps the issue of the anomalous entailment relationships noted with example (10)(a)-(b).
Finally, McCawley (1978) adopts essentially the NOM-S Analysis but calls his the **predicate-conjunct** analysis. He places quantifiers (like few, many, two, three, etc.) **outside** the deep structure of the relative clause. After relativization has taken place, the quantifier is lowered.

For example, for his sentence

(10)(a) Many linguists who have good backgrounds in sociology are driving taxis.

McCawley shows the logical structure (his term) (10)(b) below, and the necessary transformations to derive (10)(a).

(10)(b)

```
S₀
   /\many
  /   \and
S₁     S
   /\aux VP
  /   \X be driving a taxi
N    X has a good background in sociology
X be
    \a linguist
```

S₁  →  Rel-clause formation

```
S
   /\NP
  /   \be
V    \X be
P    \a linguist
    /\N
     \a linguist who has a good background
```
The foregoing structure McCawley uses to explain the difference between

(a) Two cats that once belonged to George.
(b) Two linguists that met at a conference on language planning.

With (11)(a), two is a lowered quantifier. That is, it starts off outside of "X is a cat and X once belonged to George" and after relativization two is lowered, as we noted with the quantifier in (10)(a).

But with (11)(b) above, the NP-S (of Ross and others) is the structure used because "there is coreferentiality between the subject of met at a conference (which is the set of individuals rather than a variable ranging over that set (as with (11)(a)) and the item of which three ((sic) - two) is predicated." (McCawley: 160)

Several other 'variant' analyses on relative clause formation have been proposed.
Schachter (1973) proposes that relativization involves not the matching of a nominal in a matrix sentence with one in an embedded sentence, but rather the promotion of a nominal from an embedded into the matrix sentence. This operation replaces a dummy symbol by means of a copying operation within the embedded sentence itself. The constituent that has been copied is either replaced by a proform, as in English (with WH-forms), or deleted.

Perlmutter (1972) argues for a "shadow pronoun" theory: relativization is a copying rule that leaves behind a pro-nominal copy of the moved constituent. This shadow pronoun may be deleted.

Akmajian and Kitagawa (1976) show that neither of the theories of Schachter or Perlmutter can account for cases of relativization where the pronominals may be non-coreferential with the head of the relative. They cite as evidence the following:

(1) That's the kind of cheap American car that if you don't service the generator every 3,000 miles it will break down.

(2) Hanoko ga ZIBUN no kane o tukatte simatta X
    's money spent up taroo...
    'Taro that Hanako used up self's (i.e., his/ her) money...'
    'Taro, Hanako used up her money herself.'

Akmajian and Kitagawa argue that the primary R(elative)
C(lause) B(inding) is between subscripts i and i, but secondary RCB is also possible by virtue of an INTRINSIC CONNECTION (i.e., between 'the cheap American car' and 'generator' in (1), and between 'Taro' (the head NP) and 'Hanako' in (2). In the Japanese example, 'Taro' and 'Hanako' have an intrinsic connection like the names 'Jack and Jill' in English.

Kuno (1975), reiterates views expressed in 1972 about Japanese relative clause construction which, he says, involves not the 'deleting of an ordinary NP, but the theme of the embedded clause.' He further proposes as a universal constraint on relative clause formation, the following:

The Thematic Constraint on Relative Clauses.

A relative clause must be a statement about its head noun.

He argues that certain ungrammatical sentences of English, which Ross (1967) claimed to be due to violations of the Coordinate Structure Constraint, are in fact violations of the Thematic Constraint.

Gundel (1974) proposes that relative clauses are formed on the Topic NP (i.e., Kuno's theme) of sentences.

Maintaining the view that relative clauses are a universal linguistic phenomenon which therefore "a theory of universal grammar must account for," Bach (1973:257-258), quoting a study by Schwartz (1971) on various languages,
lists these seven types of relative clause constructions.

1. NP \( \text{WH} \ldots \emptyset \ldots \) WH = a relative pronoun
2. NP That \( \ldots \emptyset \ldots \) noun
3. NP \( \ldots \emptyset \ldots \) Pro = a resumptive
4. NP That \( \ldots \text{Pro} \ldots \) pronoun coreference
5. NP That \( \text{WH} \ldots \text{Pro} \ldots \) referential to the
6. \( \ldots \emptyset \ldots \text{NP} \) head of the
7. \( \ldots \text{Pro} \ldots \text{NP} \) clause.

Bach (1974) says that the first three types are common in English and many other languages and (4) occurs in some dialects of English, e.g.,

That's a movie that you cry when you see it.

while (6) also occurs, e.g.,

The rapidly approaching train.

This study will attempt to show that Maori has a type of relative clause construction like (1) and (2) i.e.,

NP naana... and a type like (3) except that Pro is obligatory in certain structures and \( \emptyset \) in others.

5.4 Relative Clauses in Maori Verbal Sentences

As a convenient starting point for our investigation of Maori relative clauses we will consider relative clauses which have the Agent-Emphatic construction explained below. We will argue that the Agentive pronoun naana in such clauses is a relative pronoun, and two kinds of evidence—dependency, and modern usage—will be provided to support the argument.
5.4.1 Naana Relative Clauses

In sentence (1) the relative clause (underlined) is embedded in the subject NP of an intransitive matrix clause. The relative clause itself is transitive.

(1) Kua riro ngaa taangata naana i aarahi te iwi.

Lit. 'Gone are the men who guided the tribe.'

'The men who (it was that) guided the tribe have gone.'

Before proceeding further it is necessary to dwell at some length on the type of relative clause found in (1), since it is a common structure for transitive relative clauses, and furthermore it illustrates a strategy in the language for disambiguating the roles of the NPs in the relative clause.

The relative clause in (1) ...naana i aarahi te iwi 'who led the tribe' is called an Agent-Emphatic construction in the grammars of Maori. This construction exists as an independent sentence structure in the language, although the pronominalized form naana requires a discourse related context to make sense. That is, the singular referent of naana 'he/she/it' must be information shared by the speaker and hearer.

The derivation of the Agent-Emphatic construction of Maori and its best translation into English are controver-
sial. For the purpose of illustrating the role of the Agent-Emphatic construction in relative clauses, I adopt here a standard transformational-generative analysis for its derivation, in which the construction is assumed to be derived from a more basic structure.

Let us look first at the deep structure for (1) shown below, and notice particularly the structure of $S_2$.

\[
(2) \quad S_1 \quad \begin{array}{c}
PRED \quad NP \\
T/A \quad V/P \quad Det \quad N \quad S_2 \\
Kua \quad riro \quad ngaa \quad taangata \\
perf \quad gone \quad the:pl \quad men \\
\end{array}
\]

\[
(2) \quad S_2 \quad \begin{array}{c}
PRED \quad NP \quad NP \\
T/A \quad V \quad P \quad NP \\
i \quad aarahi \quad ngaa \quad taangata \\
past \quad lead \quad i \quad te \quad iwi \\
the:pl \quad obj \quad the \quad men \quad tribe \\
\end{array}
\]

'The men who led the tribe are gone.'

Now, the relative clause of (1), naana i aarahi te iwi 'who led the tribe' is assumed to derive from a structure like $S_2$. For the sake of clarity in the explanation of the Agent-Emphatic construction, I will treat the
structure $S_2$ as an independent sentence which occurs as (3) below. (3) also reflects the VSO word order posited as basic in Maori.

(3) I aarahi ngaa taangata i te iwi.

past lead:pl men obj the:sg tribe

'These men led the tribe.'

(3) is transformed into a passive structure by (i) suffixing the verb with its appropriate -Cia form; (ii) placing the agent NP ngaa taangata in an oblique case frame by preceding it with e 'agent marker', and (iii) placing the object NP i te iwi in an unmarked case by deleting i 'object marker.' Thus (3) becomes:

(4) I arahina e ngaa taangata te iwi.

past lead:st agt the:pl men the:sg tribe

'The tribe was led by these men.'

(4) now undergoes the Agent-Emphatic transformation: The Agentive phrase is fronted and e is replaced by naa $^4$ 'real'; the -Cia suffix is deleted. The unmarked NP remains as is. Thus (4) becomes:

(5) Naa ngaa taangata i aarahi te iwi.

real the:pl men past lead the tribe

'(It was) the men (who) led the tribe.' \{(by whom the tribe was led.)\}

The derivation (5) above is summarized in (6) below:

(6)(a) (deep structure)

I aarahi ngaa taangata i te iwi.
past lead the:pl men obj the tribe
(b) (passive) \[\rightarrow\]
I aarahi-na e ngaa taangata te iwi.
past lead:st agt the:pl men the tribe
(c) (Agent-Emphatic) \[\rightarrow\]
Naa ngaa taangata i aarahi te iwi.
real the:pl men past lead the tribe
'(It was) the men (who) led the tribe.'
The output (6) (c) is an acceptable independent sentence.
To convert (6) (c) above into the relative clause of (1) one further change must take place; namely, pronominalization of the Agent NP: i.e., ngaa taangata 'the:pl men' is pronominalized to -na '3 person clitic pronoun', and suffixed to naa- to form naana, so that
(6)(c) ... Naa ngaa taangata i aarahi te iwi.
real the:pl men past lead the tribe
becomes
(7) ... naa-na i aarahi te iwi.
real-3pers past lead the tribe
'... who led the tribe.'
Thus, the diagrammatic surface structure of (1) is
'The men who led the tribe have gone.'

It should be noted, however, that naana in an independent sentence cannot be coreferential with a 'plural agent' in a preceding sentence as it can in a relative clause like that in (1). That is, if (1) were two separate sentences, they would be

(9) Kua riro ngaa taangata. Naa raatou i aarahi te iwi.

perf gone be:pl men real they past lead the tribe

'The men have gone.' 'They led the tribe.'

But not

(10) Kua riro ngaa taangata. *Naana i aarahi te iwi.

'The men have gone.' 'He/she/it led the tribe.'

A further example illustrating the same point is


past return the:pl women real they past cook the: pl food

'The women returned.' 'They cooked the food.'
The use of naana in this context is wrong.

    'The women returned.' 'She cooked the food.'

But when relativized, the use of naana is acceptable.

(13) I hoki ngaa waahine naana i tao ngaa kai.
    'The women who cooked the food returned.'

Thus, in order for a naana clause to occur with an
antecedent that differs in number and person, the clause
must be part of or dependent on another. This dependency
relationship is further cemented by the maintenance of a
level phonological intonation across the clause boundary.

The second argument for naana as a relative pronoun
is modern usage.

Bruce Biggs (personal communication) has noticed the
use by native speakers today of the full pronoun in the
Agent-Emphatic relative clauses like (14)(a).

(14)(a) Kua riro ngaa taangata naa raatou i aarahi
te iwi.
    'The men who led the tribe have gone.'

The fact that modern native speakers do substitute
naa raatou for naana to comply with number and person of
the head NP provides evidence that the older usage naana
is indeed a reduced form of the head NP assumed to be
present in the deep structure. The construction also
exists in my speech, drawn to my attention by Bill Wilson
in a Maori discourse recorded at the University of Hawaii.
However, it is difficult to find evidence of structures like (14)(a) in early (e.g., 19th century) texts, hence, the attributing of this construction to modern usage. Thus, it appears then that a relative clause such as that found in (1) contains a pronominal copy of the head NP.

Note that this pronominal copy is moved to clause initial position much like the WH- movement in English.

Naana copy of the head noun may also be deleted to give:

(14)(b) Kua riro ngaa taangata i aarahi te iwi.

perf gone the men past lead the tribe

'The men who led the tribe have gone.'

The ambiguous nature of (14)(b) should be noted however, in that ngaa taangata 'the men' may now be interpreted as either 'the men who led the tribe' or 'the men who the tribe led'.

Usually, world view context is one of the disambiguating factors for such sentences. That is, it is more usual for (certain) men to lead the tribe than vice versa. But with an ambiguous example like (15), disambiguation requires specific discourse context.

(15) Kua hinga te ope i whawhai taua paa.

perf fall the war-party past fight that village

'The war party which {fought that village} has been defeated.'
The ambiguity in (15) could come from two sources. First, from naana deletion if it were derived in the same way as (14)(b).

That is, (15) with naana would be

(16) Kua hinga te ope naana i whawhai taua paa.

perf fall the war-party real:3pers fight that village

The second source is from dropping (which occurs frequently in speech) of the case markers i/ki 'object' from sentence (15), a non-Agent-Emphatic construction. No ambiguous reading is possible with the case markers present, as in (17).

(17) Kua hinga te ope i whawhai i/ki taua paa.

perf fall the war-party past fight obj that village.

'The war party which fought that village has been defeated.'

We may conclude then that (14)(b) may also be derived two ways, as for (15), but the derivation which contains naana has been regarded as the source for (14)(b) since our purpose was to show that naana may be deleted in such clauses.

We now turn to the derivation of relative clauses like that in (17), and to a discussion of nci, naa, and raa. We will return to naana in the next section.
5.4.2 **Nei, naa, raa Relative Clauses**

In the following section I shall assume that *nei, naa, raa* function as relative pronouns or relative markers as defined in 5.1.2, since they have a different syntactic distribution from the 'demonstrative pronouns' of the same form. As relative pronouns, they occur post-verbally --that is in the position occupied by the underlying coreferential NP of the antecedent. As 'demonstrative pronouns' *nei, naa, raa*, occur with nominals.

Like the *naana* 'relative pronoun', *nei, naa, raa* may also delete. This deletion strategy, it should be noted, is another distinguishing feature in the differences that exist between *nei, naa, raa* functioning as relative pronouns and as demonstratives.

*Nei, naa, raa* will be discussed in two sections. Section 5.4.3 will illustrate their behavior in active-transitive relative clauses. Then follows a discussion on the differences and similarities in function and meaning of *nei, naa, raa* as demonstrative and relative pronouns. We will then show that these embedded clauses are indeed dependent. Section 5.4.4 discusses the behavior of *nei, naa, raa* in 'passive' relative clauses. The main point to be noted there is that ambiguities arise through the deletion of case marking particles--assumed to be brought about by the 'passive' transformation. It is then suggested that the language avoids the resultant
ambiguity in transitive relative clauses by adopting the Agent-Emphatic construction, i.e., naana relative clauses.

5.4.3 Nei, naa, raa in Transitive Relative Clauses

Let us return to $S_2$ of the deep structure of (1), repeated as (18) below, and follow the derivation of the active sentence through to the surface structure (21).

First, notice that pronominalization of ngaa taangata 'the men' to a regular pronoun raatou 'they:pl' gives a questionable output like (19).

$$\text{(18)} \quad \ldots \text{ngaa taangata} \begin{array}{c} i \text{ aarahi} \ \text{ngaa taangata} \ i \text{ te iwi} \\ S_2 \end{array}$$

the:pl men past lead the:pl men obj the tribe

$$\text{(19)} \quad ?*\ldots \text{ngaa taangata} \begin{array}{c} i \text{ aarahi} \ \text{raatou} \ i \text{ te iwi} \\ S_2 \end{array}$$

But note (20) and (21) are fully acceptable.

$$\text{(20)} \quad \ldots \text{ngaa taangata} \begin{array}{c} i \text{ aarahi} \ \text{raa} \ i \text{ te iwi} \\ S_2 \end{array}$$

$$\text{(21)} \quad \ldots \text{ngaa taangata} \begin{array}{c} i \text{ aarahi} \ \emptyset \ i \text{ te iwi} \\ S_2 \end{array}$$

'...the men who led the tribe.'

Note that the replacement of raatou by nei, naa, raa leads to a grammatical output, as also does their deletion, as shown in (21).

Note further that the clauses containing nei, naa, raa and $\emptyset$ are indeed dependent clauses. The starred sentence (19) however, may have $S_2$ stand as an independent clause from the matrix clause, as shown in:
(22) Kua riro ngaa taangata. I aarahi raatou i te iwi.  
'The men have gone.'  'They led the tribe.'

But the relative clauses in (20) and (21) cannot stand as separate sentences, as shown in (23) and (24).

(23) Kua riro ngaa taangata. *I aarahi 

\[
\begin{align*}
\text{nei} & \text{ naa} \\
\text{raa} & i \text{ te iwi.}
\end{align*}
\]

(24) Kua riro ngaa taangata. *I aarahi ø i te iwi.

Sentence (22) may separate the two clauses since the second clause has its own subject NP, the pronoun raatou, which is understood to refer to ngaa taangata in the previous sentence. But (23) and (24), which have no regular pronoun to function as subject, have to depend upon the matrix clause to provide the missing NP. As dependent clauses, the nei, naa, raa—with their deictic meaning—help to identify that antecedent in (23), and in (24) ngaa taangata is the assumed missing NP of the embedded clause. But the clauses in (23) and (24) cannot be independent.

This dependency relationship then shows clearly that S₂ in (20) and (21) are relative clauses. Coreferentiality of NPs in the matrix and embedded clauses must also be a necessary condition.

We note of course the same phenomenon in English which does not allow relative clauses to stand as separate sentences.
Whom it was given to.

Nei, naa, raa are generally called 'demonstratives' in Maori grammar. As 'demonstratives' these particles refer to a physical relationship between the speaker and referents. Nei means 'near the speaker', naa means 'near the hearer', and raa, 'away from the speaker and hearer'. The terms 'near' and 'away' may also refer to a time or space relationship as we will see in their use as relative pronouns.

Example (25) shows the use of nei, naa, raa as pure demonstratives, i.e., they indicate the objects under discussion are within visual distance.

(25) (a) Titiro ki te tangata raa!
    look goal the man dem
    'Look at that man!'

(b) He pene te mea nei.
    pred pencil the thing dem
    'This thing is a pencil.'

Their frequency of occurrence appears to be conditioned purely by context.

Notice however, that even if these particles occurred with raatou (i.e., raatou \{ nei \} raa) in (19), it still would not make the sentence grammatical. Yet their occurrence alone after the verb in (20) is acceptable. This indicates that they have a function other than 'demonstrative'. When they occur in post-verbal position it is suggested that
they function as 'relative pronouns.'

The choice of nei, naa, raa in post verbal position, like (20), appears to be conditioned entirely by the discourse context and the spatio-temporal orientation of the speaker with the utterance. For example, if nei is chosen it seems to imply that the antecedent ngaa taangata 'the men' has only recently (perhaps one sentence back) been introduced or mentioned as the discourse topic. If naa is used, the meaning conveyed is that ngaa taangata or topic of the discourse is placed in a spatial relationship closer to the hearer than to the speaker--as if the speaker were objectifying the utterance or distancing himself from the situation conveyed by the utterance. Raa implies a referent of long standing in the discourse, or reference to an antecedent about whom/which knowledge is shared by the speaker and hearer.

Nei, naa, raa appear to be similar to what Lyons (1968:278) called "situationally-bound adverbs of place (e.g., here, there)" and are like "demonstrative pronouns (e.g., this, that, those, etc.)... they (both) include an element of deixis."

In (20), nei, naa, raa have a deictic function--that of pointing back to the antecedent NP in the higher clause, placing that NP in a spatio-temporal relationship to the speaker and hearer.
As 'relative pronouns' then, they are not like the relative markers of Micronesian described by Sohn which were purely 'linking' and provided no semantic features. Nei, naa, raa do provide a semantic input which is deictic, but this semantic information is not provided directly by their antecedent NP, rather, it comes from discourse contexts—the spatial-temporal relationship of the antecedent NP to speaker and hearer.

Since nei, naa, raa provide semantic information they are somewhat like the WH- relative pronouns of English. However, the English relative pronouns are more explicit about the semantic and syntactic features of the antecedent NPs copied.

Syntactically, nei, naa, raa (and ai—to be discussed later) as 'relative pronouns' have a constant position which is post-verbal, unlike both the Micronesian relative markers and English relative pronouns which occur pre-nominally, that is before the relative clause. Their post-verbal position places Maori among the languages that Keenan and Comrie described as marking relativization by a post-verbal relative pronoun (e.g., Basque).

Nei, naa, raa may also delete from (20) without changing the meaning of the sentence. They show then a similarity to Micronesian relative markers noted by Sohn, and to English relative pronouns. Thus, we may conclude that in a continuum Squish (see Chapter 6) between pure
relative pronouns like the WH- forms of English and the
pure relative markers like those of Micronesian, the Maori
relative pronominal markers nei, naa, raa perhaps occupy
a position somewhere in the middle of this continuum.

It is worth noting here that nei, naa, raa are like
the English that. That can function as a demonstrative, a
relative pronoun and as a 'situationally-bound adverb'.
In 'that man', 'that' is deictic functioning as a demon-
strative. In '... those women that had babies' 'that'
functions as a relative pronoun (or relative marker).
It carries no information about the antecedent NP. That
is different in this respect from the WH- forms. In 'I
don't want you to think that' (meaning '...badly about
me'), that functions as a situationally-bound adverb.

We will now observe the behavior of nei, naa raa
in passive relative clauses.

5.4.4 Nei, naa, raa in Passive Relative Clauses

Recall that the derivation of the Agent-Emphatic
construction of (1) shown in (6) was from an active
underlying structure to a passive structure, and then to
the Agent-Emphatic. Taking the same underlying structure,
we will follow the same derivation from the active through
to the passive. But instead of applying the Agent-
Emphatic transformation, we will pronominalize the agent NP to the forms nei, naa, raa.

The derivation (26)(a) through (26)(e) shows that pronominalization to a regular pronoun (26)(b) $\Rightarrow$ (26)(c) provides a grammatically questionable sentence. The same case existed in the derivations seen earlier in (6). However, notice that (26)(d) is still not fully acceptable. Again compare this with the derivations in (6) where the use of nei, naa, raa is normal.

(26)(a) (deep structure)

$$\cdots \text{ngaa taangata}[^{S_2} \text{i aarahi ngaa taangata the:pl men past lead the:pl men i te iwi}[^{S_2}] \text{obj the tribe} \downarrow$$

(b) (passive)

$$\cdots \text{ngaa taangata}[^{S_2} \text{i arahina e ngaa the:pl men past lead:st agt the:pl taangata te iwi}] \text{men the tribe} \downarrow$$

(c) (pronominalization)

$$?^*\cdots \text{ngaa taangata}[^{S_2} \text{i arahina e raatou te iwi}] \text{agbt they:pl} \downarrow$$

(d) (relativization)

$$?^*\cdots \text{ngaa taangata}[^{S_2} \text{i arahina \{nei \} naa \{raa \} te iwi.} \text{pro}$$
It appears that the reason why (26)(d) and (26)(e) are awkward lies in the ambiguous readings they provide. In (26)(d), neither the nei, naa, raa forms (i.e., the agent pro-forms) nor the object NP te iwi 'the tribe' is distinguished by case markers. Either is interpretable as the agent or object. That is, the relative clause may read as: '...the men that led the tribe' or ...'the men the tribe led.' And (26)(e) with nei, naa, raa absent the result is still somewhat odd. This oddness may be because [S₂ i arahina \( \emptyset \) te iwi] is acceptable as an independent sentence; and we have already noted that it is just those kinds of clauses that are not tolerated as relative clauses, e.g., (19) and (26)(c).

It may be objected to that the derivation of (26)(c) to (26)(d) should be to ai 'oblique case anaphor' (which we will discuss more fully in Section 5.4.6) and not nei, naa, raa. However, the sentence

(27) Kua riro ngaa taangata i arahina ai te iwi.

perf gone the:pl men past lead:st ana the tribe

is still ambiguous, with readings of:

i  'Gone are the men who led the tribe.'

ii  'Gone are the men who were/are the reason for the tribe being led (by someone).'

That case marking is a key factor in disambiguating the roles of the NPs in the embedded clause is shown by
(28)(b) below. Raa in (28)(a) is assumed to be the pro-form for the antecedent NP te kaainga 'the place'. Its omission in (28)(b) presents no ambiguity because the agent NP is still present and is in an oblique case.

(Notice that waiho, the verb of the embedded clause, requires no -Cia suffix, yet the agentive marker e precedes the actor NP. Such usages present real problems for those who insist that e NP 'agent + NP' is the result of passivization, which is signaled by -Cia suffixation.)

(28)(a) ..., ka tae ano ki te kaainga i waiho atu raa e ia.
inc arrive again to the place past leave dir ana agt she (NMT:50)
'..., (she) arrived again at the place which she had originally left from.'

(28)(b) ...ka tae ano ki te kaainga i waiho atu e ia.
inc arrive again goal the place past leave dir agt she
'.. (she) arrived again at the place which she had originally left from.'

It appears that to avoid deriving ambiguous sentences like (26)(d)-(e)--especially where the NPs are human and the embedded clause is transitive--the language chooses either the strategy of forming relative clauses with case markers as in (20), (21), or of converting the sentences into the naana Agent Emphatic construction discussed previously.
The order of the relative clause constituents are Antecedent rel-pron V obj. This minimizes the chances of ambiguity by separating the subject and object NPs with the verb intervening.

5.4.5 Naana with nei, naa, raa

The purpose of this section is to show that a further distinction can be made between nei, naa, raa, when they function as relative pronouns and as demonstrative pronouns. The distinction, which is made on syntactic grounds, provides additional evidence that nei, naa, raa in post-verbal position are indeed relative pronouns.

Other considerations, such as coreferentiality, 'stylistic' occurrences of nei, naa, raa and their co-occurrence with ana 'progressive', are briefly discussed.

We have noted that deletion of these relative pronouns nei, naa, raa is possible in transitive relative clauses, but that the chances of ambiguity are greatly increased.

Now, there often occur sentences like (29), where naana is followed by nei, naa, raa:

(29) Kua riro nga taangata naana nei i aarahi te iwi.
    perf gone the:pl men real:3pers ? past lead the tribe.
    'The men who led the tribe have gone.'
Such sentences may lead one to reject the pronominalization of the embedded coreferential NP of the antecedent to nei, naa and raa, as shown in the derivations (18) through (21). However, the fact that if naana is deleted in (29) then nei must also be deleted suggests that nei (naa and raa) function as demonstratives in that environment. Therefore nei must be dominated by the same node that dominates the full NP in deep structure; i.e.,

\[(30) \quad \left[ \begin{array}{l}
\text{ngaa taangata nei} \\
\text{NP} \\
\text{NP}
\end{array} \right]
\]

'these men'

The deletion of nei, naa, raa as relative pronouns in post-verbal position, however, involves no other constituent. This suggests that they are not part of the underlying coreferential NP (that is, a demonstrative as in (30) above) which undergoes deletion or pronominalization in the relative clause. And it provides further evidence for the distinction between nei, naa, raa as 'demonstrative pronouns' and 'relative pronouns'. It is not then unreasonable to assume that nei, naa, raa in post-verbal position are pro-forms of the full coreferential NP. The alternative is to say that the full coreferential NP in the relative clause is deleted and nei, naa, raa is then introduced by a transformation.
(30) also violates the coreferential condition for relative clause formation ngaa taangata 'the men' in the matrix clause is not identical to ngaa taangata nei 'these men' in the embedded clause within the NP-S analysis of Ross and others. This violation necessitates seeking an alternative way of forming relative clauses in order to accommodate the above. The problem will not be pursued here, but suffice it to say that the lowering of quantifiers, number-adjectives (i.e., few, many, two, three, etc.), as noted in McCawley's solution to the same problem (see Section 5.1), could be applied to these demonstratives of Maori also.

Pursuing a further point in the discussion of nei, naa and raa as demonstratives, it should be noted that their occurrence in sentences like (29) is a stylistic option rather than a necessity. These forms can also co-occur (but with certain limitations which will not be discussed here) without change in meaning. For example:

(31) Kua riro ngaa taangata i aarahi {nei} {raa/naa} {raa}
    perf gone the:pl men past lead ana dem
    i te iwi
    obj the tribe

Finally, sentence (32) (in its original textual citation) shows no nei, naa, or raa. Williams says that they do not occur with ana 'progressive', but I find that they may. I have inserted nei into the sentence to indicate
this possibility.

(32) Ka hia ihuwai teetahi rangatira e noho paatata ana (nei) ki reira.  

inc want drink:water the:one chief nonpast stay close prog to that:place

'A chief who was living close to that place became thirsty.'

To summarize, we have argued in this section that Williams's statement (see 5.2) does not correctly describe the facts. We have suggested that the particles nei, naa, raa and naana are relative pronouns of Maori. The first three occupy post-verbal positions and may delete. They also serve as demonstratives in the language. Naana, on the other hand, is a relative pronoun somewhat like the WH- forms of English in that it follows its antecedent directly, and represents the features (e.g., number and gender) of the antecedent in a single form. This naana, which may take a 'plural' antecedent, differs from the naana which occurs in sentence initial position in that the latter is restricted to a 'singular' referent.

The relative clauses we have seen thus far are

(33) (a) ... NP [(rel. pron) ...] Rel. pron = nei, naa, raa

ant

S2

(b) ... NP [(rel. pron) ...] Rel. pron = naana

ant

S2
5.4.6 Ai as a Relative Pronoun

We turn now to the particle ai which provides further supporting evidence for our general argument. ai is a highly recurrent particle whose functions are not well described in existing grammars of Maori.

The following discussion will show that ai is a pronominal copy of an oblique NP when that NP is the target of relativization. Much of the evidence for ai as a relative pronoun in Maori is discussed in Chapin (1974) and we will refer to his observations below.

This section will show occurrences of ai 'relative pronoun' and also show how it is derived from deep structure. We will note that ai occurs post-verbally like nei, naa, raa, and undergoes the same deletion process. However, there are occurrences of ai and nei which cannot be deleted. It will be argued that these latter forms are lexical items with causal-temporal meaning intersecting both, and this enables substitution of one by the other.

Chapin (1974) investigated reflexes of proto Polynesian *ai in contemporary Polynesian languages. He concluded that this anaphoric particle 'was a substitute for a noun phrase which was in an oblique case (or an adverbial prepositional phrase) and which was identical to or coreferential with some other noun phrase in the same
sentence or preceding sentence." (1974:2). As part of the evidence from Maori, Chapin cites sentence (34) below. I have underlined the relative clause.

(34) Ka mau-ria mai e ia ngaa manu i whakahiakaitia ai
ia i roto i te puku o tona kooka. (MF:50)

inc take:st dir Agt he the:pl bird past cause:
want:eat:st pro he past inside loc the stomach
of his mother

'Then he brought the birds which caused him
to be hungry
for which he hungered

while inside his mother's womb.'

He says that 'ai appears in a relative clause whose head is the antecedent of ai' (p. 31).

Accordingly, the antecedent is ngaa manu 'the birds', and ai is the relative pronoun or substitute for the oblique NP e ngaa manu. Notice that the verb of the relative clause has the -Cia suffix.

Sentence (35) (a) below shows the relative clause embedded in the subject NP of an equational sentence. The deep structure of (35)(a) is (35)(b). After relativization, the subject NP of the matrix sentence undergoes Topic-fronting (see Chapter 2); which results in the sentence (35)(a). Ai is the trace of the instrumental NP ki te toki 'with the axe' of the embedded clause.
(35)(a) Ko ngaa toki i taaraia ai eenei waka,  
he toki pounamu. \hspace{1cm} (NMT:59)  
Top the:pl axe past hew:st pro these canoe,  
pred axe greenstone  
'The adzes with which these canoes were  
hewn were greenstone adzes.'

(35)(b) ____ __ 1 ______
PRED NP l  
~
-----
PRED NP ---8 2
LJ T/A VP~fep NP
toki pounamu ngaa toki  
i taarai-a  
ki ngaa toki
pred axe greenstone past hew:st instr the axe  
the:pl axe these canoes

Note in the tree diagram (35)(b) that when the oblique  
NP ki te toki 'instr the axe' is pronominalized, the pro-  
form ai is moved next to the verb.

Now in both (34) and (35)(a) it is possible (in my  
speech at least) to delete ai without affecting meaning.  
That is, in (34), if ai were omitted ngaa manu 'the birds'  
would still be understood as a missing NP referent in the  
embedded clause. The result is the same for (35)(a).  
But the sentences are much better with ai present; that
is, they are more clearly 'correct'.

Notice now (36) and (37) below. (36) contains ai and (37) contains nei and these particles occur in the relative clause of their respective sentences. In both cases the relative clause is introduced by the tense-aspect marker e 'non-past'. However, the main point about ai and nei in these sentences is that they cannot be deleted.

(36) Ka puuhia e Hoone te poaka e ngau ai i ana tamariki.
    inc shoot:st Agt John the pig nonpast bite cont
    obj pl:poss:3pers children
    'John shot the pig which had been biting his children.'

(37) Ko ngaa mahinga teenei aa Houmea e noho nei i te ao nei.  (MF:70)
    pred the:pl work:nom this poss H. nonpast stay
    cont loc the world dir
    'These are the deeds of Houmea which remain here in this world.'

In considering the reasons for non-deletion of ai and nei in (36) and (37), let us first examine the posited deep structure and derivation of (36).
Sentence (36) is a case where the matrix clause is transitive and the relative clause derives from a transitive clause also.

The deep structure for (36) may be given as:
'John shot the pig which has been biting his children.'
The surface structure of (36) is derived by:

(a) The Possessor-preposing rule:

\[ i \text{ ngaa tamariki aa Hoone} \leftrightarrow i \text{ aa Hoone tamariki.} \]

obj the:pl children poss John
'John\'s children'

(b) Pronominalization of possessor:

\[ i \text{ aa Hoone tamariki} \leftrightarrow i \text{ aa-na tamariki} \]

obj poss J. children obj poss:3pers children
'The children of John' 'His children'

(c) Relativization:

The subject (NP\(_1\)) in the lower clause (S\(_2\)) is either pronominalized under coreferential conditions with the head noun phrase \(te\) poaka
'the pig' of the matrix clause, or deleted.

(d) Passivization:

In the matrix clause the verb takes the suffix -Cia, the article a is replaced by the agentive marker e, and the oblique NP i te poaka 'obj the pig' is placed in a non-oblique case frame by deleting the preposition i.
Note that the ai in the embedded clause of (36)(a) is given the gloss 'cont(inuative)' instead of 'pron(oun)'. Following Chapin (1974) I distinguish two ai particles occurring postverbally, one anaphoric, the other non-anaphoric. ai 'cont' in (36)(a) is assignable to the non-anaphoric morpheme and differs from the anaphoric ai discussed earlier in at least the following respects.

First, the meanings are different. The meaning conveyed by ai 'cont' is one of habitual or continuing action, while ai 'pron' refers back to a relativized oblique NP denoting instrument, cause or location.

Second, ai 'cont' is not restricted to derived sentences. Unlike ai 'pron' it can occur in simple independent sentences, for example, (38):

(38) E ngau ai te poaka i ngaa tamariki aa Hoone.

  nonpast bite cont the pig obj the:
  pl children poss John

  'The pig keeps biting John's children.'

Third, ai 'cont' is not deletable without affecting the meaning or in some cases without making the sentence unacceptable. Omission of ai from (38), for instance, results in an ungrammatical sequence. Whereas anaphoric ai can in some cases be omitted without semantic change or loss of grammaticality (see e.g. (34) and (35)(a) above).
Fourth, if a pronominal copy of te poaka 'the pig' were present in the surface structure of (36) (a) it would be either nei, naa or raa, and not ai. We observed earlier that ai occurs as a copy of oblique case NP only. te poaka in (36) (a) is a nominative case NP, and in 5.4.3 we argued that if a nominative NP has a pronominal copy it is one of the set nei, naa or raa. The nominative anaphor can combine with the continuative morpheme ai as in the following variant of (36):

(39) Ka puuhia e Hoone te poaka i ngau ai{nei} i
    ana tamariki.
    inc shoot:st Agt John the pig past cont pron
    obj pl:poss:3:pers children
    'John shot the pig which had been biting his
    children.'

It is possible to omit nei, naa or raa from (39) without affecting meaning or grammaticality. When ai is left out however, the continuative meaning is lost: for 'had been biting' now reads 'had bitten'. (Note further that a clause with anaphoric nei or raa present cannot occur as an independent sentence.)

Our argument, then is that ai 'continuative' must be attributed to the deep structure of (36) and other sentences, in contrast to anaphoric ai which is introduced by transformation into derived structures.
A similar case can be made for a distinction between anaphoric nei and temporal nei. In (37) nei is not deletable and carries an unambiguous temporal meaning (roughly 'continuing in time'). This nei morpheme is freely interchangeable with continuative ai in some contexts. For example, substitution of nei for ai in (37), gives (40) which has a reading identical to (37).

(40) Ko ngaa mahinga teenei a Houmea e noho ai i te ao nei

'These are the deeds of Houmea which remain in this world'.

If nei in (37) had a temporal phrase as an antecedent it would be possible to treat this particle as an instance of the anaphoric morpheme. But as there is no such temporal antecedent we may conclude that nei here is a non derived or lexical morpheme.

Note that the other two members of the pronominal set nei naa and raa are not interchangeable with continuative ai:naa and raa do not have non derived uses.
The relationship between ai and nei is probably an old one. Chapin's study shows that in Hawaiian "nei may in some cases be used in place of ai for, accusative, locative and causal determinants, as in

HAW (180) No ke aha ia hoi okou e pale nei i ke kanawai o ke akua ma ka oukou moolelo?

(Matt. 15:3)

'Why do ye also transgress the commandments of God by your tradition?'

In (180) the causal determinant, containing an interrogative pronoun, has been moved to the front of the clause. Normally...one expects an ai...we find nei instead." (1974:81-82). Thus the intersecting features--semantically and syntactically--of nei and ai in Maori in sentences like (36), (37) and (40) are not as idiosyncratic as one might be led to believe by comparing them with the ai and nei anaphoric forms encountered in earlier sentences where they were deletable.

5.5 Equational Relative Clauses

In the previous section the relative clauses were verbal structures. The following section will show embedded equational clauses functioning as relative clauses.
It will be shown that equational structures functioning as relative clauses are 'reduced' by the same relative clause formation processes described for verbal relative clauses. That is, an NP in the embedded equational structure is coreferential with an NP (the antecedent) in a higher or matrix clause. The embedded NP is pronominalized. In some circumstances, which will be demonstrated later, the pronominal copy may be omitted. In other circumstances the copy must be deleted.

The translations of the equational structures are given in the subject-predicate order of English but it should be remembered that the order for Maori is predicate-subject.

Example (41)(a) below illustrates the following points. The matrix clause is an attributive clause, and the relative clause is also an attributive clause. The relative clause is also non-restrictive and it modifies the predicate nominal tangata 'man' of the matrix clause. The pronominal copy is -na which is contained in the tri-morphemic form t-aa-na 'sg:poss:3pers'. Sentence (41)(b) shows taana omitted which results in an ungrammatical sentence.

(41)(a) He tangata, he kurii nui taana, te pirihi mana hou mo teenei rohe.
    pred man, pred dog big sg:poss:he, the policeman new for this district
'The new policeman for this district is a man who has a huge dog.'

(b) *He tangata, he kurii nui, te pirihimana mo teenei rohe.

The reason that (41)(b) is ungrammatical with taana omitted is that we are left with two attributive predicate phrases he tangata 'is a/some man' and he kurii nui 'is a/some big dog' with only one subject NP te pirihimana hou...'. Thus, the sentence is semantically anomalous.

The deep structure for (41)(a) can be shown as (42) below. The tree diagram (42) shows in deep structure a coreferential nominal, tangata 'man', in both the matrix and the embedded clause. This provides the conditions for relative clause formation. Te tangata 'the man' in the relative clause is pronominalized to the clitic form -na '3pers' and is affixed to the possessive determiner t-aa to form t-aa-na 'sg:poss:3pers'.

(42)
'The policeman for this district is a man who has/owns a big dog.'

Sentence (43)(a) below is a further example of a non-restrictive relative clause like (41). The relative clause ...he huu oona... '...which has shoes...' modifies 'horse'. The relative pronoun copy is -na '3rd pers' which is cliticized to oo- 'pl:subordinate poss'.

(43)(a) He hoiho, he huu oona, te hokonga mai a Hoone.
    pred horse, pred shoe pl:poss:3pers, the buy:
    nom dir poss John
    'John's purchase is a horse, which has shoes.'

(43)(b) He hoiho, he huu, te hokonga mai aa Hoone.
    (This has a conjunctive mean of 'John's purchase was (a) horse(s) and (a) shoe(s).')

When oona 'poss:3pers' is not present, as in (43)(b) above, the sentence is not seen as a relative clause but as a reduced conjoined structure. It is therefore derived by conjunction reduction and identical subject deletion as described in Chapter 4; the identical subject deleted being te hokonga mai aa Hoone  'John's purchase'. 
In summary, sentences (43)(a)-(b) above (and (41) (a)-(b) discussed earlier) are perhaps the clearest examples for showing that appositive clauses are relative clauses. These sentences obligatorily require a relative pronoun in the embedded clause which must have as its antecedent the nominal of the predicate phrase. Omission of that relative pronoun leaves the embedded clause 'stranded'. Recall that in (41)(b) we noted the stranded embedded predicate competing with the matrix predicate for the same subject NP, thus causing an ungrammatical sentence. In (43)(b), deletion leaves a sentence with a conjunctive meaning instead. Such sentences are derived differently, specifically by obligatory left-to-right identical subject deletion, and conjunction reduction.
5.5.1 Competing Theoretical Models as Explanatory Mechanisms

I have shown in (42) the deep structure for (41)(a), that $S_2$ is a constituent embedded in the predicate nominal of $S_1$ (i.e., *tangata 'man').

Recall that McCawley (1978:158) derived restrictive relative clauses that appear on predicate-nouns like (41) (a) above from a coordinate structure (see McCawley's diagram on page 149). Sentences like (1) of this chapter could possibly be derived from the Predicate-Conjunct analysis that McCawley proposes. However, sentence (1) contains an appositive or non-restrictive relative clause, and the Annear-Thompson (1971) proposal (despite McCawley's (1978) objections) that both restrictive and non-restrictive relative clauses derive from a Deep Structure Conjunction analysis appears to provide--for the present at least--a theoretical framework for explaining the occurrence of a non-restrictive relative clause like that in (1) and (41) (a).

According to a Deep Structure Conjunction analysis, the deep structure for (41)(a) would be
Relative clause formation involves the embedding of $S_3$ in the predicate of $S_2$, which then provides a tree diagram like (42). The conjunction is deleted.

There are, however, some objections to the Deep Structure Conjunction analysis. Pawley and Syder (forthcoming) imply in the results of their analysis of spontaneous discourse that a subordinating construction, as in (42) is a more accurate deep structure representation of restrictive relative clause formation than a coordinate structure representation like (44). It is true that the evidence of 'performance', that is, what the speaker actually says, shows that clauses introduced by relative pronouns sometimes end up as unreduced clauses rather than fully formed relative clauses, and that constructions like the following:
(a) I got it from a map which I've seen lots of them. Can be made grammatical simply by removing the relative pronoun (in this case which) and substituting a conjunction or sentence boundary; that is,

(b) I got it from a map and I've seen lots of them.

(c) I got it from a map. I've seen lots of them.

But Pawley and Syder regard it as significant that the speaker in this case (there are many more similar examples shown) chose a relative pronoun and not a conjunction. Pawley and Syder say that "Speakers have good semantic reasons for using a relative clause...[since]... the alternatives with conjunctions or sentence boundary do not mean the same thing. By using a relative clause one downgrades and particularizes the status of the relative clause, making it specifically a qualification of the head noun." (1976:41)

That such planned relative clauses often end up as full clauses, where a full clause is not permitted following a relative pronoun, is due to the one-clause-at-a-time constraint on encoding novel sentences. According to Pawley and Syder, novel connected spoken discourse is typically constructed one clause at a time. Hence coordinating structures are the most common types found in spontaneous discourse while complex structures like relative clauses, which usually require simultaneous
planning of both matrix and relative clauses, are more difficult to encode. This is the reason why relative clauses often occur in speech as full clauses, extraposed to or unintegrated with the matrix clause constituents.

The preceding discussion reflect two views of deriving relative clauses. The Deep Structure Conjunction Analysis (e.g., McCawley, and Annear-Thompson), is one that embeds a conjunct into the clause containing the head. The NP-S Analysis (Pawley and Syder, and others (see discussion in 5.3)) has the relative clause in deep structure dominated by the head. The relative clause is optionally moved out from under the head noun phrase to another part of the sentence.

We will take up this discussion in the next section to show that the Deep Structure Conjunction Analysis provides an empirical basis for determining what kinds of equational clauses may qualify as relative clauses in Maori.

5.5.2 Derivation of Adjectives

We will now deal with the derivation of nominal predicates modified by adjectives.

It will be assumed here that adjectives are predicates of equational sentences in deep structure. They modify a nominal of a higher clause. If a pronomical copy of the antecedent occurs in the relative clause then the relative clause remains non-restrictive. Deletion of the possessive
pronoun containing -na '3 person' (e.g., t-aa-na 'sg:poss:3pers') leads to an ungrammatical output. It is assumed here that the language adopts the strategy of 'Adjectival Incorporation' (see page 196) as an alternative means of modifying the antecedent noun phrase.

In the deep structure of (42) occurs the predicate phrase he kurii nui 'pred dog big' 'a/some big dog' which I said could be derived from a deeper structure than that shown in the diagram. For convenience S₂ of (42) is repeated here as:

\[
(45) \quad S_2 \quad \ldots \text{he kurii nui taa te tangata} \quad S_2
\]

pred dog big sg:poss the man

'the man has a big dog.'

with (46) below showing the deep structure for deriving the adjectival phrase in (45).

\[
(46) \quad S_2
\]

\[
PRED
\]

\[
NP
\]

\[
PRED
\]

\[
NP
\]

\[
PRED
\]

\[
NP
\]

he kurii

he nui

he nui

pred dog

pred big

pred dog

the

the
taa te tangata

sg:poss the man

To derive (45) requires first the deletion of the subject NP₁ in S₃ to derive an intermediate structure like:
And then, the predicate he preceding nui 'big' is deleted to derive (45).

Notice that (45) has an adjectival predicate by contrast with the embedded clauses of (41)(a) and (43)(a) discussed earlier. The latter two had nominal predicates.

If a single deep structure is to be posited for the nominal relative clauses we noted in the earlier structures and adjectival clauses like (46), from the observations made so far we could assume a rule like:

**Adjectival Incorporation**

Adjectives prefer to be incorporated into the predicate phrase containing their antecedent, that is, to be placed next to the nominals they modify.

The following sentences illustrate that preference. Sentences (47)(a)–(b) show the relative clauses as appositive or non-restrictive, and manifesting varying degrees of acceptability. (47)(a) has nei occurring in it and we have noted the anaphoric or relative pronominal function of this particle in earlier discussions. (47)(b) has no nei. However, the degrees of acceptability indicated by their question marks is not firm ground for drawing definite conclusions. It is probable that other native speakers' intuitions will vary on these two sentences.
But note that sentence (48) which has the adjectival phrase incorporated into the matrix predicate is fully acceptable.

(47)(a)  He wahine, he tino aataahua nei, te hoa oo Hoone.
pred woman, pred very beautiful pron, the friend of John

(b) He wahine, he tino aataahua, te hoa oo Hoone.
'John's friend is a woman, who is very beautiful.'

(48) He wahine tino aataahua te hoa oo Hoone.
pred woman very beautiful
'John's friend is a very beautiful woman.'

The above examples, (47) and (48), carry with them a further assumption that the restrictive and non-restrictive (or appositive) relative clauses discussed in 5.1.1 have a single structural origin; i.e., a subordinate structure rather than coordinate. The difference with these equational relative clause types (c.f. (41)(a) and (48)) is that adjectival predicates prefer to be immediately next to their head nouns since there is no semantic anomaly involved. That is, since a pronominal copy does not have to occur in the embedded clause (as there has to be with examples like (41)(a) where competing predicates are involved), and because there is no ambiguity as to who or what the adjective 'beautiful'is describing, then it
seems a logical move for the language to fully incorporate the adjectives. Perhaps a parallel could be drawn from English where

The house, which is big, is ours.

is more 'marked' or less natural than

The big house is ours.

Notice further that the predicate deletion is like the Rel-be deletion rule of English. However, Maori keeps its adjectives to the right of the antecedent.

Sentence (49) and (50) below are further examples like (48).

(49) He urupaa whakahaehae teeraa waahi.  
    pred graveyard caus:fear that place  
    'That is a spooky graveyard.'

(50) He manu tino reka te kereruu.  
    pred bird very sweet the pigeon  
    'The pigeon is a very sweet bird.'

Sentences (51)(a)-(b) below serve to recapitulate the difference between these so-called restrictive and non-restrictive clauses. (51)(a) below is similar to (41)(a) except that the matrix clause of (51)(a) is an identifying type while that of (41)(a) is an attributive type. However, we have noted the bad effect of deletion when applied to (41)(a). Applied to (51)(a) deletion also produces an ungrammatical output: that is, the deletion of taana which contains the relative pronoun form -na '3 person' results in
the ungrammatical output (51)(b) below. The reason is that two nominal predicates which are semantically incompatible with each other are competing as predicates for the same subject. In other words, the sentence (51)(b) says 'The policeman is the man/is \(a\) dog.'

(51)(a) Ko te tangata, he kurii nui taana, te piri-himana.

pred the man pred dog big sg:poss:he the policeman

'The policeman is the man, who has/owns the large dog.'

(b) *Ko te tangata, he kurii nui, te pirihimana.

Sentence (52)(a)-(b) which also have identifying matrix clauses show the same characteristics as (47) and (48), that is, the preference for incorporating the adjective predicates fully into the higher predicate nominal.

(52)(a) ?Ko ngaa tamariki, he whakatoi, te patunga.

pred the:pl children, pred cheeky/annoying, the hit:nom

'The victims were the children who were cheeky.'

(b) Ko ngaa tamariki whakatoi te patunga.

pred the:pl children cheeky/annoying the hit:nom

'The cheeky children were the victims.'
Notice now (53)(a)-(b). The relativization strategy has been applied to the nominalized NP te patunga (lit. 'the hitting', i.e., the victims) and is rejected. Even when the adjectival predicate is fully incorporated into the nominal as in (53)(b) the result is ungrammatical. Recall the problem discussed in section 5.3 on the NP-S analysis where it was pointed out that nominalizations do not occur with relative clauses in English. The same constraint appears to be operating in this example of Maori also. However, more research is required before anything definitive can be stated on this constraint in Maori.

(53) (a) *Ko ngaa tamariki whakatoi te patunga, he kino.
     pred the:pl children cheeky the hit:nom
(b) *Ko ngaa tamariki whakatoi te patunga kino.

Note in (54)(a) below that the adjectival predicate he mauherehere 'pred captive' following a nominal phrase is marginally acceptable. But when the adjectival predicate is incorporated, the result is fully acceptable, as in (54)(b).

(54) (a) ?Hei kai maa te taniwha raa te tangata, he mauherehere.
     fut loc food for the monster dem the man pred take tie
     'The man/person/people, who are captives,
are food for that monster.'

(b) Hei kai maa te taniwha raa te tangata mauherehere.

'People who are captives are food for that monster.'

'Captives are food for that monster.'

Notice also that in (54) the matrix clause is an equational structure of the location-temporal type, and the relative clause is modifying the subject NP.

5.3.3 Ko Relative Clauses

This final set of sentences shows identifying (ko-predicate) type sentences as appositive clauses which I shall argue qualify as relative clauses.

While (55)(a) is fully acceptable, (55)(b) which has a similar syntactic structure, is questionable. An explanation can be sought in the internal structure of the appositive clauses in the two sentences.

(55)(a) He wahine, ko Hera tana ingoa, te hekeretari.

pred woman, pred Sarah sg:poss:3pers name the secretary

'The secretary is a woman/female whose/and her name is Sarah.'

(b) ?He taane, ko Hoone, te hekeretari.

pred man/male, pred John, the secretary

'The secretary is a man/male (who is) John.'
Sentence (55)(a) shows an appositive clause \textit{ko Hera tana ingoa (pred Sarah sg:poss:3pers name) 'Her name is Sarah'}. Notice the presence of the characteristic possessive pronoun \textit{tana} of earlier examples. However, \textit{tana} here is a neutral form for \textit{taana} and \textit{toona}, whose difference in meaning is one of a dominant/subordinate relationship of the possessor to the thing possessed. \textit{Taana} and \textit{toona} have these respective meanings. The main point however, is the occurrence of -\textit{na '3 person'} which was identified in earlier examples as the morpheme relating the embedded clause to the antecedent in the matrix clause.

Notice also that a conjunctive reading is possible as indicated by the translation of (55)(a). This will be discussed later. The matrix clause is attributive.

The deep structure for (55)(a) might be shown as

\begin{center}
\begin{tikzpicture}
  \node{S_1}
  \node{PRED} [sibling angle=90,anchor=east]
  \node{NP} [sibling angle=90,anchor=south]
  \node{he} [sibling angle=90,anchor=north]
  \node{wahine} [sibling angle=90,anchor=north]
  \node{te hekeretari} [sibling angle=90,anchor=south]

  \node{S_2}
  \node{PRED} [sibling angle=90,anchor=east]
  \node{NP} [sibling angle=90,anchor=south]
  \node{ko} [sibling angle=90,anchor=north]
  \node{Hera} [sibling angle=90,anchor=north]
  \node{te} [sibling angle=90,anchor=north]
  \node{ingoa} [sibling angle=90,anchor=north]
  \node{Det} [sibling angle=90,anchor=north]
  \node{N} [sibling angle=90,anchor=north]
  \node{NP} [sibling angle=90,anchor=south]
  \node{oo} [sibling angle=90,anchor=north]
  \node{te} [sibling angle=90,anchor=north]
  \node{wahine} [sibling angle=90,anchor=north]
\end{tikzpicture}
\end{center}
pred woman pred Sarah the name poss the woman the secretary

'The secretary is a woman, whose name is Sarah.'

_Te wahine 'the woman' in S_2 is the coreferential item with the predicate nominal _wahine 'woman' of S_1 and is reduced to _-na_ when the Possessor-preposing rule applies to derive S_2, _ko Hera toona ingoa 'her name is Sarah'. But now notice that (57) has no relative copy like the _-na_ of (55).

(57) Kei too maatou marae, ko Hiruhaarama 
    te ingoa, te hui aapoopoo.
    loc:pres sg:poss our:2pers:excl marae pred
    Hiruhaarama, the meet tomorrow
    'The meeting tomorrow will be at our
    marae, whose name is Hiruhaarama.'

The deep structure for (57), which is (58) below, would be similar to (56), except that the coreferential possessor NP is deleted,
'The meeting tomorrow will be at our marae, whose/and its name is H.'

The reason that this deletion is possible in (57) is that there is no confusion as to what nominal in the matrix clause is modified. That is, the subject NP te hui aapoopoo 'the meeting tomorrow' has no coreferent, either explicit or implicit in $S_2$. We have noticed in earlier examples (41) (a) and (43) (a) with attributive matrix clauses that the non-occurrence of a relative pronoun or a copy of the antecedent, generated ungrammatical sentences. That was because the subject NP in the matrix clause of those sentences was being 'focused' upon by two entirely different predicates. In other words, the embedded clause was left 'unrelated' to the matrix clause. With sentence (57), however, there is only one nominal in the matrix
that can provide semantic relationship to the embedded clause. Hence there appears to be no need for an overt relative pronoun copy.

Returning now to (55)(b), repeated below,

(55)(b) ?He taane, ko Hoone, te hekeretari.

pred man/male pred John the secretary

'The secretary is a man/male, who is John.'

the oddness of the sentence is explained in terms of the observation made above. Ko Hoone, though not syntactically related—by the presence of a -na as in (55)(a)—to either nominal taane 'man' or hekeretari 'secretary' in the matrix clause, does not fail to make a predication. That is, it (ko Hoone) can be interpreted as referring to either nominal in the matrix clause and still make sense.

The above sentences are considered to contain relative clauses. To summarize the reasons:

First, there is a feature of relationship between the embedded and matrix clause. This may be either explicit as with the -na clitic morpheme which has been demonstrated to be a copy of a nominal in the matrix clause, or be assumed to be present in the underlying structures of the embedded clause as with (57). No copy is obligatorily required in the surface structure since no possible ambiguity could arise from its omission.

Second, the close syntactic relationship between
conjoined clauses and relative clauses of English is well known, and has no doubt motivated analyses like the Deep Structure Conjunction analysis seen in such work as Ross (1967), Annear-Thompson (1971), and McCawley's Predicate-Conjunct Analysis (1978).

My translations of (55) and (57), indicating coordinate readings (i.e., 'and'), are meant to reflect the possible derivation of these relative (appositive) clauses from the coordinate structures discussed in Chapter 4, (See (59) below). However, these conjoined clauses must have a related feature, as discussed above with -na, in order to qualify as appositive clauses. Notice the derivation of (55)(a) from a coordinate structure shown in (59). The conjoined clauses may stand as separate sentences after conjunction deletion; that is, (59) becomes (60).

(59)

```
S1
   \--- S2
       conj
   \--- S3

He wahine to hekeretari, aa, ko Hera tana ingoa
'The secretary is a woman/female, and, her name is S.'
```

(60) He wahine te hekeretari. Ko Hera tana ingoa.
'The secretary is a woman.' 'Her name is Sarah.'

Alternatively, we can assume, following Ross and others (or McCawley's analysis), that the second conjunct may be embedded within the first, to derive
He wahine, ko Hera tana ingoa, te hekeretari.
'The secretary, whose name is Sarah, is a woman.'

Third--and crucially: if the conjoined conjuncts are two unrelated sentences like

(61) He wahine te hekeretari, aa, ko Hera te kuki.
   pred woman the secretary, and pred Sarah the cook
   'The secretary is the woman, and the cook is Sarah.'

with a deep structure like

(62)

\[
S_1 \quad \text{conj} \quad S_3
\]
\[
S_2
\]
he wahine te hekeretari aa ko Hera te kuki

'The secretary is a woman, and the cook is Sarah.'

then conjunction deletion may apply to make the structure above two independent sentences. But, \( S_3 \) cannot be embedded within \( S_2 \), as is possible with examples like (1)(a). In the case of (61) such an embedding would produce an ungrammatical string:

(63) *He wahine, ko Hera te kuki, te hekeretari.
    pred woman, pred Sarah the cook, the secretary

The embedding test above does not, of course, prove that the Deep Structure Conjunction Analysis is necessarily the correct derivation for these appositive clauses, but
it does enable one to show whether a relationship between the clauses exists. If it exists, then the embedded structure qualifies as a non-restrictive or appositive relative clause. All appositive relatives in this chapter may be derived in this manner.

However, there is an alternative analysis. Since coreference is a necessary condition for relativization of all the relative clauses seen in this study, then both restrictive and non-restrictive clauses may be derived from a single deep structure. It must be allowed that the NP-S structure as well as the Coordinate Structure Analysis meets this condition.
SUMMARY

This chapter set out to investigate relative clauses and relative pronouns of Maori. Definitions and recent theoretical views on relative clause formation were presented as a framework for this discussion.

It was argued that the particles naana, nei, naa, raa, and ai are relative pronouns in Maori. While naana (and maana) function as personal pronouns, nei, naa, and raa as demonstrate pronouns, and ai as an anaphoric particle of oblique NPs, these particles also function as relative pronouns in Maori. This difference in function was demonstrated by distributional evidence. All relative pronouns occur post-verbally except naana. Naana always occurs immediately after its antecedent NP in the construction known as the Agent-Emphatic.

It was further shown that there was a dependency relationship between the clauses that contained these relative pronouns and their antecedent clauses. Relative clauses could not stand alone as separate sentences. But the same clauses containing full NPs or regular pronouns for those NPs could do so.

It was noted also that these relative pronouns were deletable. However, it was found in equational sentences that if the possessive pronouns, e.g., taana 'sg:poss:3 pers' were deleted, ungrammatical structures resulted. -na was shown to be the clitic pronominal form of the
antecedent NP and therefore the 'relative pronoun' in those appositive clauses it occurred in.

Verbal relative clauses were all found to be restrictive. The non-verbal or equational clauses examined (i.e., he and ko equational appositive clauses) were found to be non-restrictive. However, with he-adjectival predication, it was argued that such structures preferred to be fully incorporated into the nominal phrases they modified. Hence, nouns modified by adjectives were assumed to be derived in this way.

Theoretical models to account for relative clause formation in Maori were discussed. The advantages of the NP-S and NOM-S analyses were weighed against those of the Deep Structure Conjunction analysis. It was shown that the latter analysis provided an empirical test for determining what qualified as a relative clause. Only a conjunct with a coreferential NP in the conjunct preceding could be embedded. However, it was pointed out that since coreferentiality of NPs is a necessary condition for relativization then an NP-S or NOM-S analysis could generate Maori relative clauses just as well as the Deep Structure Conjunction analysis.
NOTES TO CHAPTER 5

1 Stockwell, Schachter and Partee (1973:422) show these further differences:

Restrictives, but not appositives (i.e., non-restrictives) permit that as a relative pronoun.

Appositives, but not restrictives, may modify proper nouns that have no determiners:

*'John that came early also left early.'

Appositives, but not restrictives, may modify an entire proposition:

'He said he would resign, which I thought was a good idea.'

2 See also Keenan (1976) for his definition of the notion 'subject,' which he essentially describes as a 'multi-factor composite' (my term).

3 See for example Williams (1956:42), and Biggs (1974:73) who calls this construction 'The Actor Emphatic'.

4 (maa, when the tense marker of the verb is non-past)

5 (See Chung (1973:649) for details of this rule in East Polynesian languages, and Hohepa (1966:12 for Maori).


7 A similar hypothesis—that equational sentences may be interpreted as relative clauses—is that of Ho-Min Sohn (1973). I had already worked on this hypothesis when Professor Pawley drew my attention to Sohn's work which has helped a lot in providing some direction and support for the ideas in this chapter.

8 The quotes cited are from Pawley, A.,and Frances Syder: 'Sentence Formulation in Spontaneous Speech: The One-Clause-at-a-Time Hypothesis.' (1976).

9 Note that this is not unlike the "relative clause reduction transformation" or "Rel Be Deletion" (Jacobs and Rosenbaum 1968:204, 1970:24) of English which, it is suggested, allows for the transformation of attributive embedded clauses, like $S_2$.,
The man escorted the woman to a preposed adjective in surface structure, to derive 'The handsome man escorted the woman.'

Now note the following:

The man escorted the woman.

'The man who is my brother, ...'

but preposing cannot occur.

'*the my brother man ...'

In Maori, similar constraints have been noted for the he+adjective predicates, the he predicator and the coreferential NP are deleted (almost?) obligatorily: with he+noun predicates the predicator he may be deleted. Modifiers are not preposed in Maori, except for stylistic purposes, e.g.,

(a) to pai rangtira ... (NM II:38; Waiata:107, 1.8)

you good chief
'ye good chieftains'

(b) ki uta raa, ki Hikurangi maunga
to inland dir, to H. mountain (Song: "Kaati raa...")

(c) mokai tuatini, mokai tuamano
servile many, servile thousands

'The servile multitude, the servile thousands'

See Stockwell, et al. (1973:434) for constraints on relativization on nominalizations in English. Similar constraints appear to be working here, but fuller investigation is needed for Maori. I have
qualified the constraint to "attributive clauses" since we can have NPs like:

\[\text{te patunga nui i te hoariri} \]

the hit:nom great obj the enemy

'the great defeat of the enemy'

And if adjectives are derived from embedded sentences, as I have suggested in this analysis, then the adjective \text{nui} 'great' derives from

\[\left[ S \text{ he nui te patunga} \right] \]

pred great the hit:nom

This immediately raises the issue of course as to whether nominals are derived or not, and since the debate between the lexicalists and the transformationalists continues I shall not further this discussion which is only intended to explain the constraint noted above.
CHAPTER 6

COMPLEMENTATION

6.0 Introduction

Three types of complement structures are identified in this chapter: namely, (1) sentential complements, (2) nominalizations—of which there are two types: deverbalized complements, and nominalized complements, and (3) simple noun complements. Sections 6.2-6.4 deal with the problems of definition and with describing the types of complements of Maori listed above. However, in the subsequent sections on intransitive and transitive verb complementation (see 6.6) the scope of the investigation is confined mainly to nominalizations.

6.0.1 Outline of Results

Most of the previous studies of Maori treat i, ki (ki te in some studies), kia, and kia...ai as markers of subordinate and complement clauses.

We will show that i marks nominalized complements, and simple noun complements. Ki marks both nominalized and deverbalized complements. Ki is characterized by some writers as ki te and I follow this characterization in the later discussions: that is, ki and te in deverbalized complements will be regarded as the complement marker which is followed directly by a clause. The difference in i/ki marking of nominalized complements is explained in terms of whether or not the subject NP controls the action described by the matrix verb.
kia marks clause complements of both intransitive and transitive verbs. kia and ki te may substitute in the same environment. The explanation offered is that with kia marking, the agent of the matrix clause desires something to happen and the desired outcome is expressed by the complement. With ki te marking, there is the notion of control over the action expressed in the matrix clause: therefore control rather than desire appears to be the governing factor. The ki te marked complement expresses the outcome 'goal' of that controlled act. Ai in the kia ...ai combination adds 'reason' to the kia complements. That is, the complement explains the reason for the action performed in the matrix clause. Kia...ai means 'so that', 'accordingly.'

This work shows two other complement markers: Ø for two clauses that are in juxtaposition (the matrix clause is usually intransitive and the complement is a sentence which is unmodified in any way); hei with a meaning of 'intention' or 'purpose', marks transitive clause complements and nominalized intransitive clauses.

Coreferentiality and Equi-NP deletion (Equi) are also discussed. We find that in some cases, for example with nominalizations, no coreferential conditions are necessary and therefore Equi is not a consideration. However, with nominalizations of adjectival matrix clauses, Equi is a consideration and the subject NP of the nominalized complement is deleted under coreferential conditions with
the matrix clause subject.

With ki nominalized complements Equi deletion is not a consideration, but with deverbalized complements Equi is obligatory. We will note the controversial views on ki te Equi in section 6.1.

The NP in the matrix clause that controls Equi deletion with ki and kia complements can be either the subject or object of the matrix clause. However, the coreferent of the deleted or pronominalized NP in the embedded clause or nominalization is not always easily identified. One strategy adopted is that of -Cia suffixation within nominalizations; i.e., -Canga suffixed verbs are -Cia suffixed also to indicate subject/agent deletion.

We will note also that there exists a nouniness squish, similar to that discovered by Ross (1973) for English. The complement structures of Maori manifest some squishy characteristics, one being that only nominalizations undergo fronting. Less nouny complements—like non-verbal equational sentences—cannot front and in this respect they are closer to unmodified sentential complements than to nominalized complements. We will see also (see for example the discussion on hei complements) that acceptability and interpretation of meanings of some complements are blurred when the complements hover between verb-like and noun-like types in their syntactic character-
istics.

6.1 Previous Studies

The following section reviews previous works which have described complementation or touched on matters relating to its analysis.

6.1.1 Williams's Analysis

Williams's *First Lessons in Maori* provides the first analysis, to my knowledge, of complement clauses of Maori. He does not, however, use the term 'complement'. He describes such clauses in a section entitled 'Use of Subjunctive and Infinitive.' The following material is from the most recent edition (1965:38-9) of this pedagogical work, first published a century earlier. His instruction is that one should, "after a word expressing

(a) eagerness, desire, intention to do anything
(b) go, come, stay
(c) teach

use the infinitive with the preposition ki."

What is implied (see examples below) is that embedded clauses of Maori introduced by *ki* are translated into English as infinitival clauses, that is, introduced by *to*.

Though he is not explicit, Williams implies that the above verb categories take *ki* as the complement marker (or complementizer) of infinitive clauses. We will look at some of the problems of this view later.
Following on with the above instructions, Williams further says that after "(d) learn use the infinitive with i (e) request, command, advice, consent, or permission to another to do anything use the subjunctive with kia (f) a clause expressing the object in view, use the subjunctive followed by ai." Williams's examples for the above categories are (underlining is mine):

(1) E hiahia ana ratou ki te haere. 'They desire to go.'

(2) E noho ana ia ki te hanga i te taiepa. 'He is staying to make the fence.'

(3) Na wai koe i whakaako ki te whakairo rakau? 'Who taught you to carve wood?'

(4) E ako ana taku tamaiti i te tuhituhi. 'My child is learning to write.'

(5) I ki mai ia kia haere au. 'He told me to go,' or 'He said that I should go.'

(6) I haere mai ia inanahi kia kite ai ia i a Te Hau. 'He came yesterday in order that he might see Te Hau.'
While Williams's examples do show that *ki*, *i*, *kia*, and *kia...ai* introduce what he calls infinitival and subjunctive clauses, and *object in view clause* as in (f), they nevertheless obscure certain facts. For example, with the verb categories (a) (b) (c), which Williams implies introduce complement clauses with *ki*, we may also use *kia*. Where he says to use *i*, that is, after (d) 'learn', we may use *ki*. And with verbs in category (e), with which he says to use *kia*, we may use *ki*. The examples (7) - (11) below illustrate these points not discussed by Williams.

(7) I hiahia ana au *kia* haere koe ki te moe.
'I wanted you to go to sleep.'

(8) (a) E noho ana ia *kia* hangaia rawatia he whare *moona.
'He is staying until a house is built for him.'

(b) E noho ana ia *kia* kite i te pikitia o Tarzan.
'He is staying to see the picture (movie) of Tarzan.'

(9) Na wai koe i whakaako *kia* koorero peenaa mai koe?
'Who taught you that you should speak to me like that?'

(10) E ako ana taku tamaiti *ki* te tuhituhi ki tana hoa.
'My child is learning to write to her friend.'
(11) I whakaae mai ia ki te tono i tana karere.  
   permit  he
   'He agreed to send his messenger.'

Many other examples can be given contradicting Williams's generalization: (f) is an exception. In (f), the ai which follows the verb of a clause introduced by kia appears to be 'causal ai' which was discussed in Chapter 5. Kia...ai, as shown in Williams's example (f), always carries the meaning 'in order that' or 'so that,' that is, the complement clause provides the reason for or the consequence of the action performed in the main clause.

It is apparent, that with the exception of (f), no significant generalization has been captured by Williams's rules for describing complement clauses. However, the recognition of the particles i, ki, and kia as markers of complement clauses was a useful step forward in the description of Maori.

6.1.2 Hale's Analysis

The next advance did not come until the 1960's. Hale (1968) was the first writer on Maori grammar to apply the term 'complement clause' to those structures requiring the 'infinitive' and 'subjunctive.' Clauses initiated by kia Hale called 'subjunctive complements' (p. 92) and clauses initiated by ki te he called 'noun phrase complements' (p. 96). With subjunctive complements, he says, 'the subject of the subordinate clause (i.e., embedded sentence)
is identical to some noun phrase in the main clause (i.e., the higher, or 'matrix' sentence)" (p. 92).

The verbs which Hale says accept kia subjunctive complements are those of the classes that Williams lists in (e). He further says that Equi-NP Deletion (Equi) is optional with kia complement clauses, but obligatory with ki_te complements.

Equi is a rule that deletes an NP in the embedded clause which is coreferential with an NP in the next higher clause. The NP in the higher clause is termed the 'controller' and the NP deleted is known as the 'target.' For example

(12) Ka hiahia a Hoone ki_te haere.
    inc desire pers John comp go
    'John wants to go.'

It is assumed that in deep structure Hoone 'John' is present as the NP carrying out the action of 'going' in the embedded clause ki_te haere 'to go' and Hoone is deleted under identity with the 'controller' Hoone 'John' in the higher clause. With sentence (12), Equi is obligatory because the occurrence of the pronoun copy of Hoone in the embedded clause would generate an ungrammatical sentence:

(13) *Ka hiahia a Hoone ki_te haere ia.
    inc want/desire pers John comp go he
    'John wants to go.'
(See Sections 6.1.3 and 6.1.4 for further examples.)

Hale says that the verb category for ki te complements is that for verbs like whakaako 'to teach to', tuku 'to send to'. This is Williams's category (a)-(b).

The observations, then, of kia-Equi (optional) and ki te - Equi (obligatory) are Hale's contributions to the description of complement clauses of Maori.

6.1.3 Hohepa's Analysis

Taking up Hale's analysis of kia and ki te initiated complements, Hohepa (1969) adds the notion of their complementary distribution. He also shows that kia may be followed by an active or passive verb, but ki te by an active verb only. Hale, we noted earlier, calls kia initiated complements 'subjunctive complements' and ki te initiated complements 'noun phrase complements'. But Hohepa argues for "certain ki te constructions being subjunctive complement initiators" (1969:22) because they undergo pronominalization, deletion of subject (as Hale had stated), and are in complementary distribution with kia. However, note in (14)-(16) that kia and ki te can occur in the same environment. This indicates that there must be factors concerned other than complementarity.

(14) I whakamahia a Hoone e Mere kia poke paraoa. past caus:work:st agt John pers M. comp bake bread
    ki te
'John made Mary bake bread.'

(15) Ka tonoa au e te maahita \(\{\text{kia} \}\text{ noho i roo koona.}\)

(16) Ka tono te maahita i a au \(\{\text{kia} \}\text{ noho i roo koona.}\)

'The teacher sent/sends me to sit in the corner.'

6.1.4 Chung's Analysis

In a discussion of rules in Polynesian languages that refer to the categories 'subject of' and 'object of' (which are basic terms of grammatical description within Relational Grammar Theory), Chung (1976) identified ki te-Equi as one such rule for Maori, saying that ki te-Equi is a replacement rule. For example, complements of a verb of volition like whakaaro 'decide' are "introduced by the subjunctive tense marker kia:

(42)(a) Ka whakaaro au kia haere ia.

\[
\text{inc think I subj go he}
\]

'I decided that he would go.'"

and, "when an NP in the complement clause is coreferential with some NP associated with the governing verb, it can be deleted by ki te Equi. As a result, kia is replaced by the complementizer ki te:

(43)(a) Ka whakaaro au ki te haere.

\[
\text{inc think I comp go}
\]

'I decided to go.'" (1976:126)
The point to be noted in Chung's analysis of complements is that *ki te*-Equi is an optional rule that applies to *kia* complements. That is, *kia* is replaced by *ki te* when the rule applies, thus implying that *kia* is an underlying form for *ki te* complements. But we have noted from (14)-(16) on page 222 that this cannot be.

A problem arising from Chung's analysis is shown in the following pair of sentences. She shows that if *ki te*-Equi were to apply obligatorily to (51)(a), thus deleting *au* 'I' in the complement clause, the ungrammatical sentence (52)(a) would result. She cites the following:

"(51)(a) *Ka hiahia au kia mate au āpōpō.*
    aor want I subj die I tomorrow
    'I want that I should die tomorrow.'

after *ki te*-Equi:

(52)(a) *Ka hiahia au ki te mate āpōpō.*
    aor want I comp die tomorrow
    'I want to die tomorrow.'" (1976:129)

We should note however, that sentence (52)(a) is not ungrammatical as she indicates. Therefore the above claim needs to be revised.

One further observation Chung makes is that "complements introduced by *ki te* are reduced clauses and not nouns derived by some sort of nominalization rule ... (because) *ki te* complements cannot be replaced by nominalizations suffixed with the nominalizer -Canga ... (and)
ki te complements cannot take their direct objects in the possessive." (1976:127). Her examples are:

(44)(b) ?*I hiahia au ki te patu-nga i te poaka.
past want I comp hit:nom acc the pig
'I wanted to kill the pig.'

(46)(a) *I hiahia au ki te patu o te poaka.
past want I Comp hit of the:pl pig
'I wanted the killing of the pig.'

However, a perfectly normal sentence like the following contradicts both explanations; the complement has a -Canga suffix, and the direct object is in the possessive.

(17) E hiahia ana au ki te patunga oo te poaka.
nonpast want prog I comp the kill:nom of the pig
ki taku kaainga.
kia pai tonu.
goal my place
Comp good int
'I want (that the killing of the pig (be) at my place.'
'to be good.' (i.e., properly carried out)

To summarize, we have already noted (in the counter example to Hohepa's analysis) that kia and ki te may occupy the same slot: therefore Chung's claim that kia is replaced by ki te when ki te-Equi applies requires revision. We also noted above that ki te complements may be nominalizations.
6.1.5 Biggs's Analysis

Biggs's *Let's Learn Maori* (1974 edition) devotes Section 34 to 'Subordinate Clauses with KIA.' He does not, however, use the term 'complement (clause)' in his work. He provides the following rule for kia: "In Maori a different actor subordinate sentence takes a verbal phrase in kia." (1974:93). That is, when the actor in the main clause is not coreferential with the actor in the subordinate clause, the subordinate clause is introduced by kia. He illustrates with the following sentences among others.

(18) Ka haere mai taaua ki konei, kia ako koe i te reo Maori.

'We came here so that you will learn Maori.' (p. 93)

However, the rule is too restrictive because taaua 'we:dual' may occur as 'actor' of the subordinate clause. For example, (8)(b) from section 6.1.1, is repeated below, but with a coreferential 'actor' in the subordinate clause.

(19) E noho ana ia kia kite (ia) i te pikitia o Tarzan.

'He is staying to see the picture (movie) of Tarzan.'

Biggs explains the use of ai occurring with kia in the way noted earlier in Williams's explanation of kia...ai.
In Section 32, 'The Uses and Meanings of I and Ki in Non-initial Phrases,' occurs a Subsection 32.14 which has four sentences of the following type (I have supplied the glosses):

(20) Kua hoki ia ki te moe.
    perf return he Comp the sleep
    'He has gone back to sleep.'

(21) Ka tata ia ki te mate.
    inc near he Comp the dead
    'He is close to death (dying).'

The structures following ki Biggs calls pseudo-verbal goals. That is, ki introduces the goal of the main clause. He appears not to view moe 'sleep' and mate 'die' as true verbs in this context, because they follow te 'definite article', hence the term 'pseudo-verbal.'

While Biggs's rule for kia accounts for constructions with a different actor in subordinate clauses, it does not cover cases of the same actor. His interpretation of ki te complement clauses as pseudo-verbals eliminates the need for him to discuss same or different actor/s in subordinate clauses, i.e., since words like moe 'sleep' are not interpreted as verbs when they follow te, there is no necessity to assume that an actor is involved.
6.1.6 Unanswered Problems

Williams recognizes i, ki, kia...ai as having complement clause marking functions. Hale discusses two of these, kia and ki te, and provides more specific and workable rules than Williams does. Hohepa assumes complementarity for kia and ki te complements, but his analysis entails some wrong predictions. Chung says ki te-Equi optionally replaces kia as a complement marker, and that ki te does not take -Canga 'nominalizer' complements. We have noted that revision is required of those claims. Biggs discusses only one complement marker. He shows that non-coreferential actor NPs between the subordinate clause and the matrix clause take kia complement clause marking. We have noted that kia allows coreferential actors also.

The problems that require some answers then, are:

1. What is the number of complement markers?
   It varies in the preceding discussions from four (Williams) to one (Biggs).

2. What are the real differences between kia and ki te complementizers?

3. What are the conditions imposed by the verbs for the selection of complement markers?

4. What NPs are the controllers of Equi?
In attempting to answer some of these questions it is necessary to identify the different types of complement clauses of Maori and their markers. To do this I will identify a range of complement types that occur in English and look for their parallels in translation in Maori. From that set, Maori complement clauses, nominalized complements, and simple nominals will be identified.

6.2 Complement Clause Types

6.2.1 Definitions

Langacker (1972:153) defines complement clauses as 'embedded clauses that function as subjects or objects.' In similar fashion, Quirk and Greenbaum (1973:170) describes a complement clause as 'a clause with nominal function having coreferential relation with the subjects (or object).'</p>

In the illustrative examples shown below, (Cs) stands for a complement with coreferential relation with the subject, and (Co) stands for a complement having a coreferential relationship with the object.

(22) It is believed that she was beautiful. (Cs)

(23) I imagined her to be intelligent. (Co)

We will note however, that some of the complements dealt with in the following sections do not function as subject or object but adverbially, as in

(24) John cried when he was being scolded.
6.2.2 Theoretical Framework

As a point of departure for investigation of the range of complement types for Maori I shall follow Ross's set for English. Ross (1972) presented a theory of non-discrete grammar which proposes that the categories 'verb, adjective, noun are (possibly cardinal) points in a linear squish.' In Ross (1973) he expands this theory by arguing for the existence of a nouniness squish also. He demonstrates this squish with reference to rules that apply to complement types of English.
The complement typology according to Ross (1973:152) is:

(a) that = that-clauses (that Max gave the letters to Frieda)
(b) for to = for NP to V X (for Max to have given the letters to Frieda)
(c) Q = embedded questions (how willingly Max gave the letters to Frieda)
(d) Acc-Ing = \([\text{NP} + \text{Acc}] \text{V+ing X} \text{(Max giving the letters to Frieda)}\)
(e) Poss Ing = NP's V+ing X (Max's giving the letters to Frieda)
(f) Action Nominal = \(\left\{ \text{Max's the} \right\} \text{giving of the letters to Frieda} \)
(g) Derived Nominal \(\{\text{Max's}\, \text{the}\} \) gift of the letters to Frieda

(h) Noun (spatula)

We notice that the complement types from (a) through to (h) form a hierarchy. In type (a) the complement clause comprises that followed by a simple declarative sentence. But from (b) to (g), each complement clause is a modified form of the simple declarative sentence of (a). (f) and (g) are the most noun-like of the complement clause types. (g) is more noun-like than (f) as indicated by the difference between the action-nominal verb giving in (f) and the derived-nominal gift in (g).

Ross demonstrates the nouniness squish by showing that there are a number of syntactic phenomena that 'work their way into' the complement types (a)-(b). That is, some syntactic rules may apply only to (a) and not to (b)-(h), or to (a)-(b) but not to (c)-(h). But, he says, there exists no syntactic phenomenon which applies, say to (a), (d), and (h) that will not apply to other complement types in the list.

An abbreviated example from Ross is the rule of It-deletion. It may occur (with certain verb classes) before the complement types (a) and (b), but with (c) it is questionable. With (d) and (e), it must be deleted (or not inserted--depending on how the rule is formulated). Thus:
I regret it (a) that you left
(b) for you to leave
(c) how long you stayed
(d) *you(r) staying so long
(e) *the giving of money to UNESCO

In order to identify structures of Maori that will be called complement clauses, I shall adopt the strategy of translating, where possible, the examples of English given by Ross. The strategy proves useful, for it enables us to identify and discuss more complement clause types of Maori than those generally discussed in the literature. Much of the published work has focused on relativization and subjunction. In the latter area of study, kia and ki_te subjunction have been the favorite types of complement clauses discussed. By adopting the strategy of seeking Maori parallels to those given by Ross, we are able to identify other complements, such as sentential complements. Sentential complements are simple declarative sentences (like (a) of English but without an element corresponding to the complementizer that) functioning as object complement clauses.

A further reason for following Ross is to show that a similar nouniness squish phenomenon also exists in Maori complement clause types.

In the following discussion, each of the numbered sequence (25)-(32) corresponds to Ross's sequence (a)-(h) and shown as R(a), R(b) and so on. Ross's complement types will be shown above each of the Maori examples.
For clarity, I shall use the intransitive verb *kite* 'to see' as the verb of the matrix clause.

### 6.3 Types of Complements (with the verb *kite* 'to see')

The following sentences show the three types of complements of Maori mentioned earlier. (25)-(28) are sentential complements but note that Ross's (b) has no parallel structure as shown by (26) ? below. (29)-(31) (discussion in Section 6.3.2) are nominalized complements, and (32) is included to illustrate a simple nominal functioning as a complement.

#### 6.3.1 Sentential Complements

The complements in the following examples (underlined) are simple sentences. No connecting particle intervenes between the matrix clause and the complement. Sentence (25)(a) has the complement clause introduced by a tense-aspect marker and the order of the major constituents is VSOI-O. (25)(b) is the Agent-Emphatic construction (i.e., SVOI-O).

\[ \text{R(a) that} = \text{that-clauses (that Max gave the letters to Frieda)} \]

\[(25)(a) \text{ I kite au i hoatu e Max ngaa reta ki a Frieda. past see I past give Agt Max the:pl letter to pers F} \]

or
(25) (b) I kite au naa Max i hoatunga reta ki a Frieda.
   past see I real Max past give the:pl letter to pers F.
   'I saw that Max gave the letters to Frieda.'

R(b) for to = for NP to V X (for Max to have given the letters to Frieda)

(26) ?
   There is difficulty in providing an exact parallel translation for R(b) because of the 'to have given...' structure.

R(c) Q = embedded questions (how willingly Max gave the letters to Frieda)

(27) I kite au he peehea te kaha hiahia oo Max ki te hoatu (i) ngaa reta ki a Frieda.
   past see I pred how the strong desire poss Max Comp the give (obj) the:pl letter to pers F
   (lit.) 'I saw how the strength of Max's desire was to give the letters to Frieda.'

R(d) Acc-Ing $^{\text{NP}+\text{Acc}}$ V+ing X (Max giving the letters to Frieda)

(28) (a) I kite au e hoatu ana e Max ngaa reta ki a Frieda.
   past see I nonpast give prog M the:pl letter to pers F.
   or
(28)(b) I kite au i a Max e hoatu ana (i) ngaa reta ki a Frieda.

past see I obj pers M nonpast give prog (obj)

the:pl letter to pers F.

'I saw Max giving the letters to Frieda'

The tree structures for (25) through to (28) may be:

(28)(a) I kite au e hoatu ana e Max ngaa reta ki a F.

past see I nonpast give prog agt M. the:pl letter to pers F.

(25) 'I saw that Max gave the letters to Frieda.'

(28)(a) 'I saw Max giving the letters to Frieda.'

Sentences (25)(b) and (27) both have sentential complements, but these are complements which have been modified. Sentence (25)(b) is the Agent-Emphatic construction which was discussed in Chapter 5. Sentence (27) is a he predicing sentence with a complex nominalized subject NP. Its deep structure may be given as:
I kite past see I

Adj ? PRED

he peehea he kaha te hiahia o Max

pred Q: how pred strong the desire of M.

VP

T/A V

i hoatu e Max ngaa reta ki a
past give Agt M the:pl letter to

Frieda
pers Frieda
Sentence (28)(b) might appear to derive from (28)(a) by a rule of Raising; that is, the agent e_max is raised to become the object NP, i_a_max, in the higher clause. The problem with that solution is the change of case marking required. Since e_max is considered already in an oblique NP case role, there appears to be no good reason why it should change its case marking to i_a_max 'obj pers Max' when Raising occurs. It is therefore suggested that (28)(b) already has an object NP (i.e., i_a_max) in the matrix clause, and that the embedded clause is a relative rather than a complement clause. The deep structure of (28)(b) would be (assuming a conjoined structure for relative-clause formation):

\[
\begin{array}{c}
(28)(c) \\
S_1 \quad S_2 \quad S_3 \\
PRED \quad NP \quad NP \quad CONJ \quad PRED \quad NP \quad NP \quad NP
\end{array}
\]

\[
i \ k i t e \ a u \ i \ a \ M a x, \ a a, i \ h o a t u \ e \ M a x \ n g a a \ r e t a \ k i \ a \ F.
\]

A test by which we can determine that (28)(a) has a complement clause while (28)(b) has a relative clause, is that of nominalization. (28)(a) has a nominalized counterpart which is (29). (See Section 6.3.2. Notice that Max is the agent NP in (29).) However, the nominalized output
for (28)(b) would be:

\[(28)(d) \quad \text{i kite au i a Max i te hoatu-tanga}^{\text{oo}} \]
\[\text{ngaa reta.} \]
\[\text{past see I obj pers M Comp the give:nom} \]
\[\{\text{poss}\} \text{ the letters} \]
\[\{\text{obj}\} \]
\[\text{'}I saw Max at the giving of the letters.'} \]

In the nominalized sentence (28)(d) the missing agent of the nominalized verb may be coreferential with Max. However in (28)(b) Max is definitely the coreferential NP deleted in the embedded clause. And since that embedded clause stands directly next to Max, who is the only possible agent for it, the embedded clause in (28)(b) is a relative clause and not a complement.

However, the salient fact about these preceding sentences (25)-(28) is that there is no morpheme intervening between the complement clause and the higher clause \text{i kite au} 'I saw'.

6.3.2 Nominalized Sentences as Complements

Sentences (29),(30),(31) illustrates nominalized clauses functioning as object complements.

R(e) \text{Poss-Ing = NP's V+ing X (Max's giving the letters to Frieda)}

\[(29) \quad \text{i kite au i te hoatu-tanga}^{\text{3}} \}
\[\text{Max (i) ngaa reta ki a Frieda.} \]
\[\text{past see I Comp the give:nom} \]
\[\{\text{poss:}=[-\text{control}] \}
\[\{\text{poss:}=[+\text{control}] \]
\[\text{M (obj) the:pl letter to F} \]
'I saw Max's giving the letters to Frieda.'
(See (c) below for possessive marking).

R(f) Action Nominal \( \{ \text{Max's, the} \} \) giving of the letters to Frieda

(30) I kite au i te hoatu-tanga \( \{ \text{oo, i} \} \) nga reta ki a Frieda.
past see I Comp the give:nom \{ poss: [-control] \}
the:pl letter to pers F.
'I saw the giving of the letters to Frieda.'

R(g) Derived Nominal \( \{ \text{Max's, the} \} \) gift of the letters (land)\(^4\) to Frieda

(31) I kite au i te tuku-whenua ki a Frieda.
past see I Comp the award-land to Frieda.
'I saw the gift of the land to Frieda.'

As can be seen from the preceding examples, nominalization brings about the following changes:

(a) The verb is preceded by a determiner te 'the'
which replaces the T/A marker.

(b) The verb is suffixed with the appropriate
nominalizing suffix.

(c) The agent of the verb (e.g., sentence (29)) is
placed in a possessive case role and preceded
by aa (not to be confused with the a personal
article) if the agent is expressed as controlling
or dominating the action, or oo, if the agent is
subordinate to or is assuming a passive role in
the action expressed.

(d) When the agent is absent, as with (30) the object NP is placed in the possessive case role of oo, or its normal oblique case marker i 'obj' is retained. Both markers indicate a non-dominating role of that NP in relation to the verb.

Notice that the nominalized complements of (29), (30) and (31) are connected to the matrix clause by the particle i, in contrast with (25), (27) and (28)(a) whose complement clauses are introduced directly by the T/A markers of the embedded clauses.

Notice further that i which marks the nominalized complement clauses of (29), (30), (31), also marks the simple nominal object complement of (32). i preceding nominalized clauses will be called a complement marker to show the similarity of its function with ki.

We have already noted that Hale, Hohepa and Chung characterized ki as ki te when complement clauses follow. When i is followed by a simple nominal like koko 'spatula' as in (32), i will be glossed 'object'.

Biggs (1974a) characterizes i/ki when functioning in non-sentence initial position as initiators of 'comments.' However, the term 'comment' does not satisfactorily distinguish the kinds of complements that may follow i/ki. In this work the kinds of NPs that follow i/ki are indicated by the glosses.
6.3.3 Noun Complements

The following sentence illustrates a noun functioning as a complement:

R(h) Noun (spatula)

(32) I kite au i te koko
    past see I obj the spatula
    'I saw the spatula.'

6.4 Types of Complements (with the verb titiro 'to look')

We will now compare the types of complements that occur with titiro with those of kite: titiro will be substituted for kite in the matrix clause of the same sentence configurations seen in the sequence (25)-(32).

It will be seen that though both these verbs belong to the same category in the Verb Chart I (p. 24), that is, both are intransitive, titiro manifests different behavior from kite with respect to the types of complement clauses and complement markers it can take. The verb titiro 'to look at' takes a more restricted range of complement clauses, and its complement clauses are introduced by ki.

It will be argued that the difference in complement marking--between i and ki--seen with these two verbs is determined semantically, that is, by the notion of involuntary action which is inherent in a verb like kite 'to see' and the notion of controlled action⁵ which is
inherent in a verb like *titiro* 'to look'.

Notice now that (33)(a) and (33)(b) are ungrammatical with the verb *titiro*. Recall that these are examples of sentential complements, which are grammatical with *kite* 'to see'.

(33)(a) *I titiro au i hoatu e Max ngaa reta ki a Frieda.
(33)(b) *I titiro au naa Max i hoatu ngaa reta ki a Frieda.

But (34), the parallel of (27) which also has a sentential complement, is grammatical. The reason is perhaps explained in terms of Ross's nouniness squish. Equational sentences, like the complement of (34), appear to have nominal-like characteristics (see Chapter 2) and may explain why such sentences can occur as complements of *titiro* while the more verbal-like sentences are ungrammatical.

(34) I titiro au he peehea te kaha hiahia o past look I pred Q:how the strong desire of Max ki te hoatu (i) ngaa reta ki a Frieda Max Comp give obj the:pl letter to pers F.

'I looked how willingly Max gave the letters to Frieda.'

Sentence (35) is ungrammatical for the reasons given above. That is, the complement is a sentential complement clause of the verbal type.
(35) *?I titiro au e hoatu ana e Max Ngaa reta
    ki a Frieda.
    'I looked at Max giving the letters to Frieda.'

The remaining sentences that parallel the sequence
(25)-(32) above have nominalized complements introduced
by ki. We shall illustrate with (36) only. Example (36)
parallels (30).

(36) I titiro au ki te hoatu-tanga\{oo\} ngaa reta
    ki a Frieda.
    past look: at I Comp the give:nom\{poss\} the:pl
    letter to pers F.
    'I looked at the giving of the letters to
    Frieda.'

The results of our comparison of kite and titiro
complements may be summarized as follows.

The complements of kite are marked by Ø when the
complements are sentences as in (25), (27), (28).
Complements are marked by i when the sentences are
nominalized as in (29), (30), (31), or if the complement
is a simple noun as in (32).

With titiro, only nominalized complements (e.g.,
(36)), or a simple noun may follow. These are introduced
by ki which we will call the complement marker of 'object
of purpose' or 'goal' for Agent controlled verbs. However,
a he-initiated equational sentence as in (34), may function
as a complement of titiro. As with other sentential
complements no marker is required for he-complements. The 'nouniness' or 'non-verbal' character of he-sentences was offered as a possible reason for this.

A reasonable explanation of the difference between the two verbs appears to be this: the semantic difference between kite 'to see' and titiro 'to look' gives rise to the difference in complement clause marking. Kite is a verb connoting an involuntary action by the agent and titiro connotes an action under the control of the event.

6.5 The Nouniness Squish Phenomenon

We discussed Ross's nouniness squish earlier in the chapter. There is evidence of a similar phenomenon in Maori.

Firstly we noted with the two verb types kite 'to see' and titiro 'to look' a range of complement markings (Ø, i, ki (or ki te)) and how the marking 'works its way into' the complement types. (See discussion on Ross, pp.231-32.) Ø marks VP initiated sentential complements, he sentential complements, and he + noun complements. Nominalized complements and te + noun (simple) complements are marked by i and ki. While i/ki are dropped in speech before their complements to allow Ø to take their place, it is not possible for i/ki to precede VP or he initiated complements. Thus we can say that Ø can 'work its way into' the range of complements shown but i/ki marking is limited to nominal complements only.
Secondly the nouniness squish exists as shown by the way in which the fronting rule operates with the complement types. Non-nouny complements or full sentence complements cannot be fronted.

(37) \*I hoatu e Max nga a reta ki a Frieda, i kite au.

past give Agt M the:pl letter to pers F past seen I (giving of the letters by Max to Frieda, I saw.)

Although he indicates 'nounier' complements, the complements which have sentential status cannot front also.

(38) \*he peehea te kaha hiahia o Max....i {kite} {titiro} au.

(How willingly Max.... I {saw} {looked at} )

However we do know that he + noun (indefinite nominal predicates) may function as simple complements (see Reedy 1978) and may undergo fronting. For example,

(39) I hoatu e Max he reta ki a Frieda.

pas give Agt Max pred letter to pers Frieda {a letter} 'Max gave {some letters} to Frieda. {letters}

The he - phrase may be fronted to derive:

(40) He reta i hoatu e Max ki a Frieda.

'A letter was given by Max to Frieda.'

i/ki mark the most noun-like complements and these complements can be fronted as in
(41) \[ \{I\} \text{ te hoatutanga oo Max (i) ngaa reta ki a} \]
\[ \{Ko\} \]

\[ \text{Frieda, ka } \{ \text{kite} \} \text{ au. 7} \]

\[ \text{Comp} \]

\[ \text{?Top} \text{ the give:nom poss Max (obj) the :pl letter} \]

\[ \text{to pers F. inc } \{ \text{see} \} \text{ I} \]

\[ \text{look at} \}

'The giving by Max of the letters to Frieda,

I \{ \text{looked at.} \}

Thus the above examples show that there is a difference in the types of complement clause marking according to the criteria given for kite 'see' and titiro 'look at'--the criteria being involuntary or spontaneous action compared with controlled action--one taking i complements and the other ki complements. We have also shown that the types of complements are hierarchically grouped in a squish-like continuum.

6.6 Intransitive and Transitive Verb Complementation

6.6.1 Introduction

We shall now observe the kinds of complements that may occur with the two main categories of verbs--intransitive and transitive--given in Chapter 2,
noting also the markers for the complements of those verbs. In addition we will attempt to show the conditions for the application of Equi.

However, the scope of investigation in the following sections is narrowed down to nominalized complements or nominalizations. That is, we shall not be concerned with investigating whether sentential type complements occur with all verb classes discussed.

The two main types of nominalizations which will be investigated will be those that are deverbalized, i.e., which show the configuration te+verb and those that are nominalized, i.e., which have the form te+verb+Canga. It is assumed here that both are derived from underlying sentences dominated by NPs, as shown in the previous sections on kite and titiro.
6.7 Complements of Class I Stative Verbs

In the preceding section we noted the nominalized complements of the verbs kite 'to see' and titiro 'to look'. Both of these verbs are intransitive and belong to Class III: Experience Verbs. We will return again to these verb types later.

The purpose of this section is to show complement marking of Class I: Stative Verbs, e.g., hemo 'dead', mutu 'finish', etc. We will note that with these verbs:

- i marks nominalized complements but not deverbalized complements. Note that these complements provide temporal or causal meaning.

- ki marks both nominalized complements and deverbalized complements. Since i and ki both mark nominalized complements, a discussion on the difference in meaning, which is attributed to the notion control, will follow the examples below.

Sentence (42) (a)-(b) are nominalized complements with i. Note the deverbalized complement with i in (42)(c) which is ungrammatical.

(42)(a) I hemo te poaka i te haerenga ki roo-ngahere.
   past die the pig Comp the go:nom goal inside
   bush
   'The pig died when it went into the bush.'

(42)(b) Kua tangi a Mere i te patunga aa Hoone i a ia.
   perf cry pers Mary Comp the hitting by John
   of her
   'Mary cried when John hit her.'
'Mary cried because John hit her'.

(42)(c) *I hemo te poaka i te haere ki roo-ngahere.
past die the pig Comp the go goal inside-bush

Sentences (43)(a)-(b) show nominalized complements with ki.

(43)(a) Kua riro te tangata ki te whakawaa-tanga
o ngaa mauherehere.
perf gone/taken the man Comp the judge:nom
the: pl catch:tie:tie
'The man has gone to the hearing of the prisoners'.

(43)(b) Kua riro te tangata ki te hoko-nga oo ngaa kau.
perf gone/taken the man Comp the buy the:pl
cow
'The man has gone to the selling/buying of the cows'. (i.e., cattle sale)

The above examples might suggest that motion, indicated by the matrix verb, is the governing factor for the difference in i or ki marking. That is, the verbs in (42)(a)-(b) hemo 'die' and tangi 'cry' are pure stative whereas riro 'gone/taken' in (43) indicates motion towards some 'goal'.

But notice now example (44) which has the verb hemo 'die'. (44) is followed by a complement which is a simple nominal. Either i or ki may introduce the nominal phrase te ngahere 'the bush'.

(44) Kua hemo te poaka i te ngahere.
(44) I hemo te poaka i te ngahere.
past die the pig loc/caus the bush
'The pig died in the bush/because of the bush'.

(45) I hemo te poaka ki te ngahere.
'The pig died at the bush.'

i marking in (44) means that the bush was either the location of the pig's death, or the cause of the death. ki marking is explained below.

6.7.1 Ki Marking and Animate Subjects

The occurrence of ki with a simple nominal complement as in (45) implies that the patient may have control over the act or place of dying. The patient must, of course, be [+animate] in order to exert control. It should be added, that a Cause or Agentive NP may be stated and I assume it to be implied. However, as no Cause NP is explicitly stated in (45) the Cause/Agentive role appears to be assumed by the patient NP itself, i.e., te poaka 'the pig'. (See note 5 on Wilson's Verbal Categories for a discussion on the verb mate 'die'. Mate behaves in the same way as hemo, with respect to ki + simple nominals as in (45)).

The following examples appear to confirm that the notion of control is an important factor to ki complement marking.
Kua riro te puu i a Hoone ki te puhipuhi
(i ngaa) manu.
 perf take the gun caus pers John Comp the
 shoot: shoot bird
 'The gun has been taken by John to shoot
 (the) birds'.

Ka noho te tangata i a Hoone ki te kai.
 inc sit/stay the man caus pers John Comp
 the eat
 'The man stayed because of John to eat.'

Notice with (46) that the subject or Patient NP te puu
 'the gun' is inanimate. Now if the cause or agent NP
 i a Hoone were not present we would get an unacceptable
 sentence like (48).

(48) *Kua riro te puu ki te puhipuhi (i ngaa)
 manu.
 perf taken the gun Comp the shoot:shoot (the:
 pl) bird
 'The gun has gone to shoot (the) birds.'

The reason for the unacceptability of (48) seems to be
 that where a complement is involved with a stative verb like
 riro 'gone' 'taken' and the subject is an inanimate NP, e.g.,
 te puu 'the gun', a cause or agentive NP must be stated in
 the matrix clause. An inanimate NP like te puu 'the gun'
 cannot function as the agent of the verb puhipuhi 'shoot'
 in the complement of (48).
(See section 6.7.3 for the discussion of Equi with ki marked complements.) Contrast (48) with (49) which has a human subject NP. (49) is acceptable since te tangata 'the man' can be the agent of riro 'gone' in the matrix clause and for puhipuhi 'shoot' in the complement.

(49) Kua riro te tangata ki te puhipuhi manu.

perf gone the man Comp the shoot:shoot bird

'That man has gone to shoot birds'.

Contrast (48) also with (50) below, where te puu 'the gun' can be the subject of the intransitive verb riro 'taken, gone' in a simple sentence. Because no agency function is expected of it (cf. (48) above), the inanimate NP te puu 'the gun' functions purely as the Patient. Furthermore, no complement is involved.

(50) Kua riro te puu.

perf taken the gun

'the gun has \{been taken\}.'

Though (50) may be translated as 'The gun has gone' it is understood that some other agent and not 'the gun' itself has been responsible for its 'going/disappearing'. But with a simple sentence like (51):

(51) Kua riro te tangata raa.

perf gone the man dem

'That man has \{gone \{been taken\}\}.'

the sentence may mean that the man himself is the cause of
his going, or that someone else has taken him, as in:

(52) Kua riro te tangata raa i te taniwha.
perftakenthemandemcausothemonster
'The man has been taken by the monster.'

What is apparent from the above discussion is that where a deverbalized complement is involved the animate agent must be stated in the matrix clause.

6.7.2 Equi with i Marked Complements

We will now observe the process of Equi-NP deletion with the stative verbs. We will see that with i marked nominalized complements, Equi is an optional rule: that is, the coreferential NP of the matrix clause in the nominalized complement may be deleted. For example:

(53)(a) I hemo te poaka i te haerenga (oo te poaka) ki roo-ngahere.
pastdiedeethepigCompthego:nomposs-the piggoalinside-bush
'The pig died when the pig went to the bush.'

(53)(b) I hemo to poaka i a Hoone i te haerenga
{oo Hone} ki roo-ngahere.
{oo te poaka raa}
pastdiethepigcausepersJohnCompthego:
{poss John} {poss the pig dem} goalinsidebush
'The pig died because of John when {John} went into the bush.'
With (53)(b) above we note that either NP of the matrix clause may occur as the coreferential agent NP of the verb haere 'go' in the nominalized complement. With the application of Equi in sentence (53)(b), ambiguity arises as to which NP in the matrix clause has controlled Equi Deletion since either the subject or the oblique NP may control Equi. In such cases explicit mention of the subject of the verb haere 'go' in the nominalized clause would prevent ambiguity. That is, Equi would not be applied unless the discourse context was clear.

However with (53)(a) no ambiguity arises since there is only one NP in the matrix clause.

6.7.3 Equi with ki Marked Complements

The controlling NP of Equi deletion in the deverbalized complements (54) and (55) below, appear to be conditioned by the fact that ki marking carries a notion of 'intention' (as well as control) and we would therefore predict that sentences like (55) with inanimate subjects will be ungrammatical.

(54)(a) Kua riro te puu i a Hoone ki te puhipuhi manu.

(=46) perf gone/taken the gun cause pers John Comp the shoot:shoot bird

'The gun has been taken by John to shoot birds.'

(54)(b) Kua riro a Hoone ki te puhipuhi manu.
perf gone/taken the John Comp the shoot:shoot birds

'John has gone to shoot birds'.

In (54) (a) which has two NPs in the matrix clause, Hoone 'John' is understood to be the deleted subject of the verb puhipuhi 'to shoot' in the complement. Hoone is therefore the controller and occurs in an oblique case in the matrix clause. But we note that Hoone is the subject in (54) (b) and Hoone is the only NP that can function as controller of Equi.

Notice however, that without the human NP, i.e., Hoone 'John', the sentence would be ungrammatical, as shown in example (55) = (48).

(55) *Kua riro te puu ki te puhipuhi manu.
    perf gone/taken the gun Comp the shoot:shoot bird
    (The gun has gone to shoot birds.)

So the conditioning factor of controller for Equi then must be a [+animate NP] in the matrix clause rather than subject or object NP.
But when more than one animate NP occurs in the matrix clause, the subject NP is the controller of the Equi. This is shown in (56).

(56) Ka noho te tangata i a Hoone ki te kai.
    inc sit/stay the man caus pers John Comp
    the eat

    'The man sits/stays because of John to eat.'

Now, in ki marked nominalized complements there are no requirements for coreference between the NPs of the matrix clause and the nominalization. For example:

(57) Ka noho te wahine ki te patunga o te poaka.
    inc sit/stay the woman Comp the kill:nom poss the pig

    'The woman stayed to the killing of the pig.'

In (57) there is no implication at all that the NP te wahine 'the woman' of the matrix clause is the agent of the nominalized complement. The same is true of sentence (58) below.
Neither of the two NPs, te iwi 'the people' and i a Hoone 'from John', is an agent of the nominalized verb 'wanting'. By contrast, however, in the deverbalized complement following the second ki, te manuhiri 'the visitors' is clearly understood to be the deleted NP of the verb haere 'go'.
6.8 **Class II: Adjectival Verbs**

We now turn to an examination of complement marking of adjectival matrix verbs (i.e., reka 'sweet', paru 'dirty', etc.). We will see that i but not ki marks the nominalized complements of adjectival verbs. We will also note that in contrast to the stative verbs of Class I, deverbalized complements cannot occur with adjectival verbs. Sentences (59)-(62) demonstrate the above points. The (a) sentences show the grammatical i marking of nominalized complements. The (b) sentences show ungrammatical ki marked deverbalized and nominalized complements.

(59)(a) Ka paru te kaka i te taka-nga (o te kaka)
       i te raena.
       inc dirty the dress Comp the fall:nom (poss the dress) from the line
       'The dress became dirty {from falling off } when it fell from
       the line.'

(59)(b) *I paru te kaka ki te taka(-nga) i te raena.

(60)(a) Ka reka te kai raa i te tao-tanga (o taua
       kai) i roo ngaawhaa.
       inc sweet the food dem Comp the cook:nom
       (of the food) loc inside hot-springs
       'This food became sweet {from being cooked } when it was cooked
       in the hot-springs.'

(60)(b) *Ka reka te kai ki te tao(-tanga) i roo ngaawhaa.
(61) Ka ora te kurii raa i te whaangai-tanga (o taua kurii) ki te miraka.

inc well/healthy the dog dem Comp the feed: nom

'The dog is well/healthy from the feeding of (it) with milk'.

(61)(b) *Ka ora te kurii ki te whaangai (-tanga) ki te miraka

Equi deletion is an optional rule as shown in the (a) examples of (59)-(61).

Equi deletion in the above sentences is controlled by the subject NP of the matrix clause. In (59) te _kaka_ 'the dress' is the coreferent in the embedded clause, and it occurs as subject of that clause. However, with (60) and (61) the coreferential NPs in the embedded clauses are in object position. So presumably these object NPs have to become 'derived' subjects by the application of the nominalization rule before Equi-NP-deletion applies.

For example (61) has the deep structure:
The following rules are assumed to apply to (62) in deriving (61):

(1) Nominalization: The T/A marker is replaced by te and the nominalizer -tanga is suffixed to the verb; the Agent NP 'someone' is extraposed and preceded by e 'agent marker', and the object NP is possessed in oo. (The rule appears to be similar to the 'passive' except that the 'derived' subject te kurii is possessed in oo.)

Thus:
(2) Te kurii 'the dog' is deleted under coreferential conditions with te kurii in the matrix clause.
(3) The agent e teetahi tangata 'someone' is deleted.

6.9 Class III: Experience Verbs

With experience verbs such as rongo 'perceive—to hear, to smell, etc.', moohio 'know', hiahia 'want, desire', mahara 'remember', etc., the markers of the nominalized complements are both i and ki.

Sentences (63) and (64) show i marking nominalized complements. (65) and (66) show ki marking nominalized complements and (67) and (68) show ki marking deverbalized complements. Again we will note that i cannot mark deverbalized complements as shown in (69).

(63) I rongo au i te kohete-tanga i a ia.
   past hear I Comp the scold:nom obj pers pro
   (lit.) 'I heard the scolding of him.'
   'I heard because of his being scolded.'

(64) Ka moohio te tamaiti i te tuarua-tanga i te koorero.
   inc know the child Comp the repeat:nom obj the talk
'The child knows \{ the repeating of the 'talk'. \}
\{ when the 'talk' was repeated. \}

As mentioned above, \textit{ki} may mark fully nominalized clauses.\textsuperscript{9} This nominalized NP carries the meaning of a \textit{perceived event},\textsuperscript{10} as in:

(65) \textit{E hiahia ana au ki te patunga oo Hoone i te poaka raa ki tuku kaainga.}
\textsuperscript{10} nonpast want prog I Comp the kill:nom by John obj the pig that goal my place
'I want John's killing of that pig (to be) at my home.'

(66) \textit{Ka (mau) mahara a Mere ki te patunga oo ngaa tiipuna e Ngati Paakeha.}
\textsuperscript{inc (hold) remember pers Mary Comp the kill:nom of the ancestors Agt N.P.}
'Mary recalled the killing of the ancestors by Ngati Paakeha.'

Sentences (67) and (68) show \textit{ki} marking of deverbalized complements.

(67) \textit{I hiahia au ki te haere.}
\textsuperscript{10} past desire I Comp go
'I wanted to go.'

(68) \textit{I mahara au ki te hoki mai.}
\textsuperscript{past remember/think I Comp return here}
'I remembered to come back.'
Notice in the following that \( i \) does not mark deverbalized complements, but it does simple nominals. For example, (69)(a) shows \textit{kohete} as a verb 'scold' and in (60)(b) \textit{kohete} noun meaning 'quarrel'. We have already seen in (63) that \textit{kohete-tanga} 'scolding' is marked by \( i \).

(69)(a) *I rongo au i te kohete i a ia.  
\textit{past hear I Comp the scold obj pers he/she}  
'I heard the scolding of him.'

(69)(b) I rongo au i te kohete.  
\textit{past hear I obj the quarrel.}  
'I heard the quarrel.'

It should be mentioned, however, that the meaning distinction between \( ki \) and \( i \) marking of deverbalized complements is not always clear cut. This is indicated by (70) where some speakers would probably accept \( i \) as an alternative to \( ki \).

(70) Kei te moohio a Hoone \{\textit{ki}\} te waiata i ngaa waiata nei i te waa tika.  
\textit{prog know pers John Comp the sing obj the:pl song dem loc the time correct}  
'John knows to sing these songs at the appropriate time.'

But it is clear that \textit{ki} cannot be a simple noun complement marker in the following example.
(71) Kei te moohio a Hoone \{i\} te waiata.
    'John knows the song.'

Only an infinitival function can be attributed to ki in (71). This is further shown in (72)(a). Yet when a demonstrative is added to the constituent following ki as in (72)(b) it unambiguously marks the constituent as a simple nominal. Compare (72)(a) which is differentiated from (72)(b) only by the demonstrative raa.

(72)(a) Kei te moohio a Hoone ki te waiata.

Lit: 'John knows to sing.'

i.e. 'John knows \{how\} to sing.'

(72)(b) Kei te moohio a Hoone ki te waiata raa.

'John knows that song.'

Equi follows a fairly clear pattern with the Experience verbs. With i and ki marked nominalized complements (e.g., (63)-(66)) there is no requirement for coreferentiality between the matrix clause and the derived nominalizations. Therefore, like the stative verbs of Class I, Equi is not a consideration.

However, with the deverbalized complements, those marked by ki (e.g., (67) and (68)) coreference is assumed
between the matrix clause subject and the subject of the
deverbalized complement. Equi is an obligatory rule
as indicated in (73)(a)-(b) below.

(73)(a) Ka hiahia a Hoone ki te haere (*ia).
   inc want pers John Comp go (he)
   'John wants to go.'

(73)(b) Ka mahara a Mere ki te tono (*ia) i te waea.
   inc remember pers Mary Comp send (she) obj
   the telegram
   'Mary remembered to send the telegram.'

6.10 **Summary of Intransitive Verb Complements**

We may now summarize the marking of nominalizations
functioning as complements of intransitive verbs:

- **i** marks nominalized (-Canga type) complements
  of intransitive verbs but not deverbalized
  complements.

- **i** marked complements generally provide a 'temporal'
  or 'causal' meaning.

- **ki** marks nominalized and deverbalized complements
  also, but only with **Class I: Stative** and
  **Class III: Experience** verbs. **ki** marked com-
  plements cannot occur with **Class II: Adjective**
  verbs.
ki marked nominalized complements have a meaning of 'perceived event' while ki marked deverbalized complements are infinitival in function.

It appears that a factor determining the choice of i/ki complement marking is whether an NP (which must be animate) in the matrix clause is controller of the state or action expressed in the main verb, or whether the NP is a Patient NP controlled by some other agent. ki implies the notion of control by an NP in the matrix clause, and therefore the complement of ki is interpreted as the 'goal' or 'purpose' towards which control is exerted. i complement marking has no implied control by an NP in the matrix clause. Therefore the meaning is 'temporal' or 'causal' rather than 'goal'.

With regard to Equi Deletion and the controllers of Equi, we note that with i marked complements of Class I: Stative verbs, when only one NP occurs in the matrix clause, Equi deletion (which is optional) does not result in ambiguous readings. But if two NPs occur in the matrix clause then ambiguity arises. We do not know which of the NPs in the matrix clause is responsible for Equi since the deleted NP in the complement could be coreferential with either NP of the
matrix (see (57), (58)). However, since Equi is an optional rule then non-application of Equi is the disambiguating strategy adopted.

With ki marked nominalized complements there is no coreferential requirement between NPs of the matrix clause and the nominalized complement. Equi is not a consideration. However, with deverbalized complements coreferentiality is a requirement. Equi, with deverbalized complements, is obligatory.

The subject NP of stative verbs is the controller of Equi. However, if the subject NP is [-animate] (see (54), (55)) then the cause NP will be controller of Equi.

Equi with i marked complements of Class II: Adjectival verbs is controlled by the subject NP of the matrix clause. However, for Equi to apply where the coreferent is the object NP in the embedded clause, nominalization must apply first to move the object NP into a 'derived' subject position.
Equi with Class III: Experience verbs is obligatory with deverbalized complements which are marked with ki. With i and ki marked nominalized complements, Equi does not apply because there is no requirement for coreferential NPs between the matrix intransitive clause and the clause from which the nominalized NP is derived.

Important to the questions posed in Section 6.1.6 relating to ki te-Equi is the obligatory nature of the deletion rule for deverbalized complements (see 6.9).

6.11 Transitive Verb Complementation

6.11.1 Complement Marking

We will see in the following discussion that kia, kia...ai, ki and i occur as markers of complements of transitive matrix clauses. Sentences (74) and (75) illustrate kia marking. Note the kia clause in the (a) sentences and the kia...ai clause combination in the (b) sentences. The contrast in meaning between kia and kia...ai marked clauses is usually shown in translation of the former by the infinitive, and the latter by 'so that' or 'accordingly'.

(74)(a) Ka tahu ia i tana ahi kia kaa
       inc light he obj his fire Comp burn
       'He kindles his fire to set it alight.'

(74)(b) Ka tahu ia i tana ahi kia kaa ai
       Comp burn reason
       'He kindles his fire so that it will burn.'
(75)(a) Ka pana ia i te motokaa kia haere.
    inc push he obj the car Comp go
(lit.) 'He pushes the car to go/move.'
    'He pushes the car to make it go.'
(75)(b) Ka pana ia i te motokaa kia haere ai.
    inc push he obj the car Comp go reason
    'He pushes the car so that it will go
    (accordingly).'

Note that neither i te nor ki te can occur as 'marker'
for these transitive verbs, as (76)(a)-(b) illustrate.
(Recall that the infinitive was marked by ki te with
intransitive verbs in the matrix clause.) ai is bracketed
below to indicate the difference in infinitival and
causal meanings shown in the translations.

(76)(a) E kuru-a ana e ia te poohatu
    (ai) te wini.
    nonpast throw:st prog agt he the stone Comp
    break (reason) the window
    'He is throwing the stone
    to break the window.'
    so that the window will
    break.'

(76)(b) Ka horoi-a e Hoone ngaa kurii
    *ki te mate(ai) ngaa kutu.
    inc wash:st agt John the:pl dog Comp die
    reason the:pl flea
'John washed the dogs\{to kill the fleas.\}  
\{so that the fleas would\}  
\{die.\}  

But notice now in (77) that \textit{kia} may not mark nominalised (i.e., \textit{-Canga} suffixed verbs) complements.  

(77) *ka tunu ia i te miiti kia maoa-tanga ai.  
\textbf{inc} roast \textbf{he object meat} Comp \textbf{cook-nom reason}  
'He roasts the meat\{to cook it.\}  
\{so that it will cook.\}'  

However, (78) and (79) show \textit{-Canga} type nominalizations marked with \textit{i}. This marking was also noted for nominalized complements of intransitive verbs.  

(78) Ka kai-nga e Hoone ngaa miiti i te maoa-tanga oo nga kai.  
\textbf{inc} eat:st \textbf{Agt John the:pl meat} Comp \textbf{the cook:nom poss the:pl food}  
'John ate the meat when the food was cooked.'  

(79) Ka tahu ia i te ahi i te hoki-nga mai oo ana tamariki.  
\textbf{inc} light she/he the fire Comp \textbf{the return:nom dir of poss:pl:3pers children}  
'He/She lit the fire\{because of the return\}  
\{when his/her children\}  
\{of his/her children.\}'  

\textit{i} complements in (78) and (79) provide an adverbial meaning of time or reason as was noted also of intransitive verb complementation.
Recall now the verb classes mentioned by Williams (see Section 6.1.1) for which his instruction was to use the infinitive with ki. The three classes of verbs expressing the meaning are:

(a) Eagerness, desire, intention to do anything  
(b) Go, come, stay  
(c) Teach  

The first two classes are intransitive verbs. We have already seen in the previous sections that hiahia 'desire, want,' haere 'go, come' and noho 'stay' take deverbalized and fully nominalized complements marked by ki.  

Whakaako 'teach' is the only transitive verb of the three types above, and we note in the following example that it takes a deverbalized complement.

(80) Ka whakaako-tia e Hoone a Mere ki te kauhoe.  

'John taught Mary to swim.'  

Other transitive verbs which take ki deverbalized complements are types like aawhina 'help,' tono 'send, request,' whakahau 'command, order, urge.' For example:

(81) I aawhina mai aku hoa i a au ki te taritari i aku taonga.  

'My friends helped me to carry my things.'
(82) Ka tonoa e Pita ngaa tamariki ki te hoko mai i eetahi rare.

> inc send:st Agt Peter the:pl children Comp the buy dir obj some sweets

'Peter sent the children to buy some sweets.'

(83) Kua whakahaua te kaimahi e te paahi ki te tiki i ngaa kau.

> perf command:st the worker Agt the boss Comp the get obj the:pl cow

'The boss commanded the worker to get the cows.'

However, recall also that there were instances where both kia and kite marking were given as alternatives in the same sentence. See for example the discussion in 6.1.3. (84) and (85) below were examples given there.

(84) Ka whakamahia e Hoone a Mere[ki te]poke paraoa.

> inc caus:make:st Agt John pers Mary Comp bake bread.

'John[asked]Mary to bake bread.' = kia

'John ordered Mary to bake bread.' = ki te

(85) Ka tonoa au e te maahita[ki te]noho i roo koona.

> inc send:st I Agt the teacher Comp sit loc in corner
'The teacher suggested to me to sit in the corner.' = kia
'The teacher sent me to sit in the corner.' = ki te

Thus we have seen instances with transitive verbs where ki te occurs as a complement marker, and instances where it cannot, e.g., (76)(a)-(b). And above, we have seen ki te alternating with kia.

We will now attempt to provide some possible reasons for this marking.

Noting the translations in (84) and (85) above, the semantic criterion that differentiates the usage of kia and ki te appears to be 'request or desire' versus 'compulsion' implied by the matrix verb. For example, in (84) the use of kia conveys a meaning of 'desire' or 'request' in the use of the verb whakamahia 'cause to make'. That is, John's causing Mary to bake bread is more by request and persuasion than by command. The same meaning of request, or desire, in the matrix verb tono also underlies the use of kia in (85). With ki te the notion of 'control' or 'certainty' underlies the meanings conveyed in (84) and (85).

Now in sentences (80)-(83) ki te occurs as complement marker for the deverbalized complements. The notion of 'certainty' or 'control in carrying out an action' is conveyed by all the matrix verbs—whakaako 'teach',
aawhina 'help', tono 'send, request' and whakahau 'command, urge.' However, kia can only substitute for ki te in (82) and (83) and it is just in those two matrix verbs, tono 'send, request' and whakahau 'command, urge' that the notions or 'request' or 'desire' are found. The request or command is fulfilled by the action described in the complement.

With the matrix verbs (whakaako 'teach' and aawhina 'help') in (80) and (81), there is no meaning of 'request' or 'desire' inherent, but rather these verbs imply actions about which decisions have already been taken or completed.

Recall the notion of control by the agent in ki marking discussed in earlier sections. It seems that the same notion is operating in ki te complement marking with transitive verbs also. Verbs like whakaako 'teach' and aawhina 'help' imply control by the agent over the action expressed by the complements and their complements are therefore marked with ki te.

However, where control or the outcome of the action expressed in the complement is uncertain, then kia is used. Hence, in sentences (86), (87) and (88), the action carried out in the matrix clause does not imply that the consequent, expressed by the complement, will be achieved.

(86) Ka tahu ia i te ahi kia kaa.

inc light he obj the fire comp burn 'He kindles the fire to set it alight.'
(87) Ka pana ia i te motokaa kia puta i te poharu.
  inc push he obj the car Comp emerge from the mud
  'He pushes the car to get it out of the mud.'

(88) E kuru-a ana e au te poohatu kia paa ki te manu.
  nonpast throw:st prog agt I the stone Comp strike goal the bird
  'I am throwing the stone to hit the bird.'

We may perhaps reduce the difference in meaning and syntactic marking of ki te and kia to one of plus control and minus control respectively.\(^\text{11}\)

With kia...ai, as in (74)(b) and (75)(b), kia still retains the basic meaning of non-control over the consequences of the action expressed in the matrix clause. ai merely provides an added dimension of 'reason' for that action, hence the translation 'so that', or 'accordingly'.

6.11.2 Controllers of Equi in Transitive Sentences

We will now turn to the question of how Equi-NP deletion operates and what the controller of Equi is in the transitive matrix clause.

It will be seen that in some cases the controller of Equi is the object NP of the matrix clause and in others it is the subject. For example, with kia complements of the following sentences the object NP is the controller.

(89) E poro ana ia i te raakau kia hinga.
nonpast chop prog he obj the tree Comp fall
'He is chopping the tree to fell (it).'

(90) Kei te whana a Hoone i te pooro kia whiti
i te koura.
prog kick pers John obj the ball Comp cross
obj the goal
(lit.) 'John is kicking the ball to cross over the
goal.'

In (89) the subject of the complement clause te raakau
'the tree' is deleted under coreferential conditions with
the object of the matrix clause.

However, examine an example like (76)(a)-(b) which is
repeated below as (91)(a)-(b). In (91)(a), without ai,
there is no assumption that an NP of the matrix clause is
controller of a deleted NP in the complement clause. When
ai is used, however, it appears that ai is the anaphor of
the oblique NP i te poohatu 'by the stone' in the under-
lying complement clause. It is that NP which provides the
meaning 'reason'.

(91)(a) E kuru-a ana e ia te poohatu kia pakaru (ai)
te wini.

'He is throwing the stone [to break the
window.] so that the window
will break.'
(91)(b) Ka horoia e Hoone ngaa kurii kia mate (ai)
ngaa kutu.

'John is washing the dogs \{to kill the fleas.\}
\{so that the fleas will die.\}'

With (91)(b) it appears that the NP John, which is in
an oblique case, is controller of the complement clause
which would have a deep structure:

(92) \[
\begin{array}{c}
S_1 \\
\text{wash} \\
\text{John the:pl dog} \\
\text{[.. ka mate ngaa kutu i a Hoone]} \\
\end{array}
\]
\[
\begin{array}{c}
S_2 \\
\text{inc} \\
\text{die the:pl fleas caus pers John} \\
\end{array}
\]

'John washes the dogs' 'The fleas die because
of John.'

In (92) the deletion of the NP Hoone would have to
apply after the 'passive' transformation has applied to $S_1$.
'Passive' places the subject NP a Hoone 'John' in an
oblique case relation e Hoone. Thus, both NPs are now in
a similar case relationship and presumably Equi-NP deletion
may then apply. However, this does not appear to be a
very satisfactory solution. Most explanations of Equi
describe the operation as deletion of the subject NP of
the embedded clause under coreferential conditions with an
NP in the matrix clause. Sentence (92) presents an
anomaly—a case of an oblique NP deleted by Equi. The
problem will not be pursued further here.
i complement marking found in examples like (78) and (79), requires no coreferential condition between the matrix clause and the nominalization. Therefore, Equi is not a consideration here.

In the examples (80)-(83) it is apparent that the conditions for Equi deletion are governed by the semantic object NP of the matrix clause.

For example, for (80), repeated below as (93)(a), the deep structure would be (93)(b).

(93)(a) Ka whakaako-tia e Hoone a Mere ki te kauhoe.
      inc teach-st agt John pers Mary Comp swim
      'John taught Mary to swim.'

(93)(b) \[ Ka whakaako a Hoone i a Mere \]
$$S_1$$
      inc teach pers John obj pers Mary
      'John teaches Mary.'

\[ ka kauhoe a Mere \]$$S_2$$
      Comp inc swim pers Mary
      'Mary swims.'

      'John teaches Mary to swim.'

In (93)(b) Mere 'Mary' in the embedded clause is Equi deleted by the object of the matrix clause, and the T/A ka is replaced by te giving (94).

(94) Ka whakaako a Hoone i a Mere ki te kauhoe.
      inc teach pers John obj pers Mary Comp the swim
      'John teaches Mary to swim.'
Then passive may apply to change the case marking of $S_1$, thus providing the surface structure in (93)(a).

It is apparent from the preceding discussion that some general rules for ki te and kia marking, as well as Equi deletion, may be stated as follows: (although there are exceptions which will be noted below)

With ki te marked complements the controlling NP in a transitive matrix clause is the semantic or underlying object NP. Also the semantic constant in ki te complement structures may be shown as:

\[
X \text{ controls } Y \text{ to do } Z.
\]

The presupposition implicit is that $Y$ will carry out $Z$. $Z$ is the act described by the complement. Equi-deletion is obligatory and $Y$ is the deleted coreferent in the embedded clause.

Most ki marked complements of transitive clauses looked at so far appear to comply with the rule. With (33) however, the generalization would imply that au 'I' (=Y) is under the control of my friends (=X) to carry my things (=Z). But with the verb aawhina 'help' there is no implication of control by 'my friends' (=X) over 'me' (=Y). However, it is clear that the action 'carry the things' (=Z) will be carried out.

With kia marked complements we may represent the transitive structures that kia occurs in as:

\[
X \text{ interacts with } Y \text{ desiring } Z.
\]
Hence, in examples like (74)(a) and (75)(a) which have the meanings 'He kindles the fire to set it alight' and 'He pushes the car to go' (i.e., make it start or move), or with (88) and (89) 'He throws the stone to hit the bird' and 'He chops the tree to fell (it)', kia expresses only desire for a certain outcome of the interaction between X and Y. Hence in the complement of (89) 'to fell the tree' kia expresses only the desire to do just that. It carries no assumption about whether the tree will be felled or not.

Like the ki complements, Y is also the coreferent in kia complements. Equi deletion is obligatory with non-animate NPs. For example,

(95) *Ka tahuna e ia te ahi kia kaa te ahi/ia.
    inc light:st agt he the fire Comp burn the fire/it.
    'He kindles the fire to set the fire/it alight.'
Non-animate NPs like te ahi 'the fire' are not pronominalizable, and therefore have to be deleted. But with animate NPs Equi is optional.

(96) Ka tono a Hoone ki a Piri kia noho (ia).
\hspace{1cm} \text{inc request pers John goal pers Bill Comp stay he}
\hspace{1cm} 'John requested Bill to stay.'
\text{Ia 'he' is understood to be coreferential with the goal NP Piri 'Bill'.}

The same rules of Equi apply with kia...ai.

6.12 -Cia Suffixation

The main purpose of this section is to show the use of -Cia (stative) and -Canga (nominalization) suffixes when sentences contain i complements. It will be shown that -Cia serves to disambiguate the roles of possessed nominalizations derived from transitive verbs.

Recall the derivation of possessed nominalizations discussed in 6.8. It was shown that the derivation involves suffixing the verb with -Canga, extraposition
of and marking the agent NP with e, and marking the object NP with oo 'possession'. We noticed also that the rules of nominalization are much like passivization. The close relationship between these two processes is further reflected in the fact that both the -Cia and -Canga suffixes may occur in the same sentence. We now describe the conditions for the occurrence of the two suffixes.

With sentence (97)(a), -Cia suffixation of the verb whakatoi 'tease' is not needed because the agentive and object roles are perfectly clear. In the nominalized complement Pare is the understood agent, and the object of the verb whakatoi 'tease' is Hoone 'John'. Hoone is the pronominalized coreferent oona 'pl poss:3 pers' as indicated by the subscripts.

(97)(a) Kua kuru-a atu e Hoone te poohatu i te whakatoi-tanga oona e Pare.

perf throw:st dir Agt John the stone Comp the tease:nom pl:poss:3 pers Agt Pare 'John threw the stone when he was teased by Pare.'

Now, in (97)(b), where the agent NP e Pare is absent, the pronoun oona may be interpreted as either the agent or object.

(97)(b) Kua kuru-a atu e Hoone te poohatu i te whakatoi-tanga oona.
'John threw the stone \{when he was being teased.\}
\{when he was teasing.\}'

The ambiguity disappears, however, when the verb is

-Cia suffixed, as in (97) (c), (d), (e). In these sentences oona is the object of the verb whakatoi 'tease'.

(97) (c) Kua kuru-a e Hoone te poohatu i te
whakatoi-tia-tanga oona.

'remoteness of the stone

'John threw the stone \{when he was being
because of his being teased.\}'

(97) (d) Kua kuru-a atu e Hoone te poohatu i te
...... Comp the
whakatoi-tanga-tia oona.

'John threw the stone \{when he was being
because of his being teased.\}'

(97) (e) Kua kuru-a atu e Hoone te poohatu i toona
...... Comp sg:poss:
whakatoi-tia-tanga.

'John threw the stone \{when he was being
because of his being teased.\}'

Notice that both the -Cia (stative) and -Canga
(nominalization) suffixes may be present, and are
permutable. Therefore, it is clear from (97)(c)-(e) that when only one [+animate] NP occurs after the verb in the complement, the role of the -Cia suffix is to disambiguate the case relation of the verb and NP.

We have noted that the ambiguity arises where only one NP occurs in a nominalized complement clause containing an underlying transitive verb and where that NP is oo possessed, as shown in (97)(b)-(e). But note in (98)(a)-(b) below that no ambiguity exists when the nominalization is from an intransitive verb.

(98)(a) Ka tangi a Mere i te haere-tanga oo Hoone.
     inc cry pers M. Comp the go:nom of John
     (lit.) 'Mary wept at/because of the going of John.'
(98)(b) Ka kawatia te whare i te hoki-ngaa oo te wahine raa.
     inc bless:st the house Comp the return: nom of the woman dem
     'The house was blessed at/because of that woman's return.'

In (98)(a) it is clear that the one performing the action is Hoone 'John', and in (98)(b), te wahine 'the woman'. Sentence (97)(b) however (repeated below), without its agent NP, places an added interpretation of agency on the remaining NP because of the oo possession marking and this gives rise to the ambiguity noted.
(97)(b) Kua kuru-a atu e Hoone te poohatu i te 
whakatoi-tanga oona.
perf throw:st dir Agt John the stone Comp 
the tease:nom poss:3pers
'John threw the stone {when he was being
{when he was
teased'}. }
teasing'.

An alternative way of disambiguating these roles is
not to make the object NP into a possessor. Instead,
simply delete the subject (NP₁) of the transitive verb,
as in the following:

(99) ... i te whakatoi-tanga i a ia.
... Comp the tease-nom obj pers 3pers
'the teasing of him'.

However, with intransitive verbs like haere 'go', hoki
'return', which do not have object NPs, the agent must
be oo possessed, as in (98).

6.13 No te Pseudo-Verbals

In Biggs (1974a) is a section 39.2 entitled 'No te
with derived nouns'. These constructions he says are
'pseudo verbal ... usually found in focus position at
the beginning of a sentence.' He also says No te means
'when'. Some of his examples follow (glosses are mine):
(100) No te horonga o Mokoia ka riro ngaa wheua o Tuuhourangi i a Ngaapuhi.
real the fall:nom of M. inc take the:pl bone of T. Agt/Caus pers M.
'The bones of Tuuhourangi were taken away by Ngaapuhi at the time when Mokoia was captured.'

(101) No te taenga ki te raumati, ka mahana te kiri o te tangata.
real the arrive:nom to the summer, inc warm the skin of the man
'When summer arrived people began to feel warm.'

(102) No te matenga o Hawe-pootiki, ka pokaia e Turi te manawa.
real the die:nom of H. p, inc cut:open agt T the heart.
'When Hawe-pootiki was dead Turi cut out his heart.'

What concerns us here is the fact that the sentence initial element is interchangeable with i, the main complement marker of nominalized clauses. Thus, (103) (a)-(b) are synonymous.

(103)(a) Noo te horonga o Mokoia ka riro ngaa wheua...
real the fall:nom of M. take bones
(103)(b) I te horonga o Mokoia ka riro ngaa wheua...
past
'The bones of T. were taken ... when Mokoia was captured.'

We conclude, then, that such noo structures are cases of fronted complement clauses. The deep structure of such sentences may be shown roughly as:

(104)

\[ S_1 \]

\[ \text{Ka riro ngaa wheua o Tuuhourangi} \]

\[ i \text{ a Ngaapuhi} \]

\[ S_2 \]

\[ \text{Comp} \]

\[ 'The bones of T. were taken by N' \]

\[ i \text{ ka horo a Mokoia (i a Ngaapuhi)} \]

'Mokoia fell (by the agency of N.)'

After nominalization of the complement clause (i.e., T/A \( \Rightarrow \text{te}, V \Rightarrow V+Canga, a \text{ Mokoia} \Rightarrow \text{oo Mokoia} \)), the complement may be fronted, and noo may then replace i. Noo may not occur if the complement remains in basic position.

That this rule, optionally substituting noo, is not an isolated process in the language is seen in other cases like the fronting process found in simple intransitive sentences, as in (105)(a)-(b) below. When the cause/agent NP is fronted, it is marked by naa and the copy ai is left after the verbs. For example:
(105) (a) I mate te poaka i a Hoone.
past die the pig \{caus \} pers John
agent
'The pig died \{by \} John.'
\begin{align*}
\Rightarrow
Naa Hoone i mate ai te poaka.
'John killed the pig.'
\end{align*}
'John caused the pig to die.'

(105) (b) ka ora te manuhiri i te kai.
inc well the visitors \{caus \} the food
agent
'The visitors will be well fed.'
\begin{align*}
\Rightarrow
\{Maa\} te kai \{e\} ora ai te manuhiri
\{Naa\} \{i\}
well visitor
\end{align*}
(lit.) 'The food will keep well the visitors.'

We also know that the Agent-Emphatic construction has
\textit{naa} or \textit{maa} marked agent NPs, when these NPs are fronted.

(106) (a) I patu-a e Hoone to poaka.
past kill:st agt John the pig
'The fire was lit by John.'
\begin{align*}
\Rightarrow
Naa Hoone i patu te poaka.
real John past kill the pig
'John killed the pig.'
\end{align*}

(106) (b) I tahuna te ahi e Hoone.
past light the fire agt John
'The fire was lit by John.'
'John lit the fire.'
We can conclude from the preceding observations that the process which fronts clauses (and other 'cause' constituents) and marks them with noo/naa is a sub-type of a more general class of process in Maori--of what might be called Fronted-Agent marking strategies.

6.14 **hei Complements**

A further type of complement that occurs in Maori, but was not elicited by following Ross's paradigm, is that marked by **hei**.

In Chapter 2 **hei** was shown to be a tense-aspect marker of predicates in Equational sentences, having the meaning 'future location in time or space.' When it functions as complementizer however, **hei** denotes 'purpose' or 'intention'. It should be noted also that **hei** marks complements of both intransitive and transitive sentences. An example of its occurrence in an intransitive sentence is:

(107) Ka noho a Hoone hei koorero-tanga maa te iwi.

inc sit/stay pers John comp talk:nom for for people

'John remains a talking point for the people'
The further examples below illustrating hei complementation are transitive sentences. The complement types that follow hei may be verbal or nominal and have these properties:

(i) no te deverbalizing marker intervenes between hei and the verb.

(ii) the verbs that follow hei (a) are transitive, or are derived transitives, or (b) are nominalizations showing the -Canga suffix.

(iii) Equi deletion is obligatory.

(iv) Ross's theory of squish categories appears to describe the problem of interpretations that is evident in some of the hei complements.

The first property is illustrated by (107) above and (108).

(108) Ka tahu a Hoone te ahi hei whakawera i ngaa kai.

light pers John the fire Comp caus:hot obj the: pl food

'John lights the fire to heat the food.'

As pointed out in (ii) above, the verbs that follow hei are transitive. Intransitive or stative verbs appear to need transitivizing (as in (108)) since (109) is unacceptable.
(109) ... *hei wera ngaa kai.
Comp hot the: pl food
'the food will be heated.'

Sentences (110) and (111) show that if intransitive verbs are not transitivized (i.e., whaka- prefixed) then they must be nominalized when following hei:

(110) ... ka hoatu he pou ... hei {rorenga} maa {*rore}
ngaa parirau
inc give pred pole... Comp trap:nom irre
the: pl wing
(MF 102)
'(they) put in poles ... to entangle the wings.'
'.... to be an entangler for the wings.'

(111) Ka tahu a Hoone i te ahi hei {ora-nga} moona
i te poo. Comp well:nom for:him
night
'John lit the fire to comfort him through/
in the night.'

Sentences (112) and (113) show regular (non-derived) transitive verbs occurring with hei.

(112) Ka kurua e Hoone te pere hei {wero}i te manu.
inc throw:st agt John the dart {pierce} obj
bird
'John threw the dart to kill the bird.'
(113) Homai he maati hei tahu i te ahi. (TR 11:196)  
give pred matches Comp light obj the fire  
'Give some matches to light the fire (with).'

Notice now that regular transitive verb complements  
as in (114)(a) may not be modified. (114)(b), with -Canga  
nominalization, is questionable. But (114)(c) with -Cia  
and -Canga suffixation and (114)(d) with the object pos­  
sessed in oo are definitely unacceptable.

(114)(a) Ka whakatere i toona poho hei horomi i a  
Maui.  
inc cause:large obj her stomach Comp swallow  
obj pers M.  
'(She) enlarged her stomach to swallow Maui.'

(114)(b) Ka whakatere i toona poho ?hei horomi-tanga  
i a Maui.  
swallow:nom  

(114)(c) Ka whakatere i toona poho *hei horomi-tia­  
tanga i a Maui.  
swallow-st­  
om obj pers M.

(114)(d) Ka whakatere i toona poho *hei horomi oo  
Maui.

Notice in (115) the following points. (115)(a) is  
like the grammatical transitive clause complements (114)(a)  
noted above. (115)(b) is a questionable -Canga complement  
like (114)(b). (115)(c) however, has the object incorpor­  
ated into a more nominal-like structure than the complement
of (115)(b).

(115)(a) Kua mahia e Hoone he taawhiti hei hopu i te kiore.

 perf make:st Agt John pred snare Comp catch the rat

(115)(b) ... ?hei hopu-nga i te kiore

 Comp catch-nom obj the rat

(115)(c) ... hei hopu-nga kiore

 Comp catch-nom rat

(a) 'John made a snare to catch (the) rats (with).'
(b) ' for catching (the) rat/s.'
(c) ' for a rat trap.'

What is apparent here is a squish of grammaticality between verb-like complements and nominal complements and (115)(b) marks a transition between those two cardinal points. (115)(b) has a verbal element, shown by the separate object marked with i 'obj' and a nominal element shown by -Canga.

Sentence (116) aptly demonstrates the same point above. Following the first hei is a nominal matika 'fish-hook' and wero manu after the second hei may be interpreted as either a nominal 'bird spears', or a verbal-like structure (object-incorporation), 'to spear birds'-- thus reflecting again the 'squishy' nature of these complements.
... fashion the bones of people as fishhooks, as bird-spears.

(116)

(116) ...i hanga ai i nga wheua tangata hei matika,
    hei wero manu. (NMT:14)

past fashion ana obj the bones man Comp fish-
hook, Comp pierce bird

'...fashion the bones of people as fishhooks,
as bird-spears.

(and) to spear birds.

6.15 Summary

This chapter has dealt with three types of complement
structures of Maori: sentential complements, nominaliza-
tions assumed to derive from clauses in underlying struc-
tures, and simple nominal complements. We focused mainly
on nominalizations which were described in two categories:
deverbalized and nominalized complements.

Previous studies were examined to show the extent to
which complementation had been dealt with, and to identify
some of the problems that this study attempts to resolve;
namely Equi-deletion, and coreferential conditions in ki te
and kia constructions.

Maori complement types were identified in this work
by adopting the strategy of finding parallels in transla-
tion with those of English in a typology set out by Ross
(1973). A form of Ross's Nouniness Squish was found to
exist in Maori complement structures also: e.g., fronting
of nominalized complements was possible, but not sentential
complements. Acceptance levels and interpretation of the complements within certain structures appeared to be affected also by the notion of nouniness squish: the more noun-like (or verb-like) the complement, the easier to accept.

The complement markers identified and discussed were $\emptyset$, i, ki, ki te, kia, kia...ai, and hei. $\emptyset$ and hei have not been discussed in previous works.

The main conclusions of this study in relation to the questions set out in Section 6.1.6 (see page 228) are:

(1) To the range of complement markers shown by Williams, $\emptyset$ and hei can be added. There are probably others still to be identified.

(2) They contrast, however, in several respects: kia and ki te are both markers of deverbalized complements occurring with intransitive and transitive verbs.

ki te marks nominalized complements; kia does not. kia-Equi deletion appears to be optional if the coreferent in the complement is animate, but obligatory if it is inanimate (see page ). ki te-Equi is an obligatory rule with deverbalized complements. However, with nominalized complements, Equi is not relevant since no coreferentiality is implied.
(3) The semantic features that appear to govern Kia and Ki te complement marking are 'desire' and 'control' respectively. That is if the main clause implies an act performed with a desired outcome in view, the complement is marked with Kia. If the main clause implies control by the Agent/Actor over the outcome then the complement is marked with Ki te.

The notion of control was offered also as signaling the difference between i te and Ki te complement marking.

(4) The controllers of Equi deletion appear to be as follows: in an intransitive clause, the NP deleted in the complement is controlled by the subject NP since the subject is the only obligatory NP for intransitives. However, in a transitive matrix clause, the semantic object NP governs Equi. An 'anomaly' noted was the deletion of the oblique NP in some complements rather than the subject NP.
NOTES TO CHAPTER 6

1 Since writing this, I have checked—at the suggestion of Andrew Pawley—Maunsell's Grammar of the New Zealand Language, fourth edition, 1894. The first was published in 1842. Maunsell's grammar reflects condescending attitudes towards Maori and its speakers. The work is further marred by typographical errors in the data. Nevertheless, the work is a veritable mine of information and contains many useful insights. It is interesting also to note that in the 1894 edition, which precedes Williams's sixth edition of First Lessons in Maori 1904, we find Maunsell discussing Neuter Verbs (p. 157)—a category, and an innovation in the analysis of Maori grammar up to that date, which Biggs (1968) has attributed to Williams (1904). Another observation of interest is that of the voluminous size of his grammatical description of Maori—162 pages, as compared with Williams's brief and sometimes cryptic grammar represented in 50 pages. Williams's grammar appears to be a shorter version and a refinement of much that Maunsell discusses in his work.

Complex sentences are discussed in scattered parts of Maunsell's work. For example, in a brief (one page) section headed 'Epanorthosis', which he describes as 'the qualifying (of) a former clause by the addition of another,' he provides many examples of structures with embedded clauses. They include examples of clauses that are discussed in this thesis, e.g., equational clauses, kia clauses, me conjoined clauses.

He also has a section on relative pronouns, and his statements are much the same as those of Williams's which we have seen in Chapter 5 of this thesis. Maunsell shows examples of the use of naana, nei and ai which he says are 'the ways in which the defect of the relative pronoun is supplied in Maori.'

2 Hale says that Equi-deletion is "a subpart of a pronominalization rule" for Maori: his primary focus was on showing the interaction between passive and pronominalization in Maori.

3 See Chung (1973): "The Syntax of Nominalizations in Polynesian" for an interesting discussion on some aspects of nominalizations of Maori, and an explanation on aa and oo possession.

4 The change of 'letters' to 'land' is to place the sentence in a more appropriate cultural context, and to retain the meaning of 'gift'.


I borrow the notions of + and - control, from Wilson (1976:49)—in his description of Hawaiian verb classes. (See also Pawley 1973:126-128).

However, Wilson's verbal categories, though followed by Pawley in describing POC, appear not to capture certain facts. For example, for the category Intradirectives (p. 50), i.e., verbs like the following (I have provided the Maori equivalent):

<table>
<thead>
<tr>
<th>Hawaiian</th>
<th>Maori</th>
</tr>
</thead>
<tbody>
<tr>
<td>hele 'go'</td>
<td>haere 'go/come'</td>
</tr>
<tr>
<td>kū 'stand'</td>
<td>tū 'stand'</td>
</tr>
<tr>
<td>noho 'sit'</td>
<td>noho 'sit'</td>
</tr>
<tr>
<td>kani 'make a sound'</td>
<td>tangi 'make a sound'</td>
</tr>
</tbody>
</table>

Wilson says, "When an intradirective is used as a predicate, its subject (i.e., unmarked NP) is both the controller and sufferer. For example, when one walks he is the one who causes (my emphasis) the movement as well as the one who suffers the results of the movement. The following sentence contains an intradirective predicate:

(4) Ua hele na keiki. 'The children went.'
    perf go the:pl child

The Maori equivalent of (4) is:

(4') Kua haere ngaa tamariki. 'The children have gone/went.'
    perf go the:pl children

I can understand that 'the children' are the 'controllers' of the movement, or the 'sufferers' of the action, but I am doubtful that the meaning cause of the action can be unambiguously inferred from or attributed to 'the children' in statements like (4). For the Maori example (4'), 'the children' may be the cause of their going. But in a class of verbs like the 'intradirectives', as well as Wilson's class 'statives', the cause NP is a syntactic category of its own and can be explicitly stated. For example (restricting the meaning of i to 'cause' or 'agent' and not 'location'):

(a) Kua haere ngaa tamariki i a Mere ki te moe.
    perf go the:pl children caus pers Mary
    Comp sleep Agt
'The children went to sleep because of Mary.'
'Mary made the children go to sleep.'

(b) Kua haere ngaa tamariki i a raatou \(\{\text{ano.}\}\) \(\{\text{tonu.}\}\)
perf go the:pl children caus pers they reflex
'The children went because of themselves.'
'The children made themselves go.'

The point is that the semantic notion causer can be established categorically and syntactically, if one wants to indicate cause, and therefore such verbs as "intradirectives" behave no differently from the class "stative" that Wilson gives with respect to cause NP case marking in Maori.

Furthermore, in Maori, a verb like mate 'die' would have to occur in both categories (assuming the above) since a person may die from causes outside of his control, as in:

Kua mate te tangata raa j te rongoa.
perf die the man dem caus the medicine

'The man died from/because of the medicine.'
or he may be the controller of his own death, as in:

I mate te tangata raa i a ia \(\{\text{tonu.}\}\) \(\{\text{anoo.}\}\)
past die the man dem caus pers he reflex

'The man \{died because of himself.\}
\{caused his own death.\}

For these reasons, the division of verb classes into statives and intradirectives seems to me to be an unnecessary subdivision. My view is that they are a single class (see Chart I of Chapter II).

6 See Biggs (1974:29) for further discussion of i/ki prepositional meanings and functions.

7 (See p. 246). This relationship between ki and ko is rather elusive but a connection in the locational meaning seems an inherent feature to both as these examples from Williams (1971:121) further testify:
Whiti atu ko te motu ki Mokoia.
cross direct away to the island to Mokoia.

'Cross over to the island of Mokoia.'

E hika, ko hea koe?

E hika, ko hea koe?

'E hika, ko hea koe?'

voc(Sir )to where you

[voc(Sir/ )to where you]

'Madam]'

Ko reira atu au tu ai, kia tae ake ano koe.

at there dir I stand pron subj arrive dir also you.

'I shall wait at that place until you arrive.'

8 It should be made clear that these sentences are ungrammatical as complement clauses but as conditional clauses these sentences are acceptable. For example:

Ka paru te kaka ki te taka i te raena.

inc dirty the dress if fall from the line

'The dress will become dirty if it falls off the line.'

9 See Chung (1976:127) who assumes tha this is not possible.

10 Quirk and Greenbaum (1973) on prepositional comple­ments say (for English) that "the occurrence of a nominal clause is limited by the fact that they are normally abstract; i.e., they refer to events, facts, states, ideas" (p. 315-316). The same phenomenon is apparently operating here in Maori also.

11 Since my writing this, Professor Roderick Jacobs has suggested whether the following generalizations might be a more accurate characterization of the difference between ki (ki te) and kia complement marking, than my notion of control (versus non-control). Jacobs's view is:

**ki te** Verb = 'realization of the event'. That event which is expressed by the complement will be carried out.

**kia** = 'the lack of assertion as to realization of the event.'
This explanation captures nicely ki marked complements of verbs like aawhina 'help', as in example (33), which could not be accommodated under the notion of

\[ x \text{ controls } y \text{ to do } z \]

as I had formulated.

12 See Chung (1973:649) in which she finds there is a difference between Maori (and Hawaiian) and Tahitian with respect to ordering of these two suffixes: that is, Maori had the order, -Cia + -Canga, while Tahitian has the opposite.

(24)(d) shows the permutable nature of these two suffixes for Maori, even though the above order is the "unmarked" one.
APPENDIX

Gundel's theory of TOPIC-COMMENT (T-C) is summarized as follows:

A. Every natural language sentence consists of a topic (or topics) which identifies what the sentence is about, and a comment, which is the predication made about that topic (or topics). The comment is what the sentence asserts, asks, promises, demands, etc., about the topic of the sentence--depending on the type of speech act that the sentence is used to perform.

B. The topic of a sentence is chosen from "given information". There are two kinds of given information:

I. given\textsubscript{I} = \textit{shared knowledge}, i.e., linguistic elements referring to objects, facts, etc., that are assumed to be identifiable by the addressee, but may or may not be recoverable from the immediate context of the speech act (i.e., a preceding sentence in the discourse or the immediate non-linguistic context).

II. given\textsubscript{II} = \textit{activated knowledge}, i.e., that subset of shared knowledge which is assumed to be in the addressee's consciousness (what the addressee is thinking about) at the time of utterance/reading because of its presence.
in the immediate context of the speech act.

Topics are always chosen from given\(_1\) (i.e., shared or pre-supposed knowledge). Topics must be definite referring expressions which must have EXISTENTIAL PRE-SUPPOSITIONS (i.e., shared knowledge) as opposed to EXISTENTIAL ASSERTIONS. For example:

(i) The French King married his mother.

In (i) the existence of a French King is pre-supposed.

(ii) A French King married his mother.

In (ii), the existence of a French King is part of what is being asserted.

In other words, existential assertions (specific indefinites) like (ii) above, cannot be topics.

e.g., It was the vice-president who resigned.

Topic: The one who resigned (someone resigned)

Comment: X is the vice-president.

Vice-president is shared knowledge (it may even be activated if it was just mentioned) but it is still part of the comment.

Comments are predications about topics. That is, a comment is new in relation to the topic. It may contain individual elements which are themselves given\(_1\) or given\(_{II}\).

C. Languages can differ as to the degree of structural explicitness of the T-C distinction as well as the grammatical devices employed in indicating
the distinction structurally. (For example, English marks this distinction with stress type constructions such as 'As for...............' 'Concerning/About.....', and Japanese marks topics with 'wa'.

D. The following restrictions hold between topic and comment: 'In order for a comment, to be successfully predicated of a topic, T must be of a type or category that it is logically possible for C to be true or false of T.' So it is possible to have:

(i) As for fruit, cantelope is best.
(ii) As for adolescents, students never have any fun.
(iii) *As for fruit, Red Snapper is best.
(iv) *As for adolescents, my typewriter is broken.

E. Sometimes, but not always, the T-C distinction corresponds to the distinction between grammatical subject and predicate (NP VP).

F. In order for a referential item to be deletable in any natural language it must be both given (activated) (i.e., pronominalizable) and topic. This is a necessary and not a sufficient condition for deletion.
G. The topic is most commonly the left-most NP in a sentence though not always.

H. Gundel posits a 'logical structure' to account for the occurrence of T-C structures and further posits that the structure is the possible source of all sentences.

\[
\begin{array}{c}
S \\
/ \\
NP_1 \\
/ \\
X_1 \\
\vdots \\
S' \\
/ \\
\vdots \\
X_1 \\
\vdots \\
\end{array}
\]

Such a structure may be posited within a semantically based syntactic framework. No movement transformations are required--only a Stress Placement rule, Copying rule, (and Chopping/Deletion rule). A structure like the above and these rules can describe such phenomena as emphatic stress placement, pseudo-cleft formation, left-dislocation, topicalization, and right dislocation.
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