Case Roles/ Relations and Discourse Relations: A Māori Language-based Perspective

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Abstract

The overall aim of this research project is to explore case roles/ relations and discourse relations (referred to in this thesis as '*intra*-propositional relations' and '*inter*-propositional relations' respectively) from the perspective of the Māori language.

The thesis begins with an outline of the scope of the research and the approaches and methods used (*Chapter 1*). This is followed by a critical review of selected literature on case roles/ relations (*intra*-propositional relations) (see *Chapter 2*) and discourse relations (*inter*-propositional relations) (see *Chapter 3*) where it is noted that some of the relational theories and models appear to lack descriptive and/or explanatory adequacy.

In *Chapter 4*, two models (an *intra*-propositional relational model and an *inter*-propositional relational model) are developed on the basis of the critical review in *Chapters 2* and *3,* and these models are applied to a written corpus of Māori language texts, the primary aim being to track the ways in which *intra*-propositional and *inter*-propositional relations are signalled in Māori.

In *Chapter 5*, I supplement the corpus-based findings reported in *Chapter 4* by re-examining the findings of two earlier studies from the perspective of the models introduced in *Chapter 4*. One of these earlier studies, reported in the early 1980s, is concerned with the distribution of prepositions in Māori in relation to case roles/ relations (*intra*-propositional relations); the other, produced much more recently (in 2001) is concerned with the signalling in Māori of a selection of what are referred to in that work as 'semantico-pragmatic relations' (*inter*-propositional relations).

Chapter 6 provides an overview of the research and a summary of the findings, together with an indication of its limitations, possible areas of application, and suggestions for future research.

Keywords: case grammar; case relations; coherence relations; cohesion; discourse coherence; discourse relations; *intra*-propositional relations; *inter*-propositional relations; Māori language; Māori language revitalisation; semantic relations; semantico-pragmatic relations; textual rhetorical relations; thematic role; thematic relation

Dedication

This thesis is lovingly dedicated to all my whānau, friends and colleagues. It is but a small tribute to all of you. *E iti noa ana, nā te aroha.*

To my parents, Te Wawata and Pat, thank you for always supporting my dreams and aspirations. The completion of this work has been made possible by decades of loving care, financial support and absolute confidence in all of your boys. My father's philosophy that actions are more important than words also served to sustain me.

To my brothers, Tony, Niki, Dean, and Jason, and my sisters, Nita, Loureen and Jess, thank you for your endless support. To my partner's whānau, Brian, Christina, Tania and Brian, thank you for always being there to help out. Special thanks to Iaean and Luella for encouraging me to become involved in tertiary study. To Koro Riki and his whānau, thank you for your guidance and aroha over the years.

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Tuia ki te rangi
Tuia ki te papa
Tuia ki te whaiao
Tuia ki te ao mārama

Ka tū te ao
Ka tū te pō
Tīhei mauri ora

He uri tēnei nō Ngāti Kahungunu, nō Ngāi Tahu, nō Ngāti Mamoe nō Waitaha hoki e mihi atu nei. I te tuatahi kei te mihi atu ki a Tainui waka, Tainui tangata, mō ngā tini manaakitanga kua uhia ki runga i a au e noho nei i raro i te maru o te maunga tapu, arā, a Taupiri. Nō reira, tēnā koutou, tēnā koutou, tēnā koutou katoa.

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Along the way, there have been many others who have lightened the load. To all of you, my sincere thanks.

Contents

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List of Abbreviations

A	Appertainant
ACT	Actor Emphatic
ADJ	Adjective
Afd	Affected
Afr	Affector
CAUS-V	Causative Verb
CAUS-V-PASS	Causative Verb Passive
CONJ	Conjunction
CONT	Continuative
DEM	Demonstrative
DEM-PL	Demonstrative – Plural
DEM-DET	Demonstrative Determiner
DET	Determiner
DET-PL	Determiner – Plural
DF	Directional Focus
DIR	Directional
E	Experiencer
EL	Event Location
EL(S)	Entity Location (Spatial)
EP	End Point
FM	Focus marker
I	Instrument
IND	Indefinite Determiner
IS	Identified State
LOC	Location
M	Material
MAN	Manner particle
Mu	Mutant
N	Noun
N-Canga	Nomilisation: C + anga (or variants)
Ncomp	Compound Noun
NEG	Negative

NPAST	Non-past
OBLIG	Obligation (weak imperative)
PAST	Past tense
Pd	Possessed
PERS	Personal article
POSS	Possessive
PP	Post-posed periphery
PR	Preposition
Pr	Possessor
PRC	Complex Preposition
PRF	Perfective aspect
PRG	Predicate Range
PRO	Pronoun
Qd	Quantified
Qr	Quantifier
R	Result
RS	Relational Specifier
RT	Relational Target
S(NT)	Source (Non-Transitional)
SCON	Sentence Conjunct
SP	Starting Point
ST	Source (Transitional)
SUBCONJ	Subordinating Conjunction
T	Transitor
TAM	Tense/aspect marker
TL	Temporal Location
TR	Transitional Range
TT	Temporal Transition
Unspec	Unspecified Tense – Marker of relative tense
V	Verb
VOC	Vocative Particle
V-PASS	Passive Verb

Chapter 1

Introduction, research aims, questions and methodology

1.1 Motivation for the research

As a learner of Māori, I often had difficulty in working out why certain grammatical rules seemed to apply in some cases, but not in others. Consulting grammar books was sometimes helpful. Often, however, it was not. It was only when I attended a lecture on English language whose focus was on what are often referred to as 'semantic roles/ relations' (referred to in this thesis as '*intra*-propositional relations') that I began to understand where some of the problems might actually lie. I found the appeal of approaching language structure through meaning relations irresistible. Concepts such as *Agent, Force, Source, Goal* and *Experiencer* were intuitively satisfying as starting points for an investigation of clause and sentence structure. However, attempting to apply what I had learned to Māori was far from straightforward. At first, it seemed likely that this was because many of those who had conducted research in the area were working within the context of Indo-European languages, particularly English. What some of them regarded as 'universal' might, in fact, turn out to be specific to certain languages or language families.[1] If I attempted to apply to Māori the categories they had identified, the pressure points would, I believed, emerge. In the event, this proved to be only partly true, especially as much of the research I initially encountered had been conducted with particular reference not to English, but to Philippine languages. A greater problem was that some researchers appeared to be unclear about distinctions between semantic roles/ relations (*intra*-propositional relations) and what are often referred to as 'discourse relations', 'rhetorical relations' or, less commonly, 'clause relations', 'semantico-pragmatic relations' (referred to in this thesis as '*inter*-propositional relations'). These are relations such as, for example, *Temporal Sequence* or *Means-Purpose* that are generally detectable *between* clauses or groups of clauses rather than, as in the

[1] The idea that specific case/ role relations, as opposed to compositional primitives, might be universal is no longer commonly held.

case of *intra*-propositional relations, *within* the clause.[2] Oddly, I found that some lack of clarity about the distinction between these two types of relation was evident not only in research that focused exclusively on one type of relation, but also in research that included both types. I therefore decided that my own research should encompass both.

1.2 Introduction to the research

There is a long tradition within linguistics of analysing clauses and sentences in terms of grammatical relations such as *Subject* and *Object.* It has been argued, however, that meaning relations that typically operate *within* clauses and those that typically operate *between* clauses and groups of clauses are at least as significant. Both types of relation, discussed here largely in propositional terms, are the focus of this investigation.[3]

Much of the enquiry concerning both types of relation can be traced back to research in the context of what has come to be known as tagmemic theory (see, for example, Barnard & Foster, 1954; McKaughan, 1958; Miller, 1964), the potential for extension and wider application being evident in the work of Fuller (1959) whose primary concern was to elaborate an inductive method of Bible study which took account of thematic coherence. That research tradition, a

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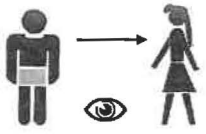
[2] Relations of the type discussed here are sometimes discussed in propositional terms. However, although reference to the concept of 'proposition' is fundamental to some approaches (including the one adopted here), it is antithetical to others.

[3] A proposition (see Fillmore, 1968, p. 23) is essentially an abstraction made up of a semantic predicator (an action, state or process) and one or more arguments that relate to it. Relationships between predicators and arguments are independent of mood, modality and temporal perspective. We can illustrate a proposition pictorially:



The same proposition can be expressed linguistically (often as a clause with tense etc. added) in different ways in the same language or in different languages. Thus in *The boy saw the girl /I kite te tama i te kōtiro/ Le garçon voit la fille*, 'boy', 'tama', and 'garçon' might be said to be Experiencers in the case of English, Māori and French respectively, entering into a relationship of Experiencer-Process with the encoded predicators ('saw', 'i kite' and 'voir'). Longacre (1996, p. 309) says: "It seems that the purpose of the surface structure clause is to encode predications. We can say therefore that the primary encoding of notional predication is the clause. But we also know in most languages a notional predication need not necessarily encode as a surface structure clause; it may be nominalized into a phrase or even a word structure".

tradition in which the focus has often been on Philippine and Papua New Guinea languages, has continued. However, the article that succeeded in attracting the attention of linguists more generally to the significance of *intra*-propositional relations, an article that was published in 1968 (Fillmore, 1968) following two earlier related articles by the same author (Fillmore, 1966a, 1966b), was not located within the tagmemic tradition and its popularity can, no doubt, be attributed to the fact that it represented an explicit challenge to generative grammar (see, in particular, Chomsky, 1957, 1965).

Because my own interest is in both *intra*-propositional relations ('semantic roles'/ 'semantic relations') and *inter*-propositional relations ('discourse relations', 'rhetorical relations', 'semantico-pragmatic relations') and because it is, I believe, only when both are considered together that some of the critical issues relating to definition, description and application emerge, the primary focus of my critical review is research that is either located within the tagmemic tradition or research that can be directly linked to it to the extent that it draws upon some critical aspects of the tagmemic approach, such as the centrality of the concept of 'proposition', the search for relationships between notional and surface structure, and the attempt to provide an integrated account of relationships between (a) predicators and their argument/s (often discussed in terms of some form of predicate calculus), (b) predications and groups of predications (often discussed in terms of some form of statement calculus), and (c) utterances in a dialogue (often discussed in terms of some form of repartee calculus). [4] I do not, however, attempt to take account of all of the very considerable volume of published research in this area, nor do I confine myself exclusively to a consideration of research that has

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[4] All of the research of the type to which I have referred thus far differs fundamentally from much recent research conducted within the context of cognitive linguistics, such as, for example, Langacker's cognitive grammar (Langacker, 1987, 1991, 1999) which, in aligning itself with the connectionist agenda, explicitly rejects any notion of proposition: ". . . only elements with semantic and/or phonological content are permitted, and they are characterized directly in terms of such content, not in a propositional format" (Langacker, 1987, pp. 9-10). Even so, as Charniak (1987, p. 73) notes, although "the problem of representing new propositions in connectionist networks is a real mess", "there has been some work on the topic", work that involves using "the state of the entire network to represent a proposition rather than concentrating it at a node". This, together with the argument by Bensch (1991, p. 3) that connectionism may eventually incorporate aspects of neo-structuralism, provides some support for those who continue to maintain that the proposition must be fundamental to relational definition.

the characteristics outlined above. Indeed, the starting point of the critical review of *intra*-propositional relations in *Chapter 2* is the article by Fillmore (1968) to which I referred earlier.

1.3 Research aims and research questions

As noted in *sections 1.1* and *1.2* above, a primary aim of this research project is to examine *intra*- and *inter*-propositional relations from the perspective of the Māori language. My concern is, therefore, with relational aspects of what I shall refer to as 'discourse coherence' and 'textual cohesion' in Māori. However, it was clear from the outset that a wide range of fundamental issues relating to *intra*- and *inter*-propositional relations needed to be broached before the question of their potential application in the context of the Māori language could be addressed. For this reason, the critical review of literature in the area would need to be a central part of the thesis, not only addressing, but seeking to resolve, a range of fundamental issues. Thus, the research centres on the following fundamental questions:

- What are the main differences among different accounts of relations in terms of the number and type of relations proposed?
- What are the critical areas of disagreement among analysts of different persuasions and how do they affect theory and modelling?
- Is it possible to design models of *intra*- and *inter*-propositional relations that is based on a critical review of earlier models and that takes account of the problems encountered in these models?
- What can application of the models referred to above to a corpus of written Māori texts reveal about these relationships and their encoding and signalling in Māori?
- Can the re-examination of existing studies of *intra*- and *inter*-propositional relations in Māori provide any useful material to supplement the findings of the corpus based study referred to above?

1.4 Research tasks in relation to the overall structure of the thesis

The first task was to critically review selected international literature on *intra*-propositional and *inter*-propositional relations, focusing in particular on issues relating to descriptive and explanatory adequacy (*Chapters 2* and *3*).[5]

The next task was to design an *intra*-propositional relational model and an *inter*-propositional relational model based on the critical review of earlier models conducted in *Chapters 2* and *3*, and to apply that model to a written corpus of Māori language texts (*Chapter 4*) and to a re-examination of research reported in the early 1980s on the relationship between prepositional selection and the occurrence of a particular *intra*-propositional in Māori (Bauer, 1981) and to a more recent (2001), but partial, study of the signalling of *inter*-propositional relations in Māori (Houia, 2001a) (see *Chapter 5*).

The final task was to provide an overview of the research project in terms, in particular, of its findings, its perceived strengths and weaknesses and its potential applications (see *Chapter 6*).

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[5] In referring at this stage to these relations as '*intra*-propositional' and '*inter*-propositional', I am anticipating the outcome of some of the arguments I forward in *Chapters 2* and *3*.

Chapter 2

Critical review of literature on case role/ relations

2.1 Introduction

In this chapter, I critically review selected literature on case relations (also sometimes referred to as 'case roles', 'semantic roles', 'semantico-pragmatic roles', '*intra*-propositional relations', and, in a more specific sense, 'thematic roles' or 'thematic relations').[6] As Gildea and Jurafsky (2002, pp. 247-248) observe:

> [Research on case relations ranges from] the specific end of the spectrum [where we find] domain-specific roles such as FROM-AIRPORT, TO-AIRPORT . . . or verb-specific roles such as EATER and EATEN for the verb *eat* . . . [to] the opposite end of the spectrum [where we find] theories with only two 'proto-roles' or 'macro-roles' . . . [and] in between lie many theories with approximately ten roles. . . . As a rule, the more abstract roles have been proposed by linguists, who are more concerned with explaining generalizations across verbs in the syntactic realization of their arguments, whereas the more specific roles have more often been proposed by computer scientists, who are more concerned with the details of the realization of the arguments of specific verbs.

Dowty (1991, p. 547) notes that "[there] is perhaps no concept in modern syntactic and semantic theory which is so often involved in so wide a range of contexts, but on which there is so little agreement as to its nature and definition, as THEMATIC ROLE or THEMATIC RELATION) and its derivative, THETA-ROLE in Government-Binding (GB) theory", adding that "the existence of thematic roles is so taken for granted that psycholinguists now attempt to study their role in mental processing experimentally".

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[6] Campe (1994, p. 2) observes that there is widespread terminology overlap and confusion in the literature area. Thus, for example, Chang and Lakoff (1997, p. 14) note that "different authors use the term **case** to refer variously to morphological case markers, semantic roles and relations, syntactic roles and relations and even construction-level notions". They also note that "the division between syntactic and semantic considerations in this area is very fuzzy indeed". One of my aims in this chapter will be to clarify some of the issues raised by this terminology confusion.

The review begins with an article by Fillmore (1968) which succeeded in attracting a great deal of attention to this area of research. Following a consideration of the case/ role relations proposed in that article (*section 2.2*), the article is re-examined with specific reference to the role of propositional theory in that account (*section 2.3*). This is followed (*section 2.4*) by the review of a number of publications which are either located within tagmemic theory or share with it the following principles: (a) important generalizations will emerge from the identification and description of case relations at a level of generality that is non-domain-specific; (b) the concept of the proposition will be central to the investigation; and (c) any adequate theory of language must be able to account for notional relationships *within* propositions (*intra*-propositional relations) and notional relationships *between* propositions and groups of propositions and for the ways in which these relationships (or groupings of them) may be reflected in the surface structure of languages.[7, 8] Finally, some consideration is also given to research that is conducted at a lower level of generality, that is, research on frame semantics that examines roles in terms of domain-specificity (*section 2.5*) and at a higher level of generality - that is research on generalised roles (sometimes referred to as 'macro-roles') (see *section 2.6*).[9]

2.2 Examining *The Case for Case*

The Case for Case, an article by Fillmore that appeared in 1968, is regarded as one of the major benchmarks in the discussion of the possibility of establishing a general set of case/ role relations. In this article, Fillmore proposes an alternative

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[7] Bond and Shirai (1997) draw attention to the problems inherent in this research agenda when they observe that in the construction of a semantic valency dictionary for application in Japanese to English machine translation, they are working with 42 case roles in the case of English and 29 in the case of Japanese.

[8] My decision not to focus in this critical review only on the more recent accounts of case roles/ relations was influenced by my belief that tracking some of the problems (and the responses to them) associated with earlier works throws important light on a number of aspects of more recent accounts. It is often the case that earlier accounts are at pains to provide reasons for aspects of the approach taken, such as, for example, the role of propositional analysis. Unless these are taken fully into account, the validity of later challenges may be too readily accepted.

[9] Gildea and Jurafsky (2002, p. 248) note that, as a rule, "the more abstract roles have been proposed by linguists, who are more concerned with explaining generalizations . . . while more specific roles are more often proposed by computer scientists, who are more concerned with the details of the realization of the argument of single verbs". However, in investigating the automatic labelling of semantic roles, they developed a correspondence between frame-specific roles and a set of 18 thematic roles and found that the overall performance was 82.1% accuracy for thematic roles, compared to 80.4% accuracy for frame-specific roles.

to the generative approach proposed by Noam Chomsky (see for example, Chomsky, 1957, 1965), questioning the "deep structure validity of the traditional divisions between subject and predicate, a division which is assumed by some to underlie the basic form of all sentences in all languages" (1968, p. 17). Central to Fillmore's argument (p. 5) is the following claim:

> There are many semantically relevant syntactic relationships involving nouns and the structures that contain them. . . . [These] relationships . . . are in large part covert but are nevertheless empirically discoverable. . . . [They] form a specific finite set, and . . . observations made about them will turn out to have considerable cross-linguistic validity.

Fillmore describes relations as comprising a set of universal, "presumably innate concepts which identify certain types of judgements human beings are capable of making about the events that are going on around them, judgements about such matters as who did it, who it happened to, and what got changed" (p. 24). At this point, it is, I believe, important to note that although Fillmore observes that he is investigating "semantically relevant syntactic relationships", it would appear to capture the spirit of the investigation more accurately – and align it more directly with other research in the area – to describe the research as involving syntactically relevant semantic (or semantico-pragmatic) relations.

Fillmore proposes a 'conceptual framework' in which these relations are interpreted, making a clear distinction between deep and surface structure and defining a proposition as "a tenseless set of relationships involving verbs and nouns (and embedded sentences, if there are any)" (p. 23).[10,11] The basic structure

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[10] This focus on verbs and nouns (rather than predicators and arguments) is unfortunate. It appears to indicate some confusion between propositions (to which Fillmore also refers) and the linguistic encoding/realisation of these propositions.

[11] If it is accepted that meaning is not 'encoded' in language, but that language is a sort of shorthand for engaging meaning, the concept of 'deep' or 'notional' structure becomes extremely problematic as does the concept of relating 'deep' or 'notional' structure to 'surface structure' by means of logical rules of some type. Ben Yami (2004) argues that the fact that predicate calculus has no reasonable way of dealing with plural referring expressions indicates that it is fundamentally flawed as a tool for dealing with natural language is a powerful one. I believe that propositional analysis is a useful analytical tool. I also believe that it has psychological reality in the sense that predicator types and argument types (e.g., action, process; source, goal etc.) rather than grammatical types (e.g., verb; noun) appear to be involved in relationships. I depart here from predicate logic by distinguishing not between argument (i.e., subject or theme) and predicate, but between arguments and *predicators*. I also argue that a predicator can appear in languages not only a verb, but as another part of speech such as a preposition. In discussing natural language,

of a simple sentence is treated as a verb and one or more noun phrases associated with that verb, each in a particular case relationship. The propositional component of a sentence is separated from modalities on the sentence as a whole which include "negation, tense, mood, and aspect" (p. 23). Fillmore initially lists six case roles/ relations (*Agentive, Instrumental, Dative, Factitive, Locative, and Objective*), adding a further three (*Benefactive, Time, Comitative*) in the course of the discussion. These are outlined in *Table 2.1* following, alongside his description of each role/ relation, specific features to which attention is drawn, and examples drawn from English. In each case, the noun that enters into the relationship in question is in bold:

Table 2.1: **Case roles/ relations according to Fillmore (1968)**

Case Role/ Relation	Description	Specific Features	Examples
Instrumental	Inanimate force or object causally involved in the action or state identified by the verb (p. 24).	• Marked with the preposition *with* in English (p. 32). • Includes natural forces (p. 27).	(i) The **key** opened the door (p. 25). (ii) John opened the door with the **key** (p. 25). (iii) John used the **key** to open the door (p. 25). (iv) The **wind** opened the door (p. 27).
Agentive	The case of the typically animate perceived instigator of the action identified by the verb (p.24).	• Although the assumption here is that agents are generally animate (p. 24, fn.31; p. 26), the agent position is said to be "sometimes occupied by 'inanimate' nouns like *robot* or 'human institution' nouns like *nation*" (p. 24, fn.31). • Marked with the preposition *by* in a passive construction in English (p. 32).	(i) **John** opened the door (p. 25). (ii) The door was opened by **John** (p. 25). (iii) **John** opened the door with a chisel (p. 27). (iv) **Mother** is cooking the potatoes (p. 29).

we need to accommodate the fact that are sometimes referred to as 'propositional attitudes' or 'modifiers' form part of the predicator. So, for example, adverbs constitute part of the predicator.

Table 2.1 (continued): **Case roles/ relations according to Fillmore (1968)**

Case Role/ Relation	Description	Specific Features	Examples
Dative	Animate being affected by the state or action identified by the verb (p. 24).	• Typically marked by the preposition *to* (p. 32).	(i) **John** believed that he would win (p. 25).[12] (ii) We persuaded **John** that he would win (p. 25). (iii) It was apparent to **John** that he would win (p. 25).
Locative	Identifies the location or spatial orientation of the state or action identified by the verb (p. 25).	• Includes both stative and directional locatives (pp. 25-26).	(i) **Chicago** is windy (p. 25). (ii) It is windy in **Chicago** (p. 25). (iii) It is hot in the **studio** (p. 44). (iv) There are many toys in the **box** (p. 46).[13]
Factitive	Object or being resulting from an action or state identified by the verb, or understood as a part of the meaning of the verb (p. 25).14	• Also used for cognate object construction (p. 85).15 • There is typically no prepositional marker for this case (p. 32).	(i) John dreamed a dream about Mary (p. 86). (ii) John had a dream about Mary (p. 86).

[12] Fillmore includes here examples, such as this one, which have verbs relating to perception/mental operation. This raises questions about the meaning of 'affected by' in this context.

[13] This example raises issues relating to the possibility that 'in' can operate as a semantic predicator (in that BE in English is essentially a place holder and tense carrier).

[14] The two parts of this description (separated by 'or') could be interpreted as being very different in nature. Examples such as 'Mary knitted a sweater' might be more convincing.

[15] A 'cognate object' is a construction in which "there is a high selectivity between a specific verb and an 'object' noun, and in which the verb + noun combination in one language might well be matched by a verb alone in another". Thus, there are contexts in which the case category *Factitive* "may be left lexically empty, and . . . certain words classified as verbs may be inserted specifically into frames containing dummy *Factitives*". Therefore, "these words may have associated with them special noun representatives (for example, *bath*) and special pro-verbs (for example, *take*)" (Fillmore, 1968, p. 85) (e.g., 'take a bath').

Table 2.1 (continued): **Case roles/ relations according to Fillmore (1968)**

Case Role/ Relation	Description	Specific Features	Examples
Objective	Anything representable by a noun whose role in the action or state identified by the verb is identified by the semantic interpretation of the verb itself; conceivably the concept should be limited to things which are affected by the action or state identified by the verb (p. 25).	• May occur as subject or object of a non-action verb or direct object of an action verb (p. 28). • There is typically no prepositional marker for this case (p. 32).	(i) John opened the **door** (p. 25). (ii) The wind opened the **door** (p. 27). (iii) John opened the **door** with a chisel (p. 27).
Benefactive	Not defined by Fillmore in his initial set (pp. 24-25). He does, however, discuss the possibility of this relation elsewhere (pp. 31-32).	• Marked by the preposition 'for' in English (p. 32).	An example might be: John washed the car for **Mary**.
Time	Not defined by Fillmore in his initial set (pp. 24-25). He does, however, discuss the possibility of this relation elsewhere (pp. 31-32).	• Associated with prepositions of time (p. 32).	He left on Monday (p. 32).
Comitative	Not defined by Fillmore in his initial set (pp. 24-25). However, it is included under 'coordinate conjunction' (pp. 81-82).	• Signalled by the preposition 'with' in English (p. 81). • Parallel to the conjunctor 'and' in English (p. 81).	He is coming with his wife (p. 81).

With reference to the case role/ relation described by Fillmore as *Instrumental*, it is interesting to note that the first three examples in *Table 2.1* necessarily involve some initiating agency (referred to by Fillmore as *Agentive*) beyond the

Instrument (whether or not this is encoded in the surface structure), whereas the forth example does not. This suggests that there may be two distinct relations here (*Agentive* and *Force*). However, the domain of concepts such as 'agency' and 'animacy' appears to be culturally relative. Thus, for example, Comrie (1981, p. 125) treats animacy as scalar, and Chang and Lakoff (1997) observe that in Navaho inanimate objects may be distinguished on the basis of their capacity for spontaneous motion, special status being accorded to natural phenomena such as wind and rain. This suggests that the concept of macro-roles, that is, generalised semantic roles which play a role in the linking of semantic and syntactic relations (see, for example, Van Valin, 2001) may be a particularly useful one. Research on macro-roles is discussed later (*see section 2.6*). It also suggests that although different languages 'chunk' perceptual space in different ways, there may nevertheless be cognitive factors that control the overall parameters within which this chunking can be accommodated.

A distinction is made by Fillmore between *Dative* (affected animate being) and *Objective* (which he indicates may be restricted to affected things). However, although agency (or its absence) may be important with reference to action initiation, it need not be relevant to the target. It may be, therefore, that there is no good semantically based reason for making a distinction between *Dative* and *Objective*.

The role referred to by Fillmore as *Factitive* is accompanied by examples that do not appear to support the description provided (see *Table 2.1*). In both cases, 'Mary' appears to be the thing/person about which the predicator is concerned rather than "an object or being resulting from an action or state" (p. 25). The case role/ relation occupied by 'Mary' in these examples may be something like *Appertainant* (pertaining to the predicator). In the case of an example such as *John made a puppet*, 'puppet' may occupy a different relation – something brought into being (e.g., *Result*). In that case, the term *Factitive* could perhaps be used with reference to that which brings something into being.

What Fillmore refers to as a *Comitative* appears, when viewed semantically, not to be a distinct relation in that 'he' and 'his wife' in the example provided appear to

represent a combined agent whose elements are syntactically separated. What may be relevant here is surface focus rather than notional distinction.

Examples of what is referred to by Fillmore as *Benefactive* appear to involve two propositions (*He washed the car for Mary* ⟶ *He intended to please Mary so he washed the car*). This would involve an *inter*-propositional relation involving *Means* and *Purpose* in which 'for Mary' is substituted for a preposition-headed group expressing purpose. There is therefore no clear motivation for the establishment of a *Benefactive* case role/ relation in that 'for Mary' appears to carry an *inter*-propositional meaning, i.e., purpose. In other words, the entire proposition 'he washed the car' appears to be linked to 'for Mary' rather than 'Mary' being linked to the semantic predicator 'washed'. In the case of the underlying propositions, we would have, in terms of Fillmore's categories, *Agentive* and *Dative* in both cases, with 'intended to please' and 'washed' being the predicators.

It is immediately apparent that the framework outline by Fillmore (1968) is biased towards Indo-European languages (English in particular). In fact, Fillmore himself observes that this proposal is language-specific to the extent that it prioritises the role of verbs and nouns rather than the conceptual content that may be expressed in some languages nominally and verbally (p. 52). My particular interest is in the role that categorisation of this type may play in Māori. I believe, therefore, that accounts that place the emphasis more specifically on arguments and predicators rather than nouns and verbs are likely to be more useful (in addition to being more satisfactorily grounded) (see discussion of the term 'proposition' in *section 2.3* below).

Fillmore also included in his 1968 article the concept of 'case frames'. These case frames, which provide partial representations of the meaning of verbs, feed into the operation of grammatical rules.[16]

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[16] The concept of 'case frames' has been refined and extended in the context of Fillmore's development of Frame Semantics (see, for example, Fillmore 1977a, 1977c, 1982) and the FrameNet project (see, for example, Baker, Fillmore, & Lowe, 1998; Boas, 2001; Fillmore, Baker, & Sato, 2002a; Fillmore, Baker, & Sato, 2002b; Fillmore & Sato, 2002; Johnson & Fillmore, 2000; Lowe, Baker, & Fillmore, 1997; Narayanan, Fillmore, Baker, & Petruck, 2003).

2.3 A propositionally-based re-examination of *The Case for Case*

Propositions are abstract concepts in semantic theory:

> Philosophy conceives of [propositions] as the things that are asserted and denied in controversies about knowledge and thus as the proper things to analyze in order to better understand such controversies. Logic conceives of them as objects to which laws of logic apply. Linguistics conceives of propositions as the result of the compositional combination of the senses of the words in sentences, that is, the senses of sentences (Katz, 1977, p. 1).

Salmon and Soames (1988, p. 1) consider the concept of the proposition to be important to philosophy and central to a philosophy of language:

> When uttering or writing a declarative sentence (in a given context) one asserts (or records) a piece of information, which is the semantic information content of the sentence (in the context). Since they are the contents of the declarative sentence - propositions are the sorts of things that are true or false. But making true or false assertions is not the only thing we do with propositions. We also bear cognitive attitudes towards them. Propositions are what we believe, disbelieve, or suspend judgement about. When you fear that you will fail or hope that you will succeed, when you venture a guess or feel certain about something, the object of your attitude is a proposition. That is what propositions are.

The emphasis on sentences in Fillmore's initial research would appear to be problematic. Propositions are not clauses or sentences, although they are intimately related to them. An "indicative sentence may 'express', 'represent', 'signify', 'designate', or even 'name' a proposition; and a proposition may be [the] 'intention', the 'content', the 'meaning', the 'real meaning', or the 'literal meaning' of an indicative sentence" (Williamson, 1968, p. 138). A proposition is therefore not a different type of sentence. Nor is it a sentence looked at from a particular perspective. It "is not just a different entity; it is a different kind of entity; it has a different order of being. To speak of propositions in the way in which we speak of sentences is to make a fundamental category mistake" (p. 138).

In recognition of this, a proposition is defined in this thesis as a predicator (often encoded as a verb) together with one or more arguments (often encoded as nouns or pronouns) that are related to that predicator. The relationships between arguments and predicators are 'case relations' (i.e., *intra*-propositional relations). That is, they are relationships *within* the proposition rather than *between* propositions. Thus, a proposition is a combination of a predicator and one or more arguments that are related to that predicator (c.f. Crombie, 1985b, p. viii).[17] With this definition in place, it becomes clear that a proposition need not be encoded as a clause. In examples (1) and (2) below, from Māori and English respectively, a single clause encodes a single proposition. However, in example (3) below, there is propositional embedding: a proposition is embedded as a nominalisation inside a clause.[18] Thus, in example (3), the proposition 'James

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[17] There are three types of interacting constraint on propositional derivation and application: syntactic structure, context and usage. Deriving propositions involves first identifying semantic predicators. A semantic predicator may occupy a range of different syntactic positions. It may, for example, occur as a verb (He *boasted*), a modified verb (He *spoke boastfully)*, a nominalization (His *intervention* . . .), a verb plus a preposition (He *is in* the cupboard) etc. Next, it involves identifying the arguments that relate to the semantic predicator. Except in the case of interpolation, (e.g., John – and I really like him – disagreed), arguments can be said to relate to the semantic predicator when they are not separated from it by another semantic predicator. Note that in the case of *He washed the car for Mary*, 'he' and 'car' relate directly to the predicator 'washed', but 'Mary' does not. It relates to 'washed the car'. Where an argument relates not to a semantic predicator, but to a semantic predicator *plus* one or more arguments, it is treated as the argument of another proposition. In this case, the predicator of that proposition is the preposition 'for' and the two propositions are linked causally. This is why, for example, *mā Hone* 'for John' and *hei pepa* 'for paper' would be treated as propositions in the examples below:

He	*kurī*	*tēnei*	*mā*	*Hone.*
DET	N	DEM	PR	N
IND	dog	this	for	John
(This dog is for John)				
Ka	*tapatapa-hia*		*hei*	*pepa.*
TAM	V-PASS		PR	N
Unspec	cut		for	paper
([It] will be cut up for paper)				

In the case of *Jane is in the cupboard under the stairs*, there are two semantic predicators 'is in' and 'under' and, therefore, two propositions. The arguments of the first proposition are 'Jane' and 'the cupboard' and the argument of the second proposition is 'the cupboard'. However, whatever is syntactically embedded is treated as being part of the unit in which it is embedded.

[18] I use the term 'embedding' in the following ways:

(1) X is embedded in Y if X occurs as part of syntactic unit Y but could, in another context, operate as a separate unit. Thus in *The man in the corner ate the fish*, 'in the corner' operates as part of the nominal group in subject position (as a qualifier), but it could operate as a separate preposition-headed adverbial group (e.g., *The fly buzzed in the corner*). Whatever is embedded in this way is treated for analytical purposes as part of the unit in which it is embedded so that the arguments of *The man in the corner ate the fish* are *The man in the corner* and *the fish.*

(2) A stretch of language which functions syntactically as part of a larger syntactic unit but which functions semantically as a proposition is said to be 'embedded'. This includes nominalisations (e.g., *His intervention*) which function syntactically as a part of a clause (e.g., subject of a clause)

interrupted' (where 'James' is the agent of the interruption) is embedded as a noun group. In this example, there are two encoded/ linguistically realised propositions: 'James interrupted' and 'she became angry'. In fact, these two propositions can be linked in an *inter*-propositional (not *intra*-propositional) relationship of *Reason-Result* (see *Chapter 3*). The first proposition may be said to function as a *reason* in relation to the *result* in the second proposition:[19]

(1) She washed the plates.

(2) *I horoi ia i ngā pereti.*
TAM V PRO PR DET-PL N
PAST wash she the plate
(She washed the plates)

(3) James' interruption caused her anger.

Thus, a single clause can encode more than one proposition. From this perspective, there appears to be no need for the case relationship that Fillmore (1968) refers to as *Benefactive*. In example (4) below, there appear to be two propositions encoded by a single clause:

(4) John washed the car for Mary.

Here, the first proposition ('John washed the car') is encoded directly. However, the second proposition needs to be recovered and can be expressed as something like 'Mary benefited' (see p. 13).[20] As in the case of example (3), there appears in

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but semantically as a proposition (involving a semantic predicator), prepositional groups (e.g., *in the room*) which function syntactically as part of a clause but semantically as a proposition (involving a semantic predicator – an action, process or state, e.g., *in* (*locational state*) and prepositional groups (e.g., *for Jean*, *mā Hone*, *hei pepa*, which function syntactically as part of a clause but whose propositional status is indicated by the fact that they include a word or phrase (such as a preposition) that functions as a semantic predicator and is interpreted as having meaning (e.g., purpose) that requires two predicators (and, therefore, two propositions) for its interpretation).

[19] Crombie (1985b, p. viii) notes that "a single clause may encode either a single proposition or more than one proposition" and that "[where] a single clause encodes more than one proposition (e.g. His intervention caused her defeat) . . . it will also encode the type of inter-propositional relationship (e.g. Cause-Effect) which is normally associated with inter-clausal and inter-sentential coherence". She concludes that "it would [therefore] appear to be unrealistic to attempt to maintain a strict distinction between pragmatics and semantics or between 'sentence' and text grammar".

[20] *John washed the car for Mary* is analysed as involving two propositions largely on the basis of the way in which 'for' in similar contexts is generally used/ interpreted – that is, as indicating

example (4) to be an *inter*-propositional relationship (a relationship *between* two propositions). This time, the *inter*-propositional relationship appears to be something like *Means-Purpose*. Thus the *purpose* (benefiting Mary) is achieved by *means* of washing the car. What this suggests is that two different types of relationship (*inter*-propositional and *intra*-propositional) may sometimes have been confused in early literature on case grammar. *Intra*-propositional relationships (case relations or case roles) are relationships *within* propositions; *inter*-propositional relationships are relationships *between* propositions.

We have already seen that an entire proposition can be encoded as a noun group. We have also already seen that predicators can be encoded as verbs, and arguments can be encoded as nouns or pronouns. In fact, however, predicators need not, even in English, be encoded as nouns or pronouns.[21] In example (5) below, what is predicated of James is not 'isness' but 'inness':

(5) James is in the cupboard.

Thus, in example (5) above, the encoded predicator is 'is in' (or, simply 'in') and the arguments are 'James' and 'cupboard'. The verb 'is' is, in effect, simply a place-holder that can carry tense. The fact that this is so (the fact that 'inness' is the predicator) is more evident when we consider an example from Māori. This is because Māori does not have any equivalent of the verb 'to be' in English. In example (6) below, the two arguments 'Hēmi' and 'kāpata' relate to the predicator which is 'kei roto':

(6) Kei	roto	a	Hēmi	i	te	kāpata.	
PR	LOC	PERS	N	PR	DET	N	
	in		James		the	cupboard	
(James is in the cupboard)							

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purpose or reason. The predicator 'washed' can be related to the argument 'John' and 'the car'. However 'for Mary' is not an argument that relates to 'washed' alone (i.e., John didn't 'wash' for Mary). Rather, he 'washed the car' for Mary. So: 'for Mary' *relates* to the whole happening and not just to 'washed'.

[21] Van Valin (forthcoming) notes that "'Be' . . . serves only to indicate attributive, identificational and equational predications in logical structures" (p. 10) and that "[in] attributive and identificational predications, the second argument of 'be' is filled by an adjectival or nominal predicate", whereas "[in] equational predications . . . it is filled by a referring expression" (p. 41).

In examples (6) and (7), 'te kāpata' and 'the cupboard' are located in terms of an encoded predicator: 'in'/ 'kei roto'.[22] In example (7), 'is under' (or, again, simply 'under') locates the encoded argument 'James' in relation to the encoded argument 'the cupboard':

(7) James is under the cupboard.

In terms of this analysis, examples (8) and (9) would have a predicator which is encoded in English as a verb plus a preposition ('lives in' and 'hides under') with 'compost' being the argument that, in Fillmore's model, occupies the case role/ relation *Locative*:[23]

(8) The hedgehog lives in the compost.
(9) The hedgehog hides under the compost.

In other words, I am arguing that a semantic predicator can be expressed linguistically as a preposition or a preposition plus a verb (even where that verb is not a 'place holder'). This effectively moves the focus away from verbs and nouns and towards concepts (i.e., away from linguistic realisation and towards concepts and notional relationships). In this case, the relational focus is on the location of the action or state.

In the case of a clause involving two prepositional phrases which operate together, one of the arguments is made up of a group containing an embedded proposition (i.e., 'the cupboard is under the stairs'):

(10) Jane is in the cupboard under the stairs.
(Jane) (is in) (the cupboard under the stairs)

Thus, in example (10) above, what is predicated of the first argument ('Jane') is 'inness'. The second argument (occupying, in Fillmore's model, the *Locative* role) is 'the cupboard under the stairs'. Thus, the second argument contains an

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[22] Thus a predicator may be realised/expressed as a preposition (see example (5)) or a locative noun (see example (6)).
[23] This would go some way to explaining the presence of some phrasal verbs, such as 'keep away from'.

embedded proposition ('The cupboard is under the stairs') in which the predicator occupies, in Fillmore's model, the *Locative* slot. What this indicates is that a proposition can be 'shifted downwards' to become an argument of another proposition.[24, 25]

Clauses in English can contain prepositional phrases that are *not* semantically linked as in example (11) below:

(11) The box is under the stairs, beside the coat.
(The box) (is under) (the stairs)/ (The box) (is beside) (the coat)

In this example, there are two associated propositions: 'The box is under the stairs' and 'The box is beside the coat'. The linguistically realised predicator of the first proposition is 'is under'; the linguistically realised predicator of the second proposition is 'is beside'. The *Locative* case role/ relation is occupied by 'stairs' in the first proposition and by 'coat' in the second. In this case, there is no downward shift. Rather, there is ellipsis of subject noun phrase and verb.

This approach would help us also to analyse clauses containing predicative adjectives in English (that is, adjectives that *follow* part of the verb 'to be' or another copula). In the sentence below, for example, what is predicated of 'Jane' is 'prettiness'. Thus, 'is pretty' is the linguistic realisation of the predicator:[26]

(12) Jane is pretty.
(Jane) (is pretty)

However, where the adjective is in attributive position (that is, before the noun in English), as in the example below, an entire proposition ('The girl is pretty') can be said to be embedded within the initial noun group:

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[24] This illustrates the importance of hierarchy, an important aspect of which within systemic theory is 'rank shift', and within tagnemic theory, is 'backlooping' and 'recursion'.

[25] Two contiguous preposition-headed groups can operate separately in combination (as a single preposition-headed group that includes a qualifier). In written language (where intonational disambiguation is not available), context can be critical. However, other things being equal, 'in the cupboard under the stairs' is generally treated (e.g., by Halliday) as one group.

[26] Crombie (1985b, pp. 99-100) notes that the same predicator may sometimes be encoded in different forms as in the case of *One meal suffices/One meal is sufficient; Lucy flirts/Lucy is flirtatious/ Lucy is a flirt*. She draws attention here to the special role of the copula in English and to its relevance to predicate classification.

(13) The pretty girl laughed.

In this case, an entire proposition (embedded) appears to operate as the argument of the predicator.[27]

Clearly, predicators may be encoded as more than one word class. In the following example, I would argue that what is predicated of Mary is 'running quickly'.[28] Thus, 'run quickly' is, in my analysis, the encoded predicator:[29]

(14) Mary ran quickly.

Thus, a verb and adverb combination may represent a single underlying predicator. It is relevant to note that part of the evidence for this position is that some languages such as, for example, English, have verbs such as 'amble' and 'saunter' which encode the manner in which actions are executed as well as the actions themselves. Additional evidence relates to the fact that there are examples of pairs (one containing a verb; one containing a verb plus an adverb) that are interchangeable (except from a stylistic perspective) such as:

He *repeated* it; he *did* it *repeatedly*
He *boasted*; he *spoke boastfully*
He *hastened* towards . . . ; He *went hastily* towards . . .

Furthermore, certain prepositional groups (e.g., *in a deliberate manner; in a rush*) can function in the same way as adverbs (*deliberately*) or verbs (*rushed*). Crombie (1985b, p. 99) notes that the semantic predicator is the same in *Lucy flirts, Lucy is flirtatious* and *Lucy is a flirt* although in one case it is expressed as a verb, in another as a verb plus a determiner and a noun, and in another as a verb

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[27] Attribute adjectives and certain types of nominalisations appear to function differently in terms of case relations. Whereas a noun group containing an attributive adjective appears to operate as a single argument, a noun group containing a noun that is derived from a full lexical verb appears to operate as a full proposition. Thus, there appears to be an inter-propositional relation involving causation in 'His *intervention* led to her distress'.

[28] This analysis differs from those in which all adverbials are excluded from the proposition.

[29] In the case of an example such as *Mary ran quickly*, decomposition into *Mary ran. The running was quick* would not be indicative of two propositions since 'the running' and 'was' in 'the running was quick' is simply another way of expressing the verb 'ran' (i.e. run + past). It is a predicator (irrespective of its form), not a propositional argument.

plus an adjective. This example could be extended to cover adverbs (e.g., *Lucy behaves flirtatiously*).

Approaching the proposition strictly in terms of arguments and predicators in the way suggested above removes a number of problems that are associated with Fillmore's proposal, problems that would make it difficult to apply his model to languages which are structured very differently from English. It would, furthermore, provide a coherent way of dealing with propositional embedding and with those adjectives, adverbs and prepositions in English which create difficulties in relation to the original model.

It has already been suggested that there may be no need for a *Benefactive* role (see p. 16: discussion of example (4)). Equally, what Fillmore (1968) refers to as the *Comitative* role appears to be unnecessary. In terms of propositional content, there is no fundamental difference between 'John' and 'Mary' and 'John . . . with Mary': the difference appears to be purely a matter of surface emphasis. Thus, in both 'John and Mary are leaving' and 'John is leaving with Mary', the argument could be said to be 'John and Mary'. Thus, redefining the term 'proposition', and recognising the fact that there are relationships *between* propositions as well as *within* them, allows for the reduction of case roles/ relations within Fillmore's initial model to seven: *Agentive, Instrumental, Dative, Factitive, Objective, Locative* and *Time*. Note, however, that I argued earlier for a combination of *Dative* and *Objective* and the division of *Factitive* into three separate relations: *Factitive* and *Appertainment* with the addition of *Result* (see p. 12). Replacing references to verbs in the descriptions by references to predicators, and acknowledging that predicators need not be encoded as verbs would have the effect of making the model more likely to be applicable to a wide range of languages. Finally, consideration needs to be given to the use of the words 'animate' and 'inanimate' in the definitions of the remaining case roles/ relations *Instrumental* and *Dative*.[30] I have already raised the issue of the cultural relativity of concepts such as 'agency' and 'animacy' (see p. 12). Māori culture (in common with a range of other cultures) recognises that many things are imbued

[30] Although 'typically animate' is used with reference to *Agentive*, 'animate' is used with reference to *Instrumental* and *Dative*.

with *mauri* (life principle). It may, therefore, be inappropriate to differentiate between 'animate' and 'inanimate' in defining case roles/ relations unless these concepts are explicitly presented as being relative ones.[31] Two of the examples of the *Dative* case roles/ relations which Fillmore provides involve mental activity ('believed', 'was apparent'). In a further example, there is indirect mental activity on the part of the occupier of the *Dative* position ('was persuaded'). These issues will be examined in more detail with reference to the models discussion in later sections. At this point, it is important simply to note that a propositional analysis raises, for different reasons, questions about each of the following case roles/ relations: *Dative*, *Factitive*, *Locative*, *Objective*, *Benefactive*, and *Comitative.* Furthermore, it would appear to indicate the possible need for additional relations involving, for example, attribution (e.g., *Jane is pretty*) and direction (e.g., *Jane ran towards the dog*).

Combining the comments made here and in *section 2.2* would result in the case roles/ relations outlined in *Table 2.2* following:

***Table 2.2*: Summary of implications of comments (pp. 7-22) on Fillmore (1968) in terms of case role/ relations**

Fillmore (1968)[32]	**Model resulting from the comments on Fillmore (1968)**
Instrumental	***Instrumental***
Agentive	***Agentive***
Dative	***Objective***
Objective	
Locative	***Locative***
Factitive	***Factitive***
	Appertainment
	Result
Time	Ø
Comitative	Ø
Benefactive	Ø

[31] This point has particular relevance to parts of the model proposed by Grimes (1975) in which a distinction is made between *Agent* and *Force* on the basis of the concept of intentionality.

[32] *Time* is not included here because although Fillmore (1968, pp. 31-32), discusses the possibility of a *Time* relation, he does not he does not actually include one in his account.

2.4 Towards the classification and description of non-domain-specific case roles/ relations

2.4.1 Fillmore (1971)

The case roles/ relations proposed by Fillmore in 1968 underwent radical revision during a seminar devoted to syntax held in the summer of 1970 at Ohio State University. The changes are reflected in an article published the following year (Fillmore, 1971). In that article, Fillmore notes that his intention was "not [to provide] a proposal to eliminate deep structures altogether, but . . . to find a level of syntactic structure which was deeper than that offered by the then standard theory" (Fillmore, 1971, p. 245). In the revised theory, the propositional core consists of "a predicator (a verb, adjective or noun) in construction with one or more entities, each of these related to the predicator in one of the semantic functions known as (deep structure) cases" (pp. 246-247). These cases (or case relations) identify the roles that the entities serve in the predication, "including that of the instigator of an action, that of the experiencer of a psychological event, that of an object which undergoes a change or movement, that of the location of an event, and so on" (p. 247).

Once again, the predicator is expressed in terms of syntactic realisations although these no longer consist of the verb only. The model itself also remains tied to clause/ sentence structure. Although he acknowledges the significance of clause embedding, Fillmore argues that only one case role/ relation of any particular type may occur in a single clause. It would, I believe, have been more productive, in terms of the arguments forwarded here (*section 2.3*), to have acknowledged that a consequence of embedding is that a single clause in surface structure may have more than one case role/ relation (*intra*-propositional relationship) of the same kind *so long as* it involves the encoding of more than one proposition.

In Fillmore's revised model, a distinction is made between *Agent* and *Experiencer*. The case role/ relations are hierarchically organised in relation to subject selection in the case of 'unmarked' sentences, the hierarchical order being:

Agent, *Experiencer*, *Instrument*, *Object*, *Source*, *Goal*, *Location*,[33] *Time*, and *Benefactive*. At least one aspect of the presentation (the hierarchical ordering in the case of 'unmarked sentences') is clearly language-specific. There is no recognition of the significance of *inter*-propositional relationships. The tension between claims for the universality of case roles/ relations and the sometimes language-specific ways in which these relations are described remains. *Dative* is replaced by three case roles/ relations: *Experiencer*, *Object* (which was included in the earlier model) and *Goal* (p. 251). *Locative* is also replaced by three case roles/ relations: *Location, Source* and *Goal* (subsuming *Factitive*). Note that there are, in fact, five case roles/ relations here (*Goal* appears in each set). Although the *Comitative* role has been removed, *Benefactive* remains. However, there is considerable uncertainty about the inclusion of *Benefactive*: it is noted that "sentences with *Benefactives* in them really come from more complicated constructions in which . . . somebody offers some deed to somebody else" which in turn constitutes "an abstract verb of giving" (p. 261). Here, the consequences of Fillmore's failure to acknowledge more fully the implications of accepting that "[they] really come from more complicated constructions" is evident. A more coherent account would involve an *inter*-propositional relationship involving *Means* and *Purpose* (see discussion of example (4) on p. 16). Furthermore, it is, difficult to determine, on the basis of Fillmore's definitions of case roles/ relations in this article, whether, 'the car' in the case of 'John washed the car for Mary' should be seen as having undergone change (and, therefore, occupy the *Object* role). It *does*, however, fit with the *Object* role (then referred to as *Objective*) as defined earlier (Fillmore, 1968) in that it is a "thing" which is "affected by the state or action identified by the verb" (p. 24).

The five case roles/ relations that replace *Dative* and *Locative* are outlined in *Table 2.3*. The redefined *Time* relation and the relations remaining from the earlier model are outlined in *Table 2.4* below:

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[33] Fillmore refers to *Location* as *Place* in various parts of his discussion (pp. 251-252).

Table 2.3: **Case roles/ relations replacing *Dative* and *Locative* in Fillmore (1971)**

Case Role/ Relation	Description	Specific Features	Examples
Experiencer	The experiencer of a psychological event or mental state (p. 247).[34]	• Excludes non-psychological change of state verbs (i.e., *grow*) (p. 251). • Does not include transfer of property verbs (i.e., *give*) (p. 251).	(i) **John** loves Mary (p. 262). (ii) **I** am cold (p. 249). (iii) **I** imagined the accident (p. 261) (iv) The noise frightens **me** (p. 261).
Object	Semantically the most neutral relation (p. 251). The entity, which moves or undergoes change (p. 252).	• Includes non-psychological change of state verbs (i.e., grow, die) (p. 251). • Sentences embedded to Object can serve to identify the content of a psychological event (p. 251).	(i) The man broke the window (p. 252). (ii) The wind opened the door (p. 252). (iii) John hit the fence with his cane (p. 255). (iv) I imagined the accident (p. 261)
Goal	End point of a motion, state or time (p. 250).	• Transfer or movement of something to a person (p. 250). • Place towards which a motion tends (p. 250). • Final location with motion verbs (p. 250). • Final state with change of state verbs (p. 250). • Final time with time points (p. 250)	(i) I wrote a poem (p. 252). (ii) He went from the top of the hill to the cemetery gate (p. 250). (iii) He grew from a 96-pound weakling into a famous football hero (p. 250). (iv) The pageant lasted from sundown until midnight (p. 250).

[34] It might be useful to note here that Van Valin (2001, p. 27) claims that *Experiencer* subsumes perceivers (e.g., Hearer; Smeller), cognizers (e.g., Thinker; Believer) and emoters (e.g., Liker; Hater).

Table 2.3 (continued): **Case roles/ relations replacing *Dative* and *Locative* in Fillmore (1971)**

Case Role/ Relation	Description	Specific Features	Examples
Location	Place where an object or event is located (pp. 249-258).	• Optional complement of essentially any predicator (p. 258).	(i) The beer was in the garage yesterday (p. 258). (ii) I lived in Milwaukee in the forties (p. 258). (iii) This room is warm (p. 249).
Source	The origin or starting point of a motion, state or time (p. 250).	• Refers to the place from which the motion begins (p. 250). • Earlier location with motion verbs (p. 250). • Earlier states with change of state verbs (p. 250). • Earlier time with time points (p. 250).	(i) He walked from the top of the hill to the cemetery gate (p. 251). (ii) He grew from a 96-pound weakling into a famous football hero (p. 250). (iii) The pageant lasted from sundown until midnight (p. 250).

Table 2.4: **Case roles/ relations retained from Fillmore (1968) in Fillmore (1971)**

Case Role/ Relation	Description	Specific Features	Examples
Agent	Instigator of the action identified by the verb (the principle cause of the event) (p. 251).	• Does not include natural forces (e.g., wind) (p. 253). • The preposition 'by' is no longer associated with Agent because it is introduced as a result of the operation of the Passive transformation (p. 252).	(i) The man broke the window (p. 252). (ii) John broke the window (p. 253). (iii) John hit the fence with his cane (p. 255). (iv) I wrote a poem (p, 252).

Table 2.4 (continued): **Case roles/ relations retained from Fillmore (1968) in Fillmore (1971)**

Case Role/ Relation	Description	Specific Features	Examples
Instrument	The immediate cause or stimulus of an event as opposed to the Agent as the principle cause (p. 251).	• Natural forces such as wind are called Instruments (p. 253).	(i) This jacket is warm (p. 249). (ii) The man broke the window with a baseball (p. 253).
Time	The time in which an object or event is located (p. 258).	• Optional complement of essentially any predicator (p. 258).	(i) The beer was in the garage **yesterday** (p. 258). (ii) I lived in Milwaukee **in the forties** (p. 258). (iii) **Summer** is warm (p. 249).
Benefactive	The one who benefits from an event or activity (p. 261).	• Occurs only in sentences with *Agents* (p. 261). • *Agent* role is thought of as being deliberate or voluntary (p. 261).	John did it for **me** (p. 261).

The distinction between *Agent* and *Experiencer* appears to be acceptable in relation to Fillmore's semantic classification of predicator types. Furthermore, distinguishing these two roles/ relations from the relation referred to as *Object* captures a perceptual distinction between direct involvement with a predicator (*Agent* and *Experiencer*) and indirect involvement (*Object*). The *Source* and *Goal* roles/ relations capture a distinction that appears to be fundamental in the case of movement or change of state. What is more, the *Location* role/ relation makes particular sense in terms of a language such as Māori in which there is no equivalent of the copula 'to be' in English (see discussion of example (6) here: *section 2.3*, pp. 17-18). There are, however, problems.

Examining this model in relation to my comments on Fillmore's earlier model (pp. 7-22) indicates that some of the issues raised there have been addressed. Even so, others remain unresolved.

The new *Object* role/ relation would appear to include both animate and inanimate affected entities (thus incorporating the roles/ relations earlier labelled *Dative* and *Objective*). However, in a sentence such as *John insulted Mary*, 'Mary' cannot be treated as *Object* in that there is no necessary change involved. Examples such as this could, however, be accommodated in a revised definition of *Goal*.

The introduction of *Experiencer* is interesting, especially as this allows for a potential distinction between *Experiencer* and *Location* in the case of examples such as *John is cold* and *Wales is cold*, and between *Agent* and *Experiencer* in the case of examples such as *John listened to the music* and *John heard the music*. However, the *Location* role is defined in a way that would actually make it difficult to accommodate examples such as *Wales is cold* unless 'cold' could be classified as an "an object or event" (p. 258).

In the case of *Goal*, there are issues relating to the inclusion of motion, state *and* time. In two of the examples relating to *Goal*, change involves a change of state (example (iii)) and a change of location (example (ii)). Example (i) *I wrote a poem* involves a very different sense of change – change from non-existence to existence. Example (iv) relates to duration rather than location. Several different types of relationship seem to be subsumed here within a single category. Similar observations could be made with reference to *Source*.

Accommodating my comments on this model (pp. 23-28) and the previous one would result in the case roles/ relations outlined in *Table 2.5* following:

Table 2.5: **Summary of implications of comments (pp. 23-28) on Fillmore (1971) in terms of case roles/ relations**

Fillmore (1971)	Model resulting from the comments on Fillmore (1971)
Agent	*Agent*
Experiencer	*Experiencer*
Instrument	*Instrument*
Object	*Object*
Source	*Source*
Goal	*Goal*
Location	*Location*
Time	*Time*
Benefactive	∅

2.4.2 Chafe (1970)

Chafe (1970) presents a model based on two major conceptual spaces. He refers to these as **(a)** the area of the verb, embracing states (conditions and qualities) and events, and **(b)** the area of the noun, embracing 'things' (both physical objects and reified abstractions) (p. 96). In fact, the two areas of 'conceptual space' would seem to represent arguments and predicators, and so there seems to be no need to make direct reference to nouns and verbs (which may be involved in encoding but are not directly relevant to propositions as abstract meaning representations). If this were accepted, the model could more readily accommodate languages such as Māori (see discussion of example (6), pp. 17-18). It would allow for a situation in which:

- a single clause encoding more than one proposition could be said to include more than one instance of the same case role/ relation;
- a predicator could be accepted as being represented by non-verbal elements or by a combination of verbal and non-verbal elements.[35]

[35] Johnson and Fillmore (2000) note that in the FrameNet corpus-based computational lexicographic project the predicate/argument structures of verbs, adjectives and nouns are annotated. As indicated earlier (see discussion of example (5) on p. 17), prepositions may also realise/encode predicators.

A significant aspect of Chafe's proposal is the observation that some clauses do not encode propositions. These 'ambient' clauses are said not to have arguments (see examples (15) - (17) below):

(15) It's raining.
(16) It's hot.
(17) It's late.

In fact, however, it could be argued that all of these examples *do* include an argument. When example (15) is reworded as 'Rain is falling', it appears that the verb 'to rain' encodes both an argument (rain) and a predicator (fall). In the case of example (16), 'heat' could be said to be predicated of the environment (for which 'it' stands). Similarly, in example (17), though with less obvious justification, lateness can be said to be predicated of time.[36] In the last two examples, it would be possible to argue for a relationship of *Location*, the subject pronoun relating to the predicator in terms of the case role /relationship *Location*. In the first example, however, it would be necessary to establish a new category relating to weather. On balance, however, Chafe's argument is more persuasive in each case. Thus, *Rain/ snow is falling* and *The wind is blowing* could be regarded as metaphoric extensions of single predicators (as opposed to predications). [37]

Chafe distinguishes between intrinsic and derived verbs, intrinsic verbs being transformed into derived verbs by means of derivational processes (pp. 119-143). The system of derivation includes categories such as inchoative, resultative, causative, deactivative and deprocessive.

Inchoative is a derivational process that converts an intrinsic state verb into a derived process verb. Chafe notes that in the surface structure of English, the presence of the inchoative "is sometimes reflected by the suffix *en*, sometimes in a different way (as *heat* from *hot*), sometimes not at all (as with *open*), and occasionally, as with *tired* and *tire*, there may be a perverse postsemantic

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[36] The problem here may be more apparent than real in that 'time' can be seen simply as an abstract argument.
[37] Note Māori '*kei te ua*'/ 'It's raining': TAM (CONT) + N (rain).

development" (p. 123). Thus, for example, in (18) (19) and (20), we have derived process verbs:

(18) The street widened.
(19) The fire heated the room.
(20) John tires.

These examples can be compared with examples that include a verb ('became') and an adjective ('wide'/ 'hot'/ 'tired'). The relationship between the predicator and argument in each case seems to involve a change of state (referred to by Crombie (1985b, p. 102) as *Mutant*).

Resultative converts an intrinsic process verb into a derived state verb. This derivational process is the opposite of inchoative: here a state is derived from a process (c.f. examples (21) and (22) below):

(21) The dish broke.
(22) The dish is broken.

The first example above appears to involve, as in the case of examples (18) to (20), change of state. The second example (22) seems to involve attribution of some type.

Causative converts an intrinsic or derived process verb into a derived action-process verb. The causative derivational process is similar to the inchoative. Here, however, a verb root which is a process (either intrinsically or as a result of a prior derivation) is converted into one that is derivatively both a process and an action. Chafe notes that "such a derived verb will then require the accompaniment not only of a patient but also of an agent" (p. 129). Thus, in example (23), we have an action-process verb:

(23) John broke the dish.

Example (23) above involves the roles/ relations referred to by Fillmore (1971) as *Agent* and *Object*.

Deactivative converts an intrinsic action-process verb into a derived process verb. This process is the opposite of the causative and applies only "under limited circumstances" (p. 131). Thus, in example (24) below, there is an intrinsic action-process verb; in example (25), there is a derived process verb, the agent having been removed during the derivational process:

(24) John is cutting paper.
(25) The paper cuts easily.

Examples (24) and (25) above involve the roles/ relations referred to by Fillmore (1971) as *Agent* and *Object*, although the agent position is not filled in example (25).

An examination of examples (18) - (25) above demonstrates the way in which the operation of derivational processes can account for surface structure clauses in which arguments and predicators may be expressed in a range of different ways.[38] Thus, in example (26) below, the predicator is encoded as a verb ('widened'), whereas in example (27), it is encoded as a verb plus an adjective. Similarly, in example (28), the predicator is encoded as a verb ('tires'), whereas in example (29), it is encoded as a verb plus an adjective:

(26) The street widened.
(27) The street became wider.
(28) John tires.
(29) John becomes tired.

What this demonstrates is the importance of avoiding linking categorisation directly with specific parts of speech, and, hence, the significance of retaining the terms 'argument' and 'predicator' in any discussion of case roles/ relations.

Chafe lists seven roles/ relations (which he refers to as noun-verb relations). These are *Patient*, *Agent*, *Experiencer*, *Beneficiary*, *Instrument*, *Complement*, and

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[38] Processes of this type appear to be responsible, at least in part, for the fact that, as Longacre (1996, p. 13) observes, "surface structure . . . may be thrown out of phase with . . . notional structure".

Location (1970, p. 163). *Patient* is described as being required by state or process verbs, provided that the verb is not also classified as ambient, *Agent* as being required by action verbs (again provided that the verb is not ambient).

In summary, the overall approach adopted by Chafe has something important to offer in that it contributes towards an understanding of why it is that predicators can be encoded in a range of different ways. However, the fact that the analysis of 'conceptual spaces' is discussed in terms of nouns and verbs rather than predicators and arguments is unfortunate. Had it been expressed in terms of predicators and arguments, it would have:

- clearly revealed the need to accommodate the fact that a clause may encode more than one proposition;
- indicated that *intra*-propositional relationships need not always involve nouns/ noun groups and verb/ verb groups;
- been more inclusive in relation to non-Indo European languages such as Māori.

2.4.3 Anderson (1971)

Anderson (1971) argues in favour of what he presents as a more 'abstract view' (p. 10) of case than is found in Fillmore (1968), defining case roles/ relations as "*grammatical relations* contracted by nouns which express the nature of their 'participation' in the 'process' or 'state' represented in the sentence (or noun phrase)" [emphasis mine](p. 10). He notes that these roles can be "represented superficially in various fashions, including inflexionally and by pre- and postpositions" (pp. 10-11), believing that languages differ "with respect to how they divide up minimal semantic fields . . . [and] in the particular transformational operations performed on these underlying representations" (p. 15), and assuming that "the underlying representations (with respect to which selectional restrictions can be formulated) [are] considerably more 'abstract'" (p. 16). This 'abstractness' may be manifested in various ways and "the differences between the underlying representation for a sentence and its surface structure [will] . . . often [be] very great – even though the alphabets of elements and the 'construction types' involved show considerable overlap" (p. 16).

Anderson develops his model in terms of a dependency grammar in which the surface structure is dependent on an initial governing verb.[39, 40] Thus, "the case elements can be interpreted quite naturally as expressing the relation contracted between their dependent nouns and the governing verb" (p. 30). He notes that in this dependency framework "verbs (or 'predicators') and nouns are 'basic' with regard to different aspects of the semantic representation". Thus, "[verbs] are central relationally: they govern the case functions contracted by nouns", whereas "[nouns] are primary referentially . . . they terminate (non-recursive) dependency trees" (p. 31, f.n. 1). Anderson proposes semantics as opposed to syntax as the basis for sentence generation. Thus, semantic structure is formed by semantic formation rules including 'sub categorization rules' which add features to the verb (p. 20), 'dependency rules' which add nouns to verbs in accordance with these rules (p. 31), and 'transformational rules' which relate the semantic representations to surface structure (pp. 24-25).

Before considering the case roles/ relations that Anderson proposes, it may be helpful to look more closely at the way in which he introduces his discussion. First, it should be noted that case roles/ relations are said to be grammatical in nature (p. 10). Secondly, although he observes that these roles/ relations may be represented in various ways and acknowledges that languages differ in terms of what is assigned to each case role/ relation, he continues to rely on a description in which reference to nouns and verbs is central. In attempting to apply Anderson's model to Māori, Bauer (1981) encountered a number of problems. In connection with this, she makes two very important observations. First, she notes that "much of the argumentation in Anderson (1971) centres around the notion of 'stative', which Anderson closely associates with *be*" for which there is no equivalent in Māori. Secondly, she observes that it is "far from easy to discover what in that account is to be regarded as language-universal, and what is specific to English" (p. 198).

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[39] It will be immediately apparent that this approach is very firmly linked to the syntactic structure of English. It is, however, also pitched at a level of generality that seems to have prepared the way for later discussion of macro-roles/proto-roles (see, for example, Dowty, 1991; Frawley, 1992; Van Valin, 1993).

[40] Anderson's formulation had a significant influence on Longacre's later work (1996, p. 156) to the extent that he assigns greater significance to *Source*, *Goal*, and *Path* than was evident in the work of either Fillmore (Fillmore, 1968, 1971, 1977b) or Chafe (1970).

Anderson includes four case roles/ relations: *Nominative*, *Ergative*, *Locative*, and *Ablative* (see *Table 2.6 following*):

Table 2.6: **Case roles/ relations according to Anderson (1971)**

Case Roles/ Relations	Description	Specific Features	Examples
Nominative	Notionally the most neutral case that is obligatory with every predication (p. 37).	• Has a ± stative feature (p. 39). • Verbs with a + stative feature have a dependency rule which introduces the copula in English (p. 39).	(i) **John** died (p. 37). (ii) **John** sneezed (p. 37). (iii) **John** is dead (p. 37). (iv) **It** is snowing (p. 50). (v) **It** is hot (p. 50).[41]
Locative	Indicates the spatial location of a *Nominative* (p. 81).	• Every verb is subcategorised with a ± locative feature (p. 83). • Stative locatives are characterised by *in*, *on*, *at*, etc. (p. 81). • With BE + Locative 'be' (be located) is added as a main feature to the verb (p. 88). • Includes 'affected verbs' (e.g., *understand*, *need*, *hate*, *love*, and *like*) (pp. 102-103). • Also includes verbs of possession (p. 107).	(i) The statue stands on a **plinth** (p. 81). (ii) He remained in **London** (p. 81). (iii) The apples are in the **box** (p. 89). (iv) The **box** contains the apples (p. 89). (v) **John** is cold (p. 96). (vi) **I** have a compass (p. 113). (vii) Many **people** know part of the truth (p. 100). (viii) Part of the truth is known by many **people** (p. 100).[42]

[41] These examples clearly illustrate the centrality of syntax in this model. The last two of the examples would be treated by Chafe (1970) as involving a predicator without any argument – as being, therefore, non-propositional.

[42] The last two examples appear to be very different in terms of relational meaning from the others.

Table 2.6 (continued): **Case roles/ relations according to Anderson (1971)**

Case Roles/ Relations	Description	Specific Features	Examples
Ergative	The instigator of the action associated with the verb (p. 40).	• Typically animate rather than necessarily animate (p. 40, fn. 1). • Has a ± reflexive rule which attaches the Nominative to the *Ergative* when the *Ergative* is reflexive (p. 51).	(i) **Egbert** read the book (p. 40). (ii) **Egbert** killed the seagull (p. 40). (iii) **Egbert** worked (p. 62). (iv) **Egbert** was cautious (p. 63).[43]
Ablative	Locates directional and dynamic location (p. 119).	• Every *Locative* has a ± directional feature (- directional for stative locatives and + directional for dynamic locatives) (p. 119). • There are two locational phrases either present or implied (p. 119). • The prepositions used are directional (e.g., *from, out of*) (p. 119). • Notionally non-stative (p. 119). • Includes transfer of property verbs (p. 121).	(i) The ball rolled from **Jane to Mary** (p. 119). (ii) He has come here from **London** (p. 120). (iii) The fog stretched from **London to Brighton** (p. 124). (iv) The book was sold by **John to Mary** (p. 129). (v) The book was bought from **John by Mary** (p. 129). (vi) Mary has learnt Greek from **John** (p. 138).

[43] Once again, the syntactic motivation is clear. The final example does not appear necessarily to involve instigated action.

The four case roles/ relations proposed rely on three binary semantic distinctions: stative/ non-stative; directional/ non-directional; locative/ non-locative. Where these three binary distinctions do not apply, direct reference is made to the syntax of English. Thus, in spite of the fact that it could be argued that 'it' in '*It is snowing*' or '*It is raining*' is simply a 'place holder' for subject position in English, and in spite the fact that many languages (including Māori) have no equivalent of the copula 'to be' in English, 'it' in these sentences is classified as representing the same case role/ relation as 'John' in '*John died*'. In view of this, Anderson's claim that his case roles/ relations are 'more abstract' than are those proposed by others, can be seen as only partly true. They are, in some respects, more concretely based on English syntax than are any of the models discussed thus far.

2.3.4 Grimes (1975)

A number of other models of case roles/ relationships were forwarded in the 1970s. Thus, for example, Platt (1971) situates his model within the framework of tagmemic theory. However, the actual relations listed are little different from those listed by Fillmore (1971). Cook (1979) develops an integrated case grammar matrix model in which there are five case roles/ relations: *Agent*, *Experiencer*, *Benefactive*, *Object* and *Locative*. Once again, the model adds little to those outlined above (i.e., those of Anderson, 1971; Chafe, 1970; Fillmore, 1968, 1971).

One framework that *is* different in some significant respects is that of Grimes (1975) in which a distinction is made between orientation roles (orientation to motion or position), process roles (dynamic aspect of change of state and static aspect of stable states) and agentive roles (causative) (see *Tables 2.7*, *2.8*, and *2.9* following):

Table 2.7: **Orientation roles according to Grimes (1975)**

Orientation roles	Description	Specific Features	Examples
Object	The thing that is moving in the dynamic case, or the thing that is in a particular position in the static case (p. 120).	• The thing whose orientation to its physical environment is given by the predicate (p. 120).	(i) **Water** flows downhill (p. 120). (ii) **A statue** sits on the pedestal (p. 120). iii) **The letter** fell from her hand (p. 120).
Source	Identifies the location of the object at the beginning of the motion, the initial boundary of the event (p. 120).	• Applies to motions but not positions (p. 120).	The letter fell from **her hand** (p. 120).
Goal	Identifies the location of the object at the end of the motion, the terminal boundary of the event (p. 120).	• At end of the motion, the object is in a position identified by the *Goal* relation (p. 120).	The letter fell to **the floor** (p. 120).
Range[44]	Location of a static entity or the path or area traversed by a moving entity. It can apply to meteorological (ambient) predicates (p. 121).	• With expressions of motion, *Range* indicates the path or area traversed (p. 121). • With position, *Range* indicates static location (p. 121). • Associated with ambient predicates (meteorological) (p. 121).	(i) The ball rolled down **the hill** (p. 121). (ii) **Ithaca** is cold (p. 121). (iii) His house is situated on **top of a hill** (p. 121). (iv) It is cold in **Ithaca** (p. 121).
Vehicle	Something that conveys the object and moves along with it (p. 122).		(i) The letter came by **plane** (p. 122). (ii) **The tide** floated the oil slick into the harbour (p. 122).

[44] It is not clear whether this category would include examples such as *Mary is cold* or whether these, and examples such as *Mary is happy*, would be included under the heading of *Patient*. What this suggests is the need for an experiential relation.

Table 2.8: **Process roles according to Grimes (1975)**

Process roles	Description	Specific Features	Examples
Material	The entity that undergoes a process of becoming (p. 125).	• Occurs with *Result* relations (p.125). • Either the *Material* or *Result* relation must combine with *Patient* (p. 125).	She makes dresses from **flour sacks** (p. 125).
Result	The entity that results from a process of becoming (p. 125).	• Occurs with *Material* relations (p. 125). • Either the *Result* or *Material* relation must combine with *Patient* (p. 125).	She makes flour sacks into **dresses** (p. 125).
Patient[45]	The relation between a thing that gets changed and the process that changes it, or in the static sense, between a thing that is in some state and the state that it is in (p. 123).	• Can be a gradual process or abrupt (p.123). • Processes end, leaving the things that undergo them in some terminal state (p. 123). • Psychological processes such as perception and feelings employ the *Patient* relation to identify who perceives or feels (p. 124).	(i) **The snow** melted (p. 123). (ii) **The foundation** cracked (p. 123). (iii) The chef melted **the butter** (p. 123). (iv) **The butter** melted (p. 123). (v) The snowflake is **white** (p. 124). (vi) The foundation is **cracked** (p. 124). (vii) **I** hear (p. 124). (viii) **I** am dizzy (p. 124).
Referent	The limitation of a process to a certain field or an object from the actual application of a process to a patient (p. 125).	• Limits the process to a field (p. 125).	(i) We talked about **politics** (p. 125). (ii) This book costs **three dollars** (p. 125).

[45] The last two examples in this category relate to a mental process (*I hear*) and an experiential state (*I am dizzy*) (or what Van Valin (2001) identifies as perception and emotion) and appear to be very different in terms of relational meaning from the others.

Table 2.9: **Agentive roles according to Grimes (1975)**

Agentive roles	Description	Specific Features	Examples
Agent	Identifies who/ what is responsible for an action (p. 126).	• Occurs with process and orientation roles (p.126).	(i) **My wife** made the cake (p. 126). (ii) **The quarterback** threw the ball (p. 126). (iii) **Fred** fixed the engine with his screwdriver (p. 126).
Instrument	Entity by means of which an action is carried out (p. 128). It can be metaphoric.	• If a person or part of that person is used in the instrument role, their body part is the object referred to, not the person acting independently (p. 128).	(i) The locomotive cleared the track with **a snowplough** (128). (ii) He parted the rope with **an axe** (128). (iii) He convinced the jury with **a syllogism** (129).
Force	Non-instigative cause (p. 131).	• Asserts a causal relation devoid of responsibility (p. 131). • Incompatible with both *Agent* and *Instrument* (p. 131). • May take the prepositions *of, from, on,* or *in* (in English)	(i) **Malaria** killed the girl (p. 131). (ii) The girl died of (from) **malaria** (p. 131).

Table 2.9 (continued): **Agentive roles according to Grimes (1975)**

Agentive roles	Description	Specific Features	Examples
Benefactive	Someone or something on whom or which an action has a secondary effect, good or ill (p.132).	• A supernumerary role that can be attached to almost anything (p. 132). • It has an agent (which must be coreferential with the agent of the base predicate), a referent (that indicates who the action affects), and a patient (which is the proposition that contains the base predicate) (p. 133).	(i) We chased the cats out of the attic for **her** (p. 132). (ii) The milk turned sour on **me** (p. 132).

There are, in relation to this model, some issues that need to be resolved. For example, it would seem, from a semantic perspective, important to distinguish between two (possibly three) types of meaning relation which are listed under the heading *Patient.* Consider the following two sentences:

(30) The **butter** melted.

(31) **John** heard the music.

On the basis of a distinction between the presence and absence of consciousness/ awareness, Crombie (1985b, p. 101ff.) distinguishes between two different relationships: *Mutant* (***The butter*** *melted*) and *Experiencer* (***John*** *heard the music*). Where a state (rather than a process) is involved, she uses the term *Durant* (p. 102). Thus she proposes three different relationships as occupying the perceptual space occupied by one in Grimes. Although she retains the term *Patient*, she uses it quite differently (that is, to refer to an entity or abstraction involved non-casually in an activity (p. 102)).

In Grimes' model, 'thirty dollars' in a sentence such as '*The meal costs thirty dollars*' is classified as *Referent*. It is unclear, however, how 'the meal' would be classified.

2.4.5 Crombie (1985b)

Crombie (1985b) classifies relations in terms of predicator type, noting that, "a single verb may function as more than one type", that predicators "need not be encoded . . . as verbs or verbal groups" (p. 99), and that, for example, in the case of *Jean is unhappy*, 'Jean' is the argument of the predicator 'unhappy' (p. 99). In the case of *Lucy flirts/ Lucy is flirtatious* and *Lucy is a flirt*, the semantic predicator is the same (p. 99). She classifies predicators into three types as follows (p. 98):

Type 1: **Dynamic** (involving mental or physical activity)
(a) *General activity* (e.g., write/ eat)
(b) *Momentary activity* (e.g., nod/ glance/ wink)
(c) *Transitional event* (e.g., arrive/ leave)
(d) *Mental activity* (e.g., choose/ decide)
(e) *Factitive* (activity which brings an entity/ entities into being) (e.g., build/ construct/ create/ fabricate/ produce)

Type 2: **Process** (involving processes in which there is no active, conscious activity) (e.g., deteriorate/ boil/ melt)

Type 3: **Stative**
(a) *Inert perception and cognition* (e.g., understand/ prefer/ like)
(b) *Relational* (e.g., own/ consist of/ contain).

She then divides states into material and experiential states and processes into material and experiential processes as follows (p. 100):

Type 1: **Material States**
e.g., It is (broken/ white).
It remains (green/ greasy).

Type 2: **Experiential States**

e.g., He feels (happy/ an idiot).
He remains (convinced).
It feels/ looks/ smells/ sounds (good).
She appears/ seems (upset).

Type 3: **Material Processes**

e.g., It became (sour).
It went (rancid).
He got/ grew (thin).
It turned (sour).

Type 4: **Experiential Processes**

e.g., He became/ got (excited).
He fell (sick).

She also discusses covert roles, verb encoded roles, nominalised predicates and dual predication (pp. 108-114):

Covert Roles:

John (*Patient*) was murdered by the king (*Agent*).
John (*Patient*) was murdered (*Agent* role is covert).

Verb-encoded Roles:

He (*Agent*) put water (*Patient*) on the roses (*Range*).
He (*Agent*) watered the roses (*Range*) ('watered' here is classified as a verbal predicate incorporating *Patient*)

Nominalised Predicates:

He (*Agent*) shaved John (*Patient*).
He (*Agent*) gave John (*Patient*) a shave.
He (*Agent*) shoved Mary (*Patient*).
He (*Agent*) gave Mary (*Patient*) a shove.

Dual Predication:

John made Alan weed the garden.
The matron had the nurse make the beds.

John embarrassed Peter.

John boiled the milk.

The relations are then classified in terms of predicator type and divided into five categories: causal, participation, orientation-transition, relational and abaxiant (with subcategories) (see *Tables 2.10*, *2.11*, *2.12*, *2.13*, *2.14*, *2.15* and *2.16*). The participation category is subdivided into activity-participation, process-participation and state-participation:

Table 2.10: **Crombie (1985b): Causal roles**

Intra- **propositional relations**	**Description**	**Specific Features**	**Examples**
Agent	Sentient entity carrying out an action (p.101).[46]	• Always sentient (p. 101).	(i) **Alan** signed the contract (p. 101). (ii) **The dog** ate the rat (p. 101).
Instrument	The entity by means of which an action is carried out (p. 101).	• Rarely sentient (p. 101). • Non-volitional (p. 101).	Alan broke the window with **a hammer** (p. 101).
Force	Non-sentient causative (p. 101).	• Precludes the explicit or implicit involvement of an agent (p. 101).	(i) **Typhus** killed the man (p. 101). (ii) **Curiosity** killed the cat (p. 101).[47]

A number of issues arise in connection with the *Causative* category. The distinction between *Agent* and *Force* appears to be semantically motivated. In the case of English, there is also a syntactic distinction which is reflected in the fact that what is referred to as *Force* cannot co-occur with *Instrument*. This distinction may, however, as indicated earlier (see p. 12), be culturally-relative. It may be

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[46] The descriptions of relations in Crombie (1985a) and (1985b) are different from those in Crombie (1987) where the influence of predicate calculus is more readily detectable.

[47] Although 'the cat' could be said to be the *Experiencer* (see Crombie, 1985b, p. 103), the nominalisation here suggests that 'curiosity' is treated *in this context* as an abstract *Force*.

this distinction is not a universal one. In Māori, for example, *whakapapa* (genealogy) includes reference to what would be treated as inanimate objects (e.g., mountains and rivers) in some other cultures; these are often said to be imbued with *mauri* (life/ spirit). However, there *are* objects (such as, for example, television sets) that are not generally treated as being imbued with *mauri*. It may therefore be that there is a critical distinction between animate and inanimate, but that it has different boundaries in different cultures.

The two examples of sentences involving the role referred to as *Force* here, both appear to be derived from two propositions which are linked *inter*-propositionally in terms of a type of cause-consequence relation (see examples (32) and (33) following):

(32) *The man died* because *he had typhus*.
(33) *The cat died* because *it was curious/ acted in a curious manner*.

In each case (examples (32) and (33) above), each of the two propositions necessarily exhibits a separate set of *intra*-propositional relations. The issue is, therefore, whether nouns such as 'typhus' and 'curiosity' can be said to enter into a particular *intra*-propositional relationship in this context. If so, it could be argued that that relationship would be *Agent* in the examples provided (in that the selection of the verb 'kill' could be taken as indicating that they are being treated metaphorically as animate arguments). There seems to be no justifiable basis for retaining *Force*. Rather, clauses in which inanimate subjects co-occur with verbs that generally require animate subjects are, except in the case of metaphoric transferred animacy, indicative of the presence of two propositions. Thus, in *Typhus killed the man*, 'the man' could be classified as *Mutant* (i.e., *The man died*, see *Table 2.12* following) and 'typhus' as *Affector* (see discussion on p. 50).

The example included under the heading *Instrument* is also problematic in that it too appears to be derived from two propositions (i.e., *Alan broke a window. He used a hammer*).[48] This could be described as involving an *inter*-propositional relation involving *Means-Purpose*. In this case, however, 'hammer' *would*

[48] Note, however, that 'used' presupposes intentionality whereas 'broke . . . with' does not necessarily do so.

occupy an *Instrument* role in one of the propositions. It therefore seems appropriate to retain the case role/ relation *Instrument*.

Table 2.11: **Crombie (1985b): Participation (Activity-participation) roles**

Intra- propositional relations	Description	Specific Features	Examples
Patient	The entity or abstraction involved non-causally in an activity (p. 102).	• An activity-participation role (p. 102) • Occurs with dynamic predicate types involving mental or physical activity (p. 102).	(i) He kicked **the dog** (p. 102). (ii) He chose **a shirt** (p. 102). (iii) He awarded **a medal** (p. 102). (iv) He rejected **the idea** (p. 102).
Assignee	The sentient entity (or collection of sentient entities) to whom/which the patient of an activity predicate is assigned (p. 102).	• An activity-participation role (p. 102). • Occurs with dynamic predicate types: general activity, momentary action, and mental activity (p. 102).	He awarded a goal to **the team** (p. 102).
Material	The entity that undergoes a process of becoming (p. 102).	• Occurs with factitive predicates (p. 102). • Occurs with *Result* relations (p. 102).	(i) She creates puppets from **gloves** (p. 102). (ii) She makes **clay** into bowls (p. 102).
Result	The entity that results from a process of becoming (p. 102).	• Occurs with factitive predicates (p. 102). • Can occur with *Material* relations (p. 102).	(i) She creates **puppets** from gloves (p. 102). (ii) He knitted **a sweater** (p. 102).

As the examples demonstrate, the activity involved in the case of *Patient* (as in the case of *Agent*) can be either mental or physical as is indicated under the heading of 'Specific Features' in the *Table*.

Table 2.12: **Crombie (1985b): Participation (Process-participation) role**

Intra- **propositional relations**	**Description**	**Specific Features**	**Examples**
Mutant	The entity that is changed by a process (p. 102).	• ± sentient (p. 102). • A process-participation role (p. 102). • Occurs with process predicates (p. 102).	(i) **The butter** melted (p. 102). (ii) **The plant** grew (p. 102). (iii) **The boy** grew tired (p. 102).

Table 2.13: **Crombie (1985b): Participation (State-participation) role**

Intra- **propositional relations**	**Description**	**Specific Features**	**Examples**
Durant	The entity that is an identified state (p. 102).	• ± sentient (p. 102). • A state-participation role (p. 102). • Occurs with stative predicates (p. 102).	(i) **The door** is green (p. 102). (ii) **The toy** is broken (p. 102).
Experiencer	The entity directly involved in an experiential state (p. 103).	• + sentient (p. 103). • A state-participation role (p. 102). • Occurs with stative predicates (p. 102).	(i) **He** heard the music (p. 103). (ii) **He** feels hungry (p. 103). (iii) **He** likes music (p. 103).
Appertainant	The entity or abstraction experienced in a particular way by a sentient entity (p. 103).	• ± sentient (p. 103). • A state-participation role (p. 102). • Occurs with stative predicates (p. 102).	(i) He heard **the music** (p. 103). (ii) He likes **John** (p. 103).

In the case of the *Durant* role, what we have is attribution of state. This might logically also include examples such as ***The girl** is pretty*.

Table 2.14: **Crombie (1985b): Orientation-Transition roles**

Intra- **propositional relations**	**Description**	**Specific Features**	**Examples**
Object	The entity described as being in a particular location or as being involved in a transitional event or a metaphoric transition (p. 103).	• ± sentient (p. 103).	(i) **The coin** rolled down the hill (p. 103). (ii) **The book** is in the drawer (p. 103).
Source	The location of an entity at the beginning of a movement (p. 103).	• Occurs with a *Goal* relation (p. 103). • Physical movement may not be involved: movement may be metaphorical (p. 103).	(i) The book fell from **the table** to the chair (p. 103). (ii) The book was passed from **Mary** to John (p. 103). (iii) The house passed from **father** to son (p. 103).
Goal	The location of an entity at the end of a movement (p. 103).	• Occurs with a *Source* relation (p. 103). • Physical movement may not be involved: movement may be metaphorical (p. 103).	(i) The book fell from the table to **the chair** (p. 103). (ii) The book was passed from Mary to **John** (p. 103). (iii) The house passed from father to **son** (p. 103).
Range	The location of a static entity or the path or area traversed by a moving entity (p. 103).	• *Range* is associated with meteorological (ambient) predicates (p. 103).	(i) The cat is on **the bed** (p. 103). (ii) The egg rolled down **the hill** (p. 103). (iii) **Scotland** is cold (p. 103). (iv) It is cold in **Scotland** (p. 103).

In the case of the orientation-transition roles, there appears to be a clear distinction between static location and movement which is not clearly reflected in either *Object* or *Range*. It seems therefore that *Object* should be divided into two

separate relations – e.g., *Static* and *Transitional.* Similarly, it seems that *Range* should be divided into two separate relations – *Location* and *Transition.* However, the distinction between static and transitional is one that relates to predicator type. Transitional roles occur with transitional event predicators. Static location involves a further type of static predicator – static location.

We have, therefore, two relations relating to static location (which I shall refer to as *Located* and *Positional Range*) and one relating to transitional event (which I shall refer to as *Transitional Range*). This would exclude predicators relating to the starting point (e.g., 'left') or end point (e.g., 'arrive') of a transitional event. In such cases, the emphasis is on a point in time rather than temporal transition and so such predicators are actually locational state predicators. Thus, *He arrived at the house at ten o'clock* would involve *Located* ('he'), *Positional Range* ('house') and *Temporal Location* ('ten o'clock').

It should also be noted that *Goal* involves metaphoric as well as real motion.

Table 2.15: **Crombie (1985b): Relational roles**

Intra- **propositional relations**	**Description**	**Specific Features**	**Examples**
Referee	The entity or abstraction to which a relational predicate is linked (p. 104).	• + sentient (p. 104).	(i) It concerns **him** (p. 104). (ii) It fits **her** (p. 104). (iii) **He** deserves a prize (p. 104).
Referent	The entity to which a *Referee* is linked through a relational predicate (p. 104).	• ± sentient (p. 104).	(i) **It** concerns him (p. 104). (ii) **It** fits her (p. 104). (iii) He deserves **a prize** (p. 104).
Quantant	The expression of extent to which an entity is linked by a relational predicate.	• Occurs with either a *Referent* or *Referee* relation (p. 104).	(i) The book costs **eighty pence** (p. 104). (ii) He weighs **one hundred and eighty pounds** (p. 104).

The relational role category requires re-examination. One problem is the fact that *Referee* is defined as "the entity to which a relational predicate is linked" (p. 104). However, a relational predicate is linked to *both Referee* and *Referent*:

> *Referee*: The entity/ entities to whom/ which something is assigned in the case of a relational predicate.
> *Referent*: Whatever is assigned to a *Referee* in the case of a relational predicate.

The examples of relational roles provided by Crombie raise a number of issues, as does the omission of examples involving possessive predicators (such as, 'have', 'own') in the case of, for example, *He has a car* and associative predicators such as 'have' in the case of, for example, *He has typhus*.

If it is appropriate to identify *Quantant* as a separate role, then it appears also to be appropriate to identify other roles such as *Possessed* and *Affected;* the roles associated with them being classified here as *Quantified* ('the book'), *Possessor* ('he') and *Affected* ('the man') respectively.

The book costs <u>eighty cents.</u>
Quantant
He has/ owns <u>a car.</u>
Possessed
The man has <u>typhus.</u>
Affector

The remaining examples (those that cannot be classified in this way) are:

It fits her.
It concerns her.
He deserves a prize.

In the case of examples such as *It fits her*, and, for example, *It suits the room*, what we appear to have is not a relational predicator, but a locational state predicator:

It fits on her.

It is suitable in the room.

Thus, 'it' in both cases could be classifiable as *Located* and 'room' and 'her' as *Positional Range*.

In the case of examples such as *It concerns her* and *He deserves a prize*, the object of concern ('her') and of reward ('he') is identified here as *Relational Goal* and the arguments 'it' and 'a prize' as the *Relational Specifier*:

It	concerns	her
Relational Specifier		*Relational Goal*

He	deserves	a prize
Relational Goal		*Relational Specifier*

Note that *It concerns her* is ambiguous. It can also be construed as *She is concerned about it*. In that case, we would have an experiential rather than a relational predicator and the roles *Experiencer* ('she') and *Appertainant* ('it').

Table 2.16: **Crombie (1985b): Abaxiant role**

Intra- **propositional relations**	**Description**	**Specific Features**	**Examples**
Abaxiant	Entity affected by an action or process but not directly involved in action/process or in its outcome (p. 104).	• + sentient (p. 104).	(i) She washed the car for **me** (p. 104). (ii) He welcomed the guests on **my** behalf (p. 104). (iii) The milk turned sour on **me** (p. 104).

I would justify the removal of *Abaxiant* role on the same grounds as removal of the *Benefactive* role from the models discussed earlier in this chapter (see p. 13).

This would result in a model such as the following:

1) Roles associated with activity predicators (other than transitional activities):

Agent, Instrument, Patient, Assignee, Material, Result

2) Role associated with material process predicators:

Mutant

3) Roles associated with experiential state or process predicators:

Experiencer, Appertainant

Note that in the case of 'experiential states' (e.g., 'like' in *I like the music*), the examples listed (*She seems upset*; *It looks good*) appear to be derived from two propositions (e.g., *It seems to me/ someone* that *she is upset*). Thus, 'it' is a position holder, and there is an implied *Experiencer*. Thus, 'it' in *It looks good* and 'she' in *She is upset* could be classified *Appertainant*.

4) Role associated with material state predicators:

Identified State

5) Roles associated with transitional event predicators:

Transitional Range, Source, Goal, Transitor

6) Roles associated with locational state predicators:

Located, Positional Range

7) Roles associated with relational predicators:

Possessor, Possessed, Quantified, Quantifier, Affector, Affected, Relational Goal, Relational Specifier

8) The *Temporal Location* role (see p. 49)

9) The *Temporal Transition* role (see p. 49).

Accommodating the comments on this model would result in the relations/ roles outlined in *Table 2.17* following:

Table 2.17: **Summary of implications of comments (pp. 42-52) on Crombie (1985b) in terms of case roles/ relations**

Crombie (1985a)		Revised	
Category	Role	Category	Role
Causal	***Agent*** ***Instrument*** ***Force***	**With non-transitional activity predicator**	***Agent*** ***Instrument*** ∅
Activity-Participation	***Patient*** ***Assignee*** ***Material*** ***Result***		***Patient*** ***Assignee*** ***Material*** ***Result***
Process-Participation	***Mutant***	**With material process predicator**	***Mutant***
State-Participation	***Durant*** ***Experiencer*** ***Appertainant***	**With material state predicator**	***Identified State***
		With experiential state or process predicator	***Experiencer*** ***Appertainant***
Orientation-Transition	***Object*** ***Source*** ***Goal*** ***Range***	**With transitional event predicator**	***Source*** ***Goal*** ***Transitional Range*** ***Transitor***
		With locational state predicator	***Located*** ***Positional Range***
Relational	***Referee*** ***Referent*** ***Quantant***	**With relational predicator**	***Possessor*** ***Possessed*** ***Quantified*** ***Quantifier*** ***Affector*** ***Affected*** ***Relational Goal*** ***Relational Specifier***
Abaxiant	***Abaxiant***		∅
		With activity, experiential and material process, material state, transitional event and locational state	***Temporal Location***
		With activity, material process and material state, experiential process and transitional event	***Temporal Transition***

2.4.6 Longacre (1996)

Longacre (1996) argues that "[whether] for the understanding of a language internally, or for the exploration of new languages, we need an inventory of cases or roles" (p. 156), noting that "it has been increasingly recognized that the surface structure categories of language mark functional slots of a rather high level of abstraction which are the primary linguistic encoding of the real world" (p. 153). Although "in crossing from one language to the other, we need not expect to find the same mapping of underlying and surface categories", "certain peculiarities in surface structure are conditioned by the underlying structures which they reflect" (p. 155).[49]

The notional case roles/ relations listed are not presented as a definitive group. They are "those which [Longacre has] found useful" (p. 156). Following Chafe (1970), Longacre uses the term *Patient* rather than *Object*, providing for it a narrower definition/ description than his earlier definition of *Object*. The term *Range* is used in preference to *Complement*, the definition/ description of *Range* being closer to that of Halliday (1967, 1968) than that of Grimes (1975). The influence of Anderson's localistic theory (Anderson, 1971) is to be found in the inclusion of *Source*, *Goal* and *Path*.

The *Tables* that follow outline the case roles/ relations to which Longacre (1996) refers. Where there is discussion following these *Tables*, that discussion is conducted in relation to a comparison of this model with that of Crombie (1985b); the intention being to work towards an inventory of thematic case roles/ relations that accommodates my comments on both models. The discussion here highlights

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[49] In the preface Longacre (1996, p. vii) notes:

> In that *The Anatomy of Speech Notions* (1976) was the precursor to *The Grammar of Discourse* (1983), this revision embodies a third 'edition' of some of the material that is found here. The original intent of the 1976 volume was to construct a hierarchical arrangement of notional categories, which find surface realization in the grammatical constructions of the various languages of the world. The idea was to marshal the categories that every analyst – regardless of theoretical bent – had to take account of as cognitive entities. The volume began with a couple of chapters on what was then popularly known as 'case grammar', then expanded upward and downward to include other notional categories on other levels. Chapters on discourse, monologue, and dialogue were buried in the centre of the volume. In the 1983 volume, the chapters on monologue and dialogue discourse were moved to the fore of the book and the chapters on case grammar were less prominent; the volume was then renamed *The Grammar of Discourse*.

issues relating to (a) what appears to be considerable reliance on surface structure in defining/ describing each relation, (b) the fact that examples sometimes appear to be dual propositional, and (c) the fact that a number of the relations encompass examples that appear to be very different in functional/ relational terms.

Table 2.18: **Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Experiencer	An animate entity whose registering nervous system is relevant to the predication (p. 156).	• The *Experiencer* may be reacting to its environment (p. 156). • The one whom an emotional state is ascribed (p. 156). • The one affected by someone else's activities (p. 156). • The object of an activity in which physical state or location is not necessarily changed but in which somebody else's physical violence, affection, etc is experienced (p. 156). • The one who desires, wants, loves or appreciates someone. The subject of sensation verbs (p. 156). • The one who is introduced to someone or made to appreciate someone (p. 156). • The one who suffers someone's scorn, derision etc (p. 156). • Co-referential with the *Agent* with a verb such as *listen*, or the recipient of verbs of speech, i.e., the addressee (p. 156).	(i) **I**'m cold (p. 156). (ii) **I**'m uncomfortable (p. 156). (iii) **She**'s nervous (p. 156). (iv) **He**'s happy (p. 156). (v) **I**'m scared (p. 156). (vi) I cheered **him** up (p. 156). (vii) John hit **Bill** (p. 156). (viii) John kissed **his wife** (p. 156). (ix) He loves **her** (p. 156). (x) The mother told **her child** a story (p. 156). (xi) She sang **me** a song (pp. 156-157). (xii) The artist showed **Tom** the painting (p. 157).

Experiencer here includes examples that are classified by Crombie (1985b) as *Patient* and *Assignee*. It also includes an example (*I cheered him up*), that appears to involve a relationship between two propositions: *He became cheerful because I did something.*[50] According to Crombie's (1985b) model, 'him' would be classified as *Mutant* and 'I' as *Agent*.

***Table 2.18 (continued):* Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Patient	The entity of which the state or location is predicated or which is represented as undergoing change of state or location (p. 157).	• The entity may be inanimate or animate (in the latter case, the registering nervous system or the intentionality of the animate entity is not relevant to the predication) (p. 157). • An entity of which a state or location is predicated (p. 157). • That which undergoes change of state or location with or without the activity of some agent (p. 157). • An animate entity that undergoes a change of physical state or of location, or that which is possessed, acquired, or exchanged (p. 157). • Certain inanimate things (i.e., astronomical bodies) are patients which predict motion as a physical state or process (p. 157).	(i) **The bolt** is loose (p. 157). (ii) **The key** is in the drawer (p. 157). (iii) **Joan**'s in Europe (p. 157). (iv) **The bolt** came loose (p. 157). (v) He loosened **the bolt** (p. 157). (vi) **Don** fell from the chair (p. 157). (vii) Dick has **a new book** (p. 157). (viii) Dick's acquired **a new book** (p. 157). (ix) Tom gave Dick **a book** (p. 157). (x) **The earth** rotes on its axis (p. 157). (xi) **The moon** revolves around the earth (p. 157). (xii) **The machine** is going (p. 157). (xiii) **The wheel** spun around one full turn (p. 157).

[50] In the case of *John cheered Mary up*, 'cheered up' is something that happened to Mary. It is not something that John did, but the effect of something that John did. Thus: *John did something* and as a result *Mary cheered up*. There are two arguments and, therefore, two propositions.

Here, the role *Patient* covers examples that would be classified by Crombie (1985b) as *Durant* (example (i)), *Range* (examples (ii) and (iii)), *Object* (examples (vi), (x), (xi), and (xiii)), *Assignee* (example (viii)), *Patient* (examples (ix) and (xii)), and *Agent* (example (vii)), involving possession.

Table 2.18 (continued): **Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Agent	The animate entity which intentionally either instigates a process or acts (p. 157).	• Instigates a process (with action-process verbs) (p. 157). • Performs an action (with action verbs) (p. 157). • Intentionality is crucial to its definition (p. 157). • May unintentionally stimulate or condition change (in such a case the agent entity is construed as *Instrument* (of the stimulus variety)) (p. 157). • The *Agent* may be co-referential with other relations (p. 158).	(i) **Mr Smith** teaches Susan algebra (p. 158). (ii) **I** introduced Tom to Mary (p. 158). (iii) **John** smashed the dish with a hammer (p. 158). (iv) **I** shortened it two inches (p. 158). (v) **Harry** placed the book by the plane (p. 158). (vi) **John** is studying tonight (co-referential with *Experiencer*) (p. 158). (vii) **Tom** listened to the owl (co-referential with *Experiencer*) (p. 158). (viii) **He**'s standing on the corner (co-referential with *Patient*) (p. 158).[51] (ix) **Harriet** travelled in Europe (coreferential with *Patient*) (p. 158). (x) **George** grabbed the book from John (coreferential with *Goal*) (p. 158).

[51] Longacre notes that "it is assumed that standing is an activity requiring expenditure of energy on the part of an animate being" (p. 158).

Example (viii) would be classified by Crombie (1985b) as *Durant*, and example (ix) as *Object*.

Table 2.18 (continued): **Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Range	The role assigned to any surface structure nominal or adjectival that completes or further specifies the predicate; the product of the activity of a predicate (p. 158).	• Assigned to surface structure nominals or adjectivals (p. 158). • Completes or further specifies the predicate (p. 158). • May also specify the product of the activity of a predicate (p. 159).	(i) Anthony sang **an unusual song/an obscene song/ four songs** (p. 158). (ii) Anthony sang **solo/a ballad/ a hymn** (p. 158). (iii) Anthony sang **the National Anthem** (p. 158). (iv) The road glistened **white in the moonlight** (p. 159). (v) This soup tastes **too salty** (p. 159). (vi) Jane composed **a song/ an opera/ a brilliant composition** (p. 159). (vii) Sue made **a table/ a house** (p. 159).

Here, examples (i), (ii) (with the exception of 'solo'), and (iii) would be classified by Crombie (1985b) as *Patient* and examples (vi) and (vii) as *Result*. *He sang solo*, could be analysed as involving two propositions: *He sang. Nobody else sang*. Example (iv) could also be analysed as involving two propositions: *The road glistened white* (*because*) *the moon was shining*. Here 'glistened white' appears to be the predicator of the first proposition, and the second proposition (apparently linked to the first in terms of *cause-consequence*) appears to involve what Crombie (1985b) refers to as *Durant*. Example (v) (*The soup tastes too salty*) appears to involve: *I think/believe* OR *someone thinks/believes X* (where X is *too much salt in the soup*). The first proposition would then involve an

Experiencer (which does not appear in surface structure), and the second both *Object* ([too much] salt) and *Range* (in the soup) (in terms of Crombie, 1985b).

Table 2.18 (continued): **Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Measure	The role assigned to the surface structure nominal which completes a predication by quantifying it (p. 159).	• Completes a predication by quantifying it (p. 159).	(i) It weighs **six pounds** (p. 159). (ii) This piece of equipment costs **$500.00** (p. 159). (iii) He lost **forty pounds** (p. 159). (iv) I shortened it **one yard** (p. 159). (v) Out team gained **ten yards** (p. 159).

The comments made earlier (see p. 50) in relation to *Quantant* in Crombie's model apply equally to *Measure* here.

Table 2.18 (continued): **Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Instrument	The inanimate entity or body part which an agent uses to accomplish an action or to instigate a process. The price with verbs of transfer. The entity which conditions a state or which triggers a change in emotional or physical state. The potent inanimate entity which triggers such a change (pp. 159-160).	• The inanimate entity which an animate agent intentionally uses to accomplish an action or a process (parts of body are used here as well) (p. 160). • Not always specified in surface structure unless there is something unusual about it (p. 160). • Usually a body part with impingement verbs. With body part instruments like *kiss* and *pet*, the instrument is not specified unless there is something unusual about it (p. 160). • With verbs of transfer the price is considered to be notionally instrument (the medium of exchange) (p. 160). • The inanimate entity or a body part which conditions an emotional state or triggers a change of state, or an animate being unintentionally accomplishing a similar end (p. 160). • A potent inanimate entity that brings on a change (p. 160).	(i) John cut the rope with **a knife** (p. 160). (ii) John powered the granules with **a pestle** (p. 160). (iii) John covered the baby with **a blanket** (p. 160). (iv) The government is deepening the canal with **a dredge** (p. 160). (v) The construction company is widening the road with **a bulldozer** (p. 160). (vi) Edward speared the fish with **a homemade spear** (p. 160). (vii) John kissed his wife with **a greasy mouth** (p. 160). (viii) John petted the cat with **both hands** (p. 160) (ix) John hit Bill with **his hand** (p. 160). (x) John hit Bill with **a board** (p. 160). (xi) John is discouraged at **the prospect** (pp. 160 -161). (xii) The baby was frightened by **the stranger's black moustache** (p. 161). (xiii) In 64 A.D. **a great fire** destroyed most of Rome (p. 161). (xiv) **A tornado** wrecked my house (p. 161).

As the description indicates, *Instrument* is intended here to cover a wide range of situations. Examples (xi) and (xii) would appear to involve two propositions linked in a *Cause-Consequence* relation:

John is discouraged because the project is not good.

The baby is frightened because the stranger has a black moustache.

Example (xiii) and (xiv) involve what Crombie and others refer to as *Force* but which I suggested as reclassifying as *Agent* (metaphoric) (discussed earlier: see pp. 44-45).

Table 2.18 (continued): **Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Source	The place of origin or the entity from which a physical sensation emanates or the animate entity who is the original owner of the transfer (p. 161).	• Occurs with verbs of motion, propulsion, and locomotion, acquisition, transfer, grab, sensation, speech, and attention (p. 161). • With verbs of propulsion, *Source* is co-referential with *Agent* (p. 161). • With speech verbs, the *Source* and the *Agent* are co-referential. • With verbs of acquisition, transfer, and grab, the *Source* indicates the original owner before the transfer (p. 161). • With verbs of transfer, *Agent* and *Source* are co-referential (p. 162). • With verbs like *receive* and *buy*, the *Agent* and *Goal* are co-referential, while the *Source* is an adjunct on the clause level (p. 162).	(i) Tom fell from **the chair** (p. 161). (ii) The boat drifted from **the left** to the right **bank** (p. 161). (iii) The baby crawled from **the kitchen** to the front room (p. 161). (iv) **Tom** threw the knife into the box (p. 161). (v) Tom heard the sound of **a train** in the distance ('Train' is the source of the sound waves that Tom hears) (p. 162). (vi) George smelled the odor of **onions** (the 'Onions' are the source of the smell) (p. 162). (vii) Tom listened to **the owl** (i.e., listened to the sound of the owl) (p. 162). (viii) The audience watched **the performance of the dance group** (p. 162). (ix) **The mother** told her child a story (p. 162). (x) **Radio FBRS** is broadcasting right now (p. 162). (xi) Mary obtained her visa from **the Australian embassy** (p. 162). (xii) George grabbed the book from **John** (p. 162). (xiii) **Tom** gave Bill a book (p. 162). (xiv) **Mr. Smith** sold Tom a convertible (p. 162).

Examples (i) to (iii) and (xi) and (xii) are consistent with *Source* as defined by Crombie (1985b). Examples (iv), (xiii) and (xiv), appear to involve a combination of *Agent* and *Source*. Examples (v) and (vi) would be classified by Crombie (1985b) as *Appertainment*, examples (vii) and (viii) as *Patient*, example (ix) as *Agent* and example (x) as *Durant*. In the absence of distinctions such as these, *Source* covers a very wide range of relational meanings.

Table 2.18 (continued): **Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Locative	The locale of a predication (p. 161).	• The place where the predication takes place without implying motion to, from, or across the space indicated (p. 161).	(i) The ship sank **at sea** (p. 161). (ii) The house stands in **the park** (p. 161). (iii) They placed the book by **the plane** (p. 161). (iv) Harriet's travelling to **Europe** (p. 161).
Goal	The locale point of termination for a predication or the entity toward which a predication is directed without any necessary change of state in that entity, or the animate entity who is the nontransitory or terminal owner (p. 162).	• With verbs of motion, propulsion, and locomotion, *Goal* specifies the locale point of termination for the predication (p. 163). • With verbs of desire, cognition, and evaluation, *Goal* expresses the entity towards which the predication is directed without any necessary change in state of that entity (p. 163). • With verbs of possession the *Goal* encodes the owner (p. 163). • *Agent* and *Goal* are co-referential with verbs such as *buy* and *receive* and with grab verbs (p. 163).	(i) The boat drifted from the left bank to **the right bank** (p. 163). (ii) Sam swam through the water to **the raft** (p. 163). (iii) Tom threw the knife into **the box**/at **me** (p. 163). (iv) Mary loves **Tom** (p. 163). (v) Mary fell in love with **Tom** (p. 163). (vi) I first introduced **Mary** to Tom (p. 163). (vii) **Dick** has a new book (p. 163). (viii) **Tom** acquired a St. Bernard (p. 163). (ix) **John** bought a book (p. 163). (x) **John** received a book from Mary (p. 163). (xi) **George** grabbed the book from John (p. 163).

Comments made with reference to *Range* in Crombie's model (see pp. 48-49) would also apply to *Range* as outlined here. So far as *Goal* is concerned, the first three examples are equivalent to those listed under the heading of *Goal* by Crombie (1985b). However, examples (iv) and (v) would be classified by her as *Experiencer*, example (vi) as *Patient*, examples (viii), (ix) and (xi) as *Agent*, and example (x) as *Assignee*.

Table 2.18 (continued): **Case roles/ relations according to Longacre (1996)**

Case Role/ Relation	Description	Specific Features	Examples
Path	The locale or locales transversed in motion and other predications or the transitory owner (p. 163).	• Can occur several times in the same clause (p. 163). • may be specified by itself with a motion verb such as *drift* (p. 163). • May occur in conjunction with *Source* and *Goal* (pp. 163-164). • With propulsion verbs, may specify either *Path* by itself, *Goal* by itself, or *Path* and *Goal* (p. 164). • With verbs of acquisition, transfer, and grab, the path indicates the transitory owner (p. 164). • With grab verbs, *Path* and *Agent* are co-referential (p. 164).	(i) John travelled from Frankfurt to Naples, **via Geneva, Milan, and Rome** (p. 163). (ii) The boat drifted **across the river** (p. 163). (iii) The boat drifted **across the river** from the left bank to the right bank (p. 164). (iv) Tom threw the knife **across the room** (p. 164). (v) Tom threw the knife **across the room** and into the box (p. 164). (vi) **The department** obtained a visa for Dr. Ho (p. 164). (vii) Tom gave **Bill** a book for Sue (p. 164). (viii) Mr. Smith sold **Tom** a convertible for his wife (p. 164). (ix) **Levi** collected taxes for the Roman government (p. 164).

The first five examples of *Path* would be classified by Crombie (1985b) as *Range* (see discussion on pp. 48-49). The last four examples, however, are all of the *Benefactive* type discussed earlier (see pp. 16-17).

Having outlined these relations (referred to as cases/roles), Longacre applies them in frames, noting that "the grouping of these roles with the verb types with which they characteristically occur" has discourse relevance. He argues that "we must specify features which distinguish one set of verbs from another set of verbs . . . [and] the roles which occur with verbs which are characterized by these features" (p. 167), the resulting sets of verbs having "characteristic constellations of accompanying substantives in given roles" (p. 167), something that may be signalled in a verb phrase rather than a single verb. A set of verbs with characteristic accompanying nouns in particular roles is referred to as a 'case frame' (p. 167). All of this relates to a "feeling that case frames can be shown to constitute some sort of system, i.e., that they are not a mere list or inventory, but a system with intersecting parameters" (p. 167).

Longacre relates his account of case frames to the accounts of Cook (1972) and Hale (1973). He describes his outline of case frames (illustrated below in *Table 2.19*) "as being more detailed and more irregular than either of those envisioned by Cook or Hale" (Longacre, 1996, p. 170).

Table 2.19: **Longacre's (1996) frames**[52]

Row	STATE VERBS	PROCESS VERBS	ACTION-PROCESS VERBS	ACTION VERBS
A	{S-AMBIENT} Ø	{P-AMBIENT} Ø	{AP-AMBIENT} Ø	{A-AMBIENT} Ø
A'	{S-AMBIENT / EXPER} Ø E	{P-AMBIENT / EXPER} Ø E		{A-AMBIENT / EXPER} Ø E
B	{S-EXPER / (INSTRU)} E (I)	{P-EXPER / (INSTRU)} E (I)	{AP-EXPER / (INSTRU)} A E (I)	{A-EXPER / (INSTRU)} A E (I)
C	{S-EXPER / COMPLET} E R	{P-EXPER / COMPLET} E R	{AP-EXPER / COMPLET} A E R	{A-EXPER / COMPLET} A/ E R
D	{S-EXPER / DIRECTED} E G	{P-EXPER / DIRECTED} E G	{AP-EXPER / DIRECTED} A E G	{A-EXPER / DIRECTED} A E/ G A E G
D'	{S-EXPER / DIRECTED / COMPLET} E R S	{P-EXPER / DIRECTED / COMPLET} E R S	{AP-EXPER / DIRECTED / COMPLET} A/S E R	{A-EXPER / DIRECTED / COMPLET} A/E R S
E	{S-PHYS} P	{P-PHYS / (INSTRU)} P (I)	{AP-PHYS / (INSTRU)} A P (I)	{A-PHYS / (INSTRU)} A/P (I) {A-PHYS / DIRECTED / (INSTRU)} A/P G (I)
F	{S-PHYS / MEASUR} P M	{P-PHYS / MEASUR} P M	{AP-PHYS / MEASUR} A P M	{A-PHYS / MEASUR} A/ P M

[52] The features are:

AMBIENT
EXPER = EXPERIENTIAL
INSTRU=INSTRUMENT
COMPLET = COMPLETABLE
DIRECTED
PHYS =PHYSICAL
MEASUR = MEASURABLE
LOCATIVE
POSTURE
MOTION
POSSES = POSSESSION

Table 2.19 (continued): **Longacre's (1996) frames**

Row	STATE VERBS	PROCESS VERBS	ACTION-PROCESS VERBS	ACTION VERBS
G	{S-PHYS / LOCATIVE / (POSTURE)} P L	{P-PHYS / LOCATIVE / (POSTURE)} P L	{AP-PHYS / LOCATIVE / (POSTURE)} A P L	{A-PHYS / LOCATIVE / (POSTURE)} A P L
G'	{S-PHYS / MOTION / (COMPLET)} P Path (R)	{P-PHYS / MOTION} P (L) or (S / Path / G)	{AP-PHYS / MOTION} AP (L) or (Path / G) A/S P (L) or (Path / G) A/G P (L) or (Path / G)	{AP-PHYS / MOTION} A/P (L) or (S / Path / G)
H	{S-PHYS / POSSES / DIRECTED} P G	{P-PHYS / POSSES / DIRECTED} P G	{A-PHYS / POSSES / DIRECTED / (INSTRU)} A/S P G (I) A/G P S (I)	{S-PHYS / POSSES / DIRECTED / (INSTRU)} A/G P S (I)
H'	{S-PHYS / POSSES / MOTION} P Path G	{P-PHYS / POSSES / MOTION} P Path G	{A-PHYS / POSSES / MOTION / (INSTRU)} A/S P Path G (I) A/Path S G (I)	{S-PHYS / POSSES / MOTION / (INSTRU)} A/Path P S G (I)

This scheme has one empty cell (A' 3), one cell (A 3) labelled 'doubtful', and two cells for one space in row E4. Following suggestions made by Cook (1972) and Chafe (1970), Longacre classifies the horizontal dimension of his scheme into four verb types – state, process, action-process, and action – noting that "the first three often group as against the fourth" (p. 171). He believes that there is "regularity of patterns of derivation which carries across these three" although "we find a certain discontinuity in going from action-process to action, so that the bulk of irregularities occur between . . . columns 3 and 4" (pp. 171-172). This is offset, however, by the observation that "agent occurs only in *action-process* and

action which are thereby grouped together" (p. 172). Furthermore, there is a grouping of the last three (*process*, *action-process*, and *action*) so that case frames from these columns can "with proper tense-modal specifications – occur on Band 1 (the Storyline) in narrative, while case frames from the first column (state), are limited to Band 4, setting".[53] Overall, Longacre regards these variant groupings of column as "divergent enough to reinforce the desirability of keeping all four columns as primary" (p. 172). The chart is divided into four distinct quadrants and is arranged into a "certain natural grouping in successive rows" (p. 172).[54]

Longacre considers some further areas to be in need of discussion in relation to his framework: reflexives, causatives, existentials and equatives. He notes, for example, that "reflexivization [appears to correspond] with the occurrence of a surface object or indirect object under semantic conditions", and that this "[permits] the surface structure object (or indirect object) to have the same referent" (p. 208). Thus, "some sort of surface structure reflexive pronoun [commonly] marks the object (or indirect object)", although "with certain case frames somewhat more specialized structures occur" (p. 208). This can be seen in examples (34) and (35) below as well as in examples (36) to (38) (c.f. Longacre, pp. 208-210):

(34) I cheered myself up by playing the piano (Row B column 3).

(35) Tom heard his own voice (Row D' 2).

(36) John washed and shaved (Row E3-reflexive pronoun may be omitted).

(37) Tom sat down in the chair (Row G3).

(38) The monk knelt at the altar (Row G3).

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[53] Longacre (1996, pp. 21-28) describes 'bands' as the means by which the 'mainline' of a text type is developed in an English narrative. He proposes a salience-cline scheme that is divided into seven bands: Band 1 is the 'story line' with simple past tense; Band 2 'backgrounds' the activities that are indicated (with the past progressive); Band 3 involves 'flashbacks' which are customarily encoded in clauses whose verbs are pluperfect; Band 4 is the 'setting' (expository) which is encoded in intransitive verbs with inanimate subjects; Band 5 is the 'irrealis' (other possible worlds), encoded by negatives, modality, and future tense; Band 6 is the author's 'evaluation' or intrusion, which is encoded also in past tense and gnomic present; Band 7 is the 'cohesive' band, which uses adverbial clauses in a back-referential function (this feature is determined by the script and is often repetitive).

[54] A detailed outline of each row is included as *Appendix 1: Longacre (1996) – Rows A-H.*

Longacre addresses three main issues under the heading 'causative': the semantic decomposition of action-process verbs into process verbs plus a subordinate causative predication; the best ways to conceive of the notional structure of the sentence *X had/made Y verb Z* or *X caused Y to verb Z* (when both *X* and *Y* are Agents); whether certain types of predicator require (a) a further column of *intra*-propositional relations, or (b) a regular causative structure (efficient cause).

In addressing the first issue, Longacre notes that it is plausible to postulate that in an example such as (39) below, we may have "a simple juxtaposition of two columns with derivation between them" (p. 212):

(39) John cheered Mary up.

What he does not do explicitly is observe the full implications of this, that is, that relationships between columns may be different *in type*, (*inter-propositional*) and, may therefore require a wholly different rationale.

Moving onto the second issue – relating to causatives – and addressing the third issue at the same time, Longacre forwards a number of arguments against setting up further columns to allow for a construction that involves an extra agent or causer. Critically, "more frequently than not the actual surface structure of a language . . . involves two clauses with two separate verbs" (p. 213). Furthermore, the causatives that add a further agent are not strictly limited to *had/made* or *caused* plus a complement. Thus, "other 'abet' verbs may be used here, e.g., *permit, want, help, force, forbid*" (p. 213).[55]

In dealing with existentials and equatives, Longacre notes that it is doubtful "whether existence is a predicate in the same sense that other predicates are" (p. 214). In discussing examples such as (40) – (42) below, he proposes that existence be treated as a condition of predication in that to have a predicate "we have to assume, at least for the sake of an argument, the existence of the entities

[55] Crombie (1985b, p. 111) treats all these under the heading *Dual Predication*.

which are involved in the predication" (p. 214). He refers to nouns whose existence is affirmed or denied as the 'existent' (p. 214):[56]

(40) God really exists.
(41) There are no such things as unicorns.
(42) Sea serpents are real.

Equatives are treated as affirmations of set membership (see examples (43) to (45) below):

(43) John is a soldier.
(44) Teaching is a lucrative profession.
(45) Clergymen are parasites.

He argues that existence and set membership are not part of the scheme of cases/roles, but something that exists outside of this scheme. It is possible however, to treat existentials as exhibiting the category *Durant* (see "attribution of state" p. 48 here).

The system proposed by Longacre (1996) includes some puzzling aspects. It is difficult to see, for example, why *Experiencer* should include 'Bill' (an "animate entity whose registering nervous system is relevant to the predication" (p. 156)) in example (46) below:

(46) John kicked Bill.

There appears, in fact, to be no justification for treating 'Bill' in this example, differently, in terms of perceptual space, from 'the table' in example (47) below:

(47) John kicked the table.

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[56] This would be treated as *Durant* in the scheme proposed by Crombie (1985b).

Although a registering nervous system may be relevant in the case of the instigator of the action, it appears to be irrelevant in the case of the second argument. For Longacre, intentionality is fundamental to agency, an *Agent* being an animate entity which intentionally instigates a process or action. This being the case, in the absence of an adverb such as 'intentionally' or 'accidentally', it is unclear whether 'Jean' in example (48) below should be assigned to the *Agent* role:

(48) Jean dropped the hammer.

There are other difficulties in relation to Longacre's framework. For example, *Range* is the role assigned to either (a) the product of the activity of a predicate, or (b) any surface structure nominal or adjectival that completes or specifies the predicate. This means that all of the bolded sections in examples (49) - (51) below would be assigned to *Range*:

(49) Anthony sang a **song**.
(50) The soup tastes **salty**.
(51) They made a **table**.

The problem here is that although it is notional relations that are under investigation, this specification appears to be largely syntactically motivated. However, in the case of *Instrument*, the definition appears to be *neither* syntactically motivated *nor* semantically motivated in that both 'tornado' in example (52) below and 'knife' in example (53) below would be included:

(52) A **tornado** wrecked the house.
(53) He cut the rope with a **knife**.

A rather different problem is encountered in relation to Longacre's definition of *Source* which, in making reference to both place of origin and the entity from which a physical sensation emanates, allows both 'chair' in example (54) below and 'concert' in example (55) below to be included within the same category:

(54) He fell from the **chair**.

(55) He watched the **concert**.

Problems of this type become even more apparent where Longacre discusses causatives which "cover several problems which relate to case or role and case frame analysis" (p. 211). Here, he concludes that examples such as (56) below can be accommodated within the framework, although he acknowledges that "more frequently than not the actual surface structure of a language . . . involves two clauses with two separate verbs" (p. 213). The dual propositional nature of example (56) below becomes clearer when an example such as (57) below is taken into account. Thus, there appears to be a causative relationship between propositions (an *inter*-propositional relationship) (i.e., X did Y and Y caused Z):

(56) John cheered Mary up.

(57) John cheered Mary up by playing the piano.

Recognising the importance of the fact that there are relations both within and between propositions, Fillmore (1977a, p. 60) draws attention to a problem associated with his earlier concern "with the inner structure of clauses" rather than "with the semantics of interclausal connections through the devices of coordination and subordination". He notes that "the grammatical functions of the nominals that represent the entities that are put into perspective are determined in part by something like a DEEP CASE HIERARCHY", whereas "other parts of the associated scene can be introduced with prepositional phrases, with adverbials of various kinds, and with subordinate clauses" (p. 74). Thus, "[since] any event takes place in time, any event sentence can contain a time adverbial; since many kinds of events take place in specific locations, sentences representing such events can contain locative adverbials; and so on" (p. 74).

This review of Longacre's (1996) model of case roles/ relations raises a number of issues that are, I believe, either resolved in Crombie's (1985b) model or have already been accommodated in my review of that model. Therefore, the revised model of thematic case roles/ relations that I proposed earlier (see *Table 2.17*) is one that I will make reference to in *Chapter 4*.

2.5 Situationally-specific case roles/ relations

Longacre (1996, p. 165) claims that "[it] is important that the inventory of cases be kept relatively small and that the cases be defined in some systematic noncontradictory way". He asks: "Shall we elaborate ad infinitum our notional structures to accommodate any and all shades of meaning that are implied by varying surface structure or can we let the meaning reside in the surface structures themselves? (p. 303)". Even so, a number of linguists no longer believe that the search for a single set of notional case roles/ relations is likely to be productive. Langacker (1991, p. 237), for example, claims that "there is no unique or exclusive set of role conceptions" and that "those that are cited as archetypical are analogous to the highest peaks in a mountain range . . . [coexisting] with others that may be significant despite their lesser salience". Similarly, Chang and Lakoff (1997, p. 4), claim that there is "widespread recognition that verbs can license quite idiosyncratic roles that may not fit any one of the fixed list of more generalized cases, but rather combine and specialize in some way", noting that "[the] diversity of possible roles has led to the outright rejection in some theories of generalized roles in favour of verb- (or predicate-) specific roles, like those used in frame semantics." Even so, they argue that "roles remain a useful abstraction for identifying idealized or prototypical semantic relations, particularly those that tend to be grammaticalized in the world's languages".

Longacre (1996, p. 154) notes that the work of Fillmore on case roles/ relations that was published in the 1970s was influenced by relational grammar, the number of nuclear cases being reduced and made relevant to scenes in particular discourse settings. In Fillmore (1977a), two important shifts of emphasis in relation to his earlier research can be detected. The first of these relates to a recognition that it is important to attend not only to "the inner structure of clauses", but also to "the semantics of interclausal connections through the devices of co-ordination and subordination" (p. 60).[57] The second involves orientation towards an emphasis on scenes. Thus, Fillmore (1977a, p. 74) notes that "the grammatical functions of the nominals that represent the entities that are put into perspective are determined in part by something like a DEEP CASE HIERARCHY", whereas "other parts of the

[57] It is interesting to note that the emphasis is here on clauses rather than propositions.

associated *scene* can be introduced with prepositional phrases, with adverbials of various kinds, and with subordinate clauses", so that "the 'circumstantial' constituents of a sentence need not be aspects of *scenes* that are particularly required by a particular type of *situation*" (emphasis mine). This overall shift in focus is further developed by Fillmore (1977a) when he notes, with reference to the research of Berlin and Kay (1969) and Rosch (1973a), that frames may refer to "any system of linguistic choices of grammatical rules or grammatical categories . . . that can get associated with prototypical instances of scenes" (p. 63). Thus, the explicit linguistic choices made by speakers are said to "activate certain scenes in the interpreter's repertory of scenes" (p. 74). This is based on the view that societies (and languages) will differ in respect of the options available in relation to a particular perspective on complex scenes.

Lowe, Baker and Fillmore (1997, pp. 1-2) observe not only that "[most] major grammatical theories now accept the general principle that some set of semantic roles ('case roles', 'thematic roles' or 'theta roles') is necessary for characterizing the semantic relations that a predicate can have with its arguments", but also that "there is no agreement as to the size of the minimal necessary set of 'universal' roles". However, they claim that because each different semantic field "brings to mind a new set of more specific roles", it follows that "[an] adequate account of the syntax and semantics of a language will inevitably involve a fairly detailed set of semantic tags", a critical issue being "how we can find the right level of *granularity* of tags for each semantic area" (p. 2). It was in response to issues of this type that 'frame semantics' was developed.

Frame semantics is described by Petruck (1996, p. 1) as "a research program in empirical semantics which emphasizes the continuities between language and experience", a frame being "any system of concepts related in such a way that to understand any one concept it is necessary to understand the entire system".[58, 59] It has been claimed that in addition to its utility in lexical semantics, the frame is

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[58] Petruck (1996) notes that very similar concepts have developed in other fields, particularly artificial intelligence and cognitive psychology.

[59] The influence of Minsky's work (1975) in which 'frames' represent stereotypical situations, and that of Schank and Abelson (1977) in which 'scripts' are knowledge structures for event sequences, is evident.

also useful in text semantics and the semantics of grammar (Petruck, 1996, p. 4).[60] Early traces of the frame notion used within frame semantics are to be found in the case frames outlined by Fillmore (1968) where semantic relations between arguments and predicators were characterized in terms of case frames attaching to verbs.

In the context of frame semantics, word meanings are related to conceptual structures that are held to support and motivate them (see, for example, Fillmore, 1982; Fillmore & Atkins, 1992, 1994). Frames, which have frame elements (FEs), have many of the properties of stereotypical scenarios, encoding real-world knowledge in schematised form.[61, 62] Thus, for example, a commercial transaction frame will have frame elements (FEs) representing the individuals and props that participate in commercial transactions, the individuals being the protagonists in the transaction (BUYER; SELLER), the props being the objects undergoing change of ownership. The argument is that "individual words or phrases [such as 'buy', 'sell', 'customer'] *evoke* particular frames or *instantiate* particular elements of . . . frames" (Lowe, Baker & Fillmore, 1997, p. 3) and assign frame elements (FEs) to different phrase types (PTs) and Grammatical Functions (GFs). Thus, the word 'buy' in English is said to "[treat] the **Buyer** as an NP subject . . . and the **Seller** as a PP complement headed by *from*, while *sell*" is said to "[treat] the **Buyer** as a direct object or a PP complement headed by *to* and the **Seller** as a subject" (Johnson & Fillmore, 2000, pp. 56-57). Frames "range from being very general, like case frames (Fillmore, 1968) or other simple event schemas underlying thematic roles, to being lexically specific" (Johnson & Fillmore, 2000, p. 56). From more general frames (e.g., a commercial transaction frame), less general frames (e.g., a real estate commercial transaction frame) can inherit elements.

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[60] In Construction Grammar (Fillmore, 1985, 1988), the same type of notation is used as occurs in frame semantics and the semantic frame associated with lexical items provides some of the information required for the semantic interpretation of sentences.

[61] In Fillmore (1982), a distinction was drawn between 'scene' (a cognitive/experiential entity) and 'frame' (a linguistic entity).

[62] Also critical is the prototype concept, a prototype being understood in this context as a "slice of surrounding culture against which the meaning of a word is defined and understood" so that "to understand the meaning of the word *breakfast*, it is necessary to understand the institutions and practices of the culture in which the category exists" (Petruck, 1996, p. 2).

Petruck (1996, p. 2) notes that "a full description of nouns linked to a money-transferring frame [includes] the syntax of the expressions in which any particular noun occurs". Thus, whereas "[some] nouns require the indefinite article . . . others require a possessive pronoun", the choice depending on "whether the money transferred is expected and whether talk about that money takes place before or after an agreement about the transfer has been made" (p. 2). Although this type of tagging has clearly been effective in the context of artificial intelligence and natural language processing, I believe that it involves a level of specificity that is not necessarily effective within the context of linguistics more generally where the ability to capture significant syntactic generalisations has important implications for descriptive adequacy that have proved to be effective in areas such as, for example, language teaching. Even so, frame semantics has been applied widely – within the context of lexicology (Petruck, 1996) and lexicography (Atkins, 1994; 1995; Fillmore, 1994; Fillmore & Atkins, 1992, 1994), and to the analysis of metaphor (Lawler, 1988) and syntactic phenomena (Lambrecht, 1984; Matsumoto, 1989; Okamoto, 1985). Indeed, Fillmore (1975) suggests that it can throw light on the acquisition of categories and category labels and inform the teaching of vocabulary in the language classroom. All of this indicates that frame semantics may in the future have a role to play in Māori language revitalisation efforts.[63] Given that this is the case, the results of an experiment on the automatic labelling of roles/ relations seem particularly pertinent. Gildea and Jurafsky (2002, p. 248) note that the FrameNet project defines roles at an intermediate level between abstract thematic roles and verb-specific roles so that, for example, within a CONVERSATION frame, verbs such as 'argue' and 'banter' and nouns such as 'argument' and 'dispute' would occur, the case roles being PROTAGONIST 1, PROTAGONIST 2, MEDIUM and TOPIC.[64] They observe that "[defining] . . . roles at this intermediate frame level may avoid some of the well-known difficulties of defining a unique small set of universal, abstract, thematic roles, while also allowing some generalization across

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[63] However, it seems unlikely, that this will happen in the short term. There are very few linguists working specifically on the Māori language and the needs of the community, in terms of language maintenance, are immediate ones.

[64] Gildea and Jurafsky (2002, p. 249) note that within the FrameNet database, frame elements can be arguments of any predicate (including nouns and adjectives as well as verbs), although "thematic roles tend to be arguments mainly of verbs". As I argued earlier (see pp. 17-18), I can see no reason why thematic roles should not be also arguments also of, for example, prepositions.

the roles of different verbs, nouns, and adjectives" (p. 249). Even so, the results of their experiment on the automatic labelling of semantic roles indicate that the success rate is approximately the same whether a set of domain-specific roles designed within the context of the FrameNet project is involved (80.4% automatic labelling accuracy) or whether these are projected onto a set of 18 abstract thematic roles (82.1% automatic labelling accuracy). Furthermore, in the context of a proposal relating to 'proto-roles', Dowty (1991, p. 613), notes that "[total] indexing of verbal arguments by thematic role type is almost certainly empirically impossible". Total indexing by situationally-specific role types is inevitably even more complex.

2.6 Generalised roles/ relations (macroroles/ proto-roles)

Comrie (1981) draws attention to the fact that both animacy and definiteness are scalar (rather than binary) concepts. Thus, whereas a number of languages mark a distinction between animate and inanimate, others make finer-grained distinctions. He proposes the notion of 'control' as a basis for establishing a case role/ relational continuum which ranges from conscious initiator controlling an action (agent) to affected entity with no control (patient). Comrie's observations have had a significant effect on case role/ relational theory, their impact being detectable in the fact that a number of linguists now recognize only the most generalised versions of case roles/ relations (Foley & Van Valin, 1984).[65] These are generally expressed in terms of some type of agent/patient distinction, a distinction whose characteristics are summarised by Chang and Lakoff (1997, p. 5) as follows:

> In the broadest and most informal terms, an AGENT usually denotes an entity that performs a volitional action, and a PATIENT usually denotes an entity that is affected by some other participant. . . . Each of these is widely grammaticalized throughout the languages of the world. Note, however, that they are neither strictly defined nor mutually exclusive, and they are by no means universally marked.

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[65] It is, however, important to note that all of this is prefigured in Pike (1954, 1955, 1967).

Van Valin (1996) notes that what have sometimes been referred to as 'generalized roles' have been incorporated into a number of disparate theoretical approaches, including formal semantics (Dowty, 1991), generative grammar (Jackendoff, 1972), European functionalism (Dik, 1989), Soviet linguistic theory (Kibrik, 1985), and his own functional/typological approach (Van Valin, 1996). All of these approaches, with the exception of generative grammar, are tied to monostratal theories of syntax (that is, to theories of syntax which posit only a single level of syntactic representation). He also notes that in these theories, generalised roles "express many of the generalizations captured in terms of deep structure subject and object in classical transformational grammar, D-structure external and internal arguments in Government and Binding, and initial 1 and 2 in Relational Grammar" (Van Valin, 1999, p. 373).

Foley and Van Valin (1984) examine case roles/ relations in terms of a hierarchy of affectedness, treating least affected (agent) and most affected (patient) as idealised endpoints of an ACTOR/ UNDERGOER hierarchy in relation to which other roles are located. This approach is developed within the context of Role and Reference Grammar (RRG) by Van Valin (see, for example, Van Valin, 1996, 2001, 2002).[66] One of the most interesting aspects of Van Valin's approach is the way in which he maps relationships between verb-specific semantic roles (e.g., Thinker; Presumer) onto thematic relations (e.g., *Experiencer*), and, in turn, thematic relations onto what he refers to as 'semantic macroroles' (e.g., *Actor*), and semantic macroroles onto grammatical relations (e.g., *Subject*) (see, for example, Van Valin, 2001, pp. 28-31). An example of the mapping of verb-specific semantic roles, thematic relations, semantic macroroles and grammatical relations, (taken from Van Valin, 2001, p. 29), is outlined in *Figure 2.1* below:[67]

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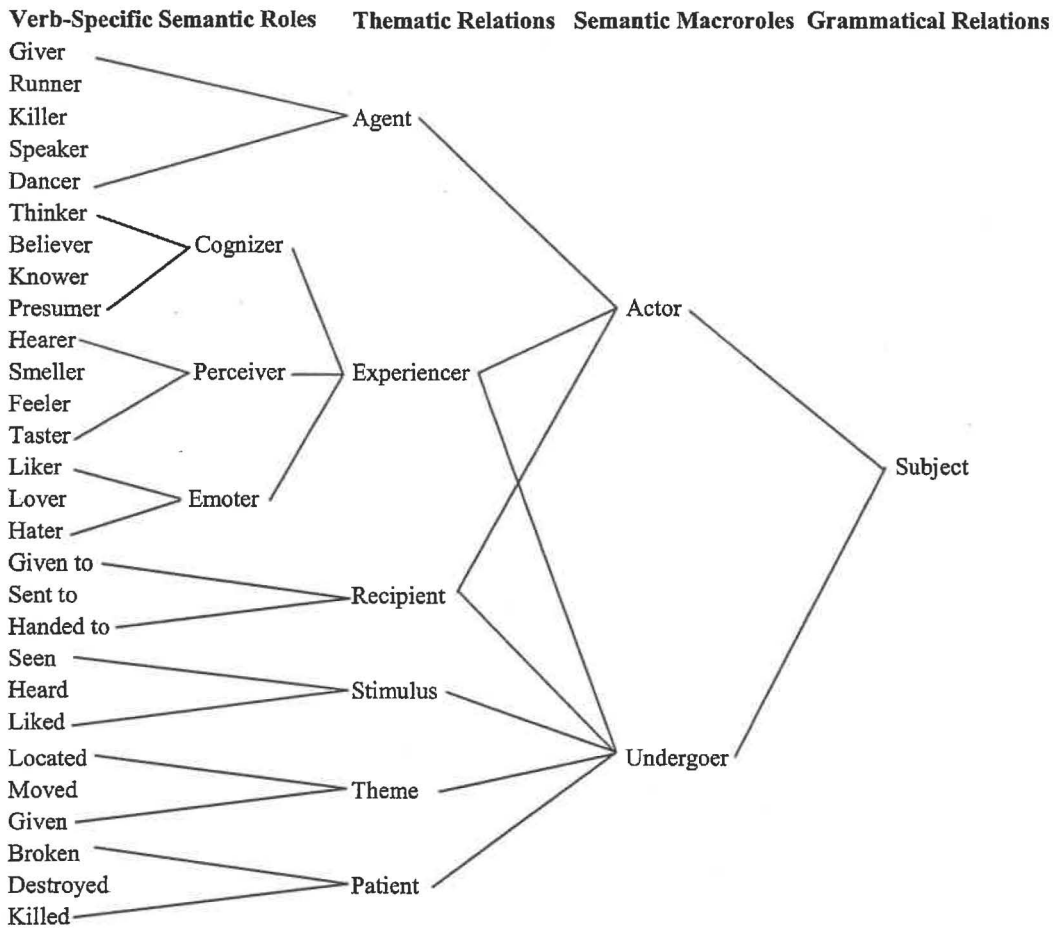
[66] In Fillmore (1968), cases/roles have two important characteristics: they provide a partial semantic representation of the meaning of verbs and they feed into the operation of grammatical rules. In Role and Reference Grammar, they have only the second function, deriving their semantic value from the logical structure rather than being independently meaningful.

[67] Note that the thematic relations outlined are those to which reference is made in Van Valin (2001).

***Figure 2.1*: Mapping of verb-specific semantic roles, thematic relations, semantic macroroles and grammatical relations (Van Valin, 2001, p. 29)**



Van Valin (1996, p. 10) provides a number of arguments in favour of generalised role categories, noting, for example, that they help account for the difference between causative verbs like 'force' and 'make' and jussive verbs like 'persuade' and 'order' (where an actor acts on an undergoer) and verbs like 'promise' which are neither causative nor jussive (where an actor has control throughout). He also addresses the issue of why there should be two macroroles only rather than three (Van Valin, 2002, pp. 12-13). First, he observes that there is no necessary correlation between actor and subject and undergoer and direct object and, therefore, that there is no reason, (in terms of any assumed direct correlation between macroroles and grammatical relations) for believing that there should be a third macrorole associated with indirect object. Secondly, he notes that "[while] all languages have cores with two core arguments, some languages strongly disprefer and perhaps do not even permit three core arguments in a single core",

and that "across languages which permit three core arguments, there is no consistent morphosyntactic treatment of the third argument" (p. 13).

A rather different approach is that of Dowty (1991) who also proposes two generalised roles or 'proto-roles', PROTO-AGENT (P-AGENT) and PROTO-PATIENT (P-PATIENT), to which more traditional roles/ relations are assigned in terms of the number of an associated cluster of entailments (binary in nature) they fulfil, entailments that include, for example, volitional involvement in an event or state.[68] Dowty's treatment of generalised roles has a number of important characteristics. First, an argument may be more or less agent-like or patient-like than another in terms of the number of properties associated with PROTO-AGENT or PROTO-PATIENT that are also associated with it. Secondly, thematic roles lose the status of discrete entities: an argument may have features that would, in many other approaches, fall into two different thematic role categories. Thirdly, the same thematic properties may be assigned by predicates to two of their arguments.

A basic difference between PROTO-AGENT and PROTO-PATIENT is that PROTO-PATIENT entails the presence of another participant, whereas PROTO-AGENT does not. This helps account for the notion of affectedness which has characterised accounts of what has often been referred to 'patient' in literature dealing with thematic roles. One possible problem is, however, the fact that causation is treated as a component of agency by Dowty, being included in the list of entailments associated with PROTO-AGENT, although cognitive approaches generally treat causality as a cluster concept from which agency is derived (Klein & Kutscher, 2002, p. 4).

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[68] Dowty (1991, p. 572) includes a preliminary list of entailments under two headings: those that involve contributing properties for the agent proto-role, and those that involve contributing properties for the patient proto-role. Those included under the first heading are: volitional involvement in the event or state; sentience (and/or) perception; causing an event or change of state in another participant; movement (relative to the position of another participant; exists independently of the event named by the verb). Those included under the second heading are: undergoes change of state; incremental theme; causally affected by another participant; stationary relative to movement of another participant; does not exist independently of the event, or not at all.

Dowty (1991) examines roles/ relations from the perspective of model-theoretic semantics (which requires that categories be assigned to specific logical types); treating proto-roles as 'prototypes' (p. 551) and arguing that they are "not discrete categories at all, but rather are cluster concepts like the prototypes of Rosch and her followers" (p. 571). He notes that "when we accept that arguments may have different 'degrees of membership' in a role type, we can see that we really need only two role types to describe argument selection efficiently" (pp. 571-572). In the context of this approach, "an argument of a verb may bear either of the two proto-roles (or both) to varying degrees, according to the number of entailments of each kind the verb gives it" (p. 547). It is argued that proto-roles may act as defaults in the learning of lexical meanings, that they may facilitate the acquisition of grammar, and that they may also play an explanatory role in relation to certain verbal contrasts. Furthermore, familiar relative rankings of traditional role types in argument selections can, it is claimed, be explained in terms of proto-roles. Thus, for example, strong *Agents* appear to outrank strong *Patients*, and both *Instruments* and *Experiencers* appear to outrank any patient-like arguments for subjecthood. As Klein and Kutscher (2002, p. 4) observe, this approach has the distinct advantage of being able to "cope with arguments that have both agent and patient properties like the traditional notions of recipient, goal and benefactive".

In support of the significance of the notion of 'supercategories' of the type he proposes, Dowty draws upon research in the areas of cross-linguistic role marking and language acquisition. In relation to cross-linguistic role marking, he observes that Croft (1986) argues that the distribution of 'case syncretism' (instances where the type of marking is used to indicate two different thematic role types in a particular language, such as, for example, the use of 'by' in English to mark passive agent, manner and instrument) seems to be explicable in terms of an analysis of events into causal chains which hold among participants in a complex event. This results in a patterning that reflects either PROTO-AGENT or PROTO-PATIENT entailments. In relation to language acquisition, Dowty notes that Clark and Carpenter (1989) provide evidence that children have a category of *source* that encompasses agents, causers, possessors, standards of comparison,

and prior events, arguing that this generalised source category is a supercategory of the PROTO-AGENT category (Dowty, 1991, p. 603).

Dowty (1991) and Van Valin (1996) agree that generalised roles are not primitives. They also agree in claiming that specific thematic relations (e.g., *Agent*, *Instrument*) have no theoretical status. However, one fundamental difference between them is that whereas Dowty treats generalised categories as being prototypical/ 'fuzzy' notions (defined in terms of entailments such as volition and sentience), Van Valin treats them as configurations of semantic representations that are *made up of* other primitives such as DO and CAUSE). Furthermore, whereas Dowty conceives of membership of proto-categories in terms of degree, Van Valin proposes proto-categories as discrete in terms of membership. Finally, Dowty's approach differs from that of Van Valin and a number of others who have proposed generalised categories of this type in that his proto-categories (P-AGENT and P-PATIENT), although referred to as 'proto-roles', are not, in fact, semantic roles at all (that is, they are not actual arguments that predicators can have). They are simply generalisations about the subject/ object selection properties of verbs that are not referred to by the syntactic rules of languages (Van Valin, 1999).

Chang and Lakoff (1997) observe that approaches that focus on generalised roles have the advantage of acknowledging that roles are complex cognitive models often determined only relative to other roles or participants. However, they claim that although such approaches are able to describe the similarities and differences among some roles, they fall short of descriptive and explanatory adequacy in that there is, particularly in the case of Dowty, an overall lack of structure or motivation for the grouping of features associated with each role.[69] On the other hand, they observe that approaches that place roles along a single hierarchy (a hierarchy of control in the case of Comrie and affectedness in the case of Van Valin) have some advantages. Even so, they argue that "assuming a single determining feature oversimplifies the complex interaction of multiple features

[69] Chang and Lakoff (1997, p. 7) do note, however, that Dowty's feature groupings are not entirely arbitrary so that, for example, "the tendency of animacy and volition to correlate with each other, and with (proto-) agent has clear motivation".

that typifies semantic role prototypes", noting that these prototypes may, in fact, turn out to be "reducible to more basic features of the interaction between entities" (p. 7). Thus, for example, in the context of force dynamics, Talmy (1988) treats entity interaction as cognitively basic, providing a taxonomy of the kinds of force-dynamic interactions possible between *agonist* (agent-related) and *antagonist* (patient-related).[70] In a similar vein, Langacker (1991) analyses semantic roles along two axes, one distinguishing domain of energy transmission in terms of source (agent, instrument) and target, the other distinguishing participants in terms of an active/ passive distinction (theme, experiencer), presenting these in terms of an action chain involving the transmission of energy (through physical or mental contact) from one participant to the next.

2.7 Relational marking: A final note

It has often been observed that there is no one-to-one relationship between thematic relations and the structure of languages (see, for example, Croft, 1991, Hopper & Traugott, 1993, Talmy, 1985). Thus, for example, in English the arguments of relations referred to by Van Valin (2001, p. 29) as *Agent* and *Instrument* may occupy subject position, those he refers to as *Patient*, *Theme*, *Stimulus* and *Source* may occupy direct object position, and those he refers to as *Recipient* and *Experiencer* may occupy either subject or direct object position.[71] Further, marking (phonological, morphological and/or syntactic) may represent a conflation of relational categories and other categories such as tense, aspect and definiteness (Slobin, 1997, p. 290), or it may, as in the case of the distinction between active and passive in English (Van Valin, 2001, pp. 29-30), be responsive to the type of major categorical grouping/ conflation that underpins proposals relating to generalised roles/ macroroles. Thus:

> The mapping between semantic roles and their morphosemantic markings is many-to-few: the number of possible *semantic* distinctions that can be made vastly outnumbers those actually lexicalized in a language, and these

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[70] This is presented in terms of, for example, the intrinsic tendency of an agonist toward action or rest, the balance of strengths, and the result of the interaction, factors which can help to explain subtle distinctions among the meanings of English verbs such as *let, help* and *prevent.*

[71] The relation referred to by Van Valin (2001, p. 42) as 'theme' involves an entity that is located or undergoing a change of location, or possessed or undergoing a change of possession.

> in turn exceed by far the number of marking distinctions that are **grammaticalized** – i.e., given some consistent morphosyntactic marking. . . . Each language finds a unique way to bridge this gap between meaning and form, and the challenge for linguistic theory is to explain or at least motivate both individual solutions and the range of their cross-linguistic variation (Chang & Lakoff, 1997, p. 1).

2.8 Conclusion

> [Even] . . . mere sampling of the vast literature demonstrates the diversity and complexity of the data, the subtleties of the semantic distinctions to be made, and the difficulty of making generalizations that are robust in the face of cross-linguistic evidence. In particular, both overt markings and their underlying concepts exhibit a striking dearth of absolute concepts and strict bounds; a dominance of relativity, scalar phenomena and prototype effects; and a high degree of sensitivity to contextual factors jointly imposed by semantic features of the participants and their interaction on the one hand, and the expectations of the construction on the other. These characteristics are a natural outgrowth of the tension between the two functions of markings: differentiating entities, especially non-prototypical ones, within constructions, and generalizing across similar entities in different constructions (Chang & Lakoff, 1997, p. 14).

Four decades ago, what I shall here refer to as '*intra*-propositional relations' were of interest to relatively few linguists, most of whom appear to have been working within the context of one particular approach (tagmemic theory) and a particular group of languages (Philippine and Papua New Guinea languages). Most, possibly all, of these linguists were concerned not only with *intra*-propositional relations, but also with *inter*-propositional relations (now generally referred to as 'discourse relations'), their account of the one necessarily informing their account of the other. Now, four decades on, much of the research conducted in linguistics generally, and in a range of other disciplines (such as, for example, artificial intelligence), can be seen to have been fundamentally influenced by research on what are now often termed 'thematic roles' or 'thematic relations' (that is,

generalisations across verb-specific roles (Van Valin, 2001, p. 28)) to distinguish them from verb-specific roles/ relations, situationally-specific roles/ relations, macroroles/ protoroles and grammatical relations. At the same time, thematic roles/ relations *as such* are sometimes now denied any theoretical status. The gains, in terms of our growing understanding of human cognition and language processing, have been significant. I believe, however, that there have also been significant losses. As concepts and categories become more abstract, as discussion becomes both more general (focused on macroroles/ protoroles) and more specific (focused on verb-encoded roles, situational-specific roles, interactional primitives), the very core of the original discourse (thematic roles/ relations) is being submerged and is, in some cases, disappearing. Yet that very core has had a profound impact in a number of areas including second/ foreign language curriculum design, the design of pedagogically-motivated functional grammars, and approaches to second/ foreign language teaching. In *Chapter 4*, the primary focus will be on the application of two relational models, one *intra*-propositional, the other *inter*-propositional, to the analysis of a Māori language corpus.

Chapter 3

Critical review of *inter*-propositional relational taxonomies

3.1 Introduction

My aim in this chapter is to critically review a number of different taxonomies of what I refer to as '*inter*-propositional relationships', that is, relationships of meaning that hold *between* propositions or groups of propositions (or linguistically encoded propositions or groups of propositions) rather than *within* single propositions (or linguistically encoded propositions).[72] This review is conducted within the context of a distinction between 'coherence' and 'cohesion' and 'text' and 'discourse' and largely from the perspective of issues relating to descriptive adequacy.

In view of the fact that terminology in this area can be confusing and contradictory, I begin by discussing the way in which I shall use the terms 'text', 'discourse' and 'coherence' and 'cohesion' here (*section 3.2*). This is followed (*section 3.3*) by an examination of research conducted in the early 1970s by Ballard, Conrad and Longacre (1971b) and Longacre (1972a) who argue that a surface relational taxonomy can be seen to be linked to a similar, deeper, relational taxonomy, but that that deeper taxonomy "stops short of general semantic or logical categories" (p. 75). In the next section (*section 3.4*), some relational taxonomies which are presented as being semantic (or as being primarily semantic) in nature are examined. Next, there is a discussion of some relational taxonomies in which relations are treated as being semantico-pragmatic in nature, or in which some relations are treated as being semantic, some as pragmatic in nature (*section 3.5*). Issues relating to relational signalling, the domain and scope of relations and the role of inferencing are then considered along with a consideration of the proposal that there are what have been described

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[72] I use the term '*inter*-propositional' here although some linguists who attempt to link their research to parallel distributed processing (popularly known as 'connectionism') are at pains to avoid the term 'proposition'.

as 'cohesive relations' (*section 3.5*). *Section 3.6* provides an overview and summary of the content of the chapter as a whole and an introduction to *Chapter 4* in which the focus is on the relational analysis of a Māori language corpus in which the critical emphasis moves from the issue of descriptive adequacy to that of explanatory adequacy.

3.2 An introduction to the use of some critical terminology

There are differences in the ways in which different researchers in this area use some critical terms. I shall therefore begin by providing an indication of the ways in which 'text', 'discourse', 'coherence' and 'cohesion' are used here.

The word **'text'** is used here to refer to what is actually spoken or written (by one person or more than one person) in the context of a single topic or a group of linked topics. The word **'discourse'** is used to refer to a text *plus* whatever is added to the text (by a process of inferencing) by a hearer/reader in order to make sense of it. Thus, although hearers/readers will experience the same texts, they will not necessarily interpret texts (make sense of them as 'coherent' discourses) in exactly the same way. That is, they will not necessarily always share the same discourses. **'Coherence'** is a property of discourse rather than text, although texts generally contain a range of devices (cohesive devices) that act as a guide to interpretation. **'Cohesion'** (the presence of cohesive devices in a text) is not, however, a requirement for **'coherence'**.

3.3 Towards a notional taxonomy: Ballard, Conrad and Longacre (1971b), Longacre (1972a), Beekman and Callow (1974), Hollenbach (1975), Grimes (1975), Longacre (1996)

3.3.1 Towards a semantically-based taxonomy: Ballard, Conrad and Longacre (1971b)

Ballard, Conrad and Longacre (1971b) present a taxonomy of relations developed from the Inibaloi language, a Philippine language which belongs to the

Austronesian language family.[73] The examples they provide are drawn from text material gathered in various parts of Benguet Province but primarily in the municipality of Kabayan, where the first author was resident for five years (p. 70, fn1).

Ballard, Conrad and Longacre argue that "a set of deep grammar relations needs to be posited to account for the moving of same or very similar lexical material through changing patterns of interclausal relations", and that the sentence "as the immediately ascending hierarchical level above the clause, needs such a set of relations if we are to understand the dynamics of that level" (p. 73).[74] They propose a framework whereby "a surface taxonomy of form within a language determines a similar taxonomy of deep relations", one in which "the two taxonomies stand and fall together",[75] adding that the deep structure to which they are referring "is not the deepest possible level" in that "it stops short of dissolution into general semantic or logical categories". Critically, they argue that "the structure of a given language indicates a cut-off point in that it sets up no more deep structure categories than are required to account for surface encodings" (p. 75). Thus:

> [I]t seems apparent that the deep structure relations — which are on the situational or real-world side of language rather than on its more formal side — are more universal than the surface structures which encode them.
>
> [I]t proves convenient . . . to compare languages as structures first via the deep structures and secondly via surface structures (p. 78).[76]

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[73] Ballard, Conrad, and Longacre (1971b, p. 70, fn.1) describe Inibaloi as "the language of approximately 40,000 people in the southern two-thirds of Benguet Province, Central Luzon, Philippines.

[74] It is interesting to note that the emphasis here is on clauses and sentences rather than propositions.

[75] The assumption appears to be that all relationships will be expressed at a surface level.

[76] Ballard, Conrad, and Longacre (1971b) note that "although most of the relations posited . . . for Inibaloi would seem to make a fair bid for universality, it remains that they are posited specifically for Inibaloi in order to facilitate discussion of encoding of deep structures into surface structures of that language" (p. 78).

Ballard, Conrad and Longacre argue that "it may be conjectured that deep structure relations found on the clause level as well as those found on the sentence and paragraph levels are to a high percentage the same around the world", although "local variations of the general scheme are found in particular linguistic areas while individual languages within an area have further idiosyncrasies in their deep structure". For this reason, they insist that "care needs to be taken in the study of a particular language neither to thoughtlessly posit structures that are not known elsewhere nor to confine that language to a procrustean bed by forbidding it any novelty" (p. 78).

Ballard, Conrad and Longacre use the word 'universal' in a very specific sense, relating it to "a linguistic area" and seeing it as being "significant to the study of languages within that area" (p. 78). This treatment of relations in terms of what are effectively 'semi-universals' seems at first sight to be problematic. In fact, however, observations of this type can perhaps be related to prototype theory (see *Chapter 4*, pp. 209-211), the possibility being that language families, or specific languages, may divide up universal relational prototype spaces in different ways.

Ballard, Conrad and Longacre (1971b) establish a set of what they refer to as 'deep structure relations' under seven headings: *Conjoining*, *Paraphrase*, *Temporal*, *Implication*, *Alternation*, *Amplification*, and *Reporting* (pp. 111-114), with each deep structure relational category having subcategories. These relations and subcategories are outlined in *Table 3.1* below: [77]

[77] A development of this model is provided in Longacre (1972a) and outlined in *Tables 3.2* to *3.11* here.

Table 3.1: **The Inibaloi language: 'Deep structure relations' and their subcategories (Ballard, Conrad & Longacre, 1971b)**

Deep Structure Relations	Subvarieties	
Conjoining	*Coupling* *Contrast*	
Paraphrase	*Affirmation*	Identity-Equivalence Generic-Specific Specific-Generic Statement-Specification
	Negated Antonym	
Temporal	*Overlap*	Coterminous Punctiliar-continuous Continuous- punctiliar
	Succession	Span-event Event-event Event-span
Implication	*Realization*	Hypothetical Contrafactual Warning With universal quantifier of temporal or participant Contingency
	Frustration	Surprise Expectancy Reversal Conflicting Premises Mistaken Idea
	Causation	Efficient Cause Final Cause Intent
Alternation	*With Excluded Middle*	By negation By antonym
	Without excluded Middle	
Amplification	*Existence-predication* *Predication-equation*	
Reporting	*Speech* *Awareness* *Metalanguage*	

3.3.2 Longacre (1972a)

The theory of discourse developed during an earlier project on Philippine languages (Longacre, 1968), according to which paragraph and sentence were conceived as "linguistic units of structural relevance" (Longacre, 1972a, p. v), was

further developed in two workshops conducted in Papua New Guinea[78] from February to September 1970 and reported later (Longacre, 1972a). Papua New Guinea was chosen as a location for further study for a number of reasons (Longacre, 1972a, p. v):

(i) A great many languages (at least 500 at that time) were spoken in a relatively compact physical location and these languages belong to a variety of families;
(ii) These languages were relatively uninfluenced by contact with the languages of Europe and Asia; [79]
(iii) A number of linguists had been working there since 1956 and in excess of 90 languages had already been studied. [80]

Papua New Guinea was therefore considered to be an excellent laboratory for the study of linguistic unity and diversity, providing a relatively uncontaminated sample of languages from a range of language families.

The data described in this project were drawn from twenty-three languages and dialects (Longacre, 1972a), which were studied by "a group of dedicated investigators, working in the same linguistic area, and employing the same overall approach" (p. viii). As Longacre observes: "the same amount of people working separately and scattered over a long time horizon would not have [had] the same advantage of mutual reinforcement and stimulation" (p. viii). In addition to the forty or so linguists directly involved in linguistic analysis, the project team also included mathematical consultants, linguistic consultants, an expert consultant on deep and surface structures, and various administrators and assistants. The overall conclusion was that "there is a finite number of ways of combining clauses in inter-clausal relations in the deep structure, and . . . these encode into the surface grammar of sentences and paragraph units" (Longacre, 1972a, p. 52). These

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[78] Known separately as the Territory of Papua and New Guinea at that time.
[79] The family groups involved were Austronesian, East Papuan, Sepik-Ramu, and Trans-New Guinea.
[80] The National or official languages of Papua New Guinea are Hiri Motu, Tok Pisin, and English. The number of languages listed for Papua New Guinea is currently 832. Of those, 823 are considered as living languages and 9 are considered extinct (http://www.ethnologue.com/show_country.asp?name=Papua+New+Guinea [sourced: 15 March, 2004]).

relations are listed under eight main headings - *Conjoining*, *Paraphrase*, *Temporal*, *Implication*, *Alternation*, *Deixis*, *Reporting* and *Illustration* – and are outlined in *Tables 3.2 - 3.11* following. It is important to note here that Longacre establishes varieties of each relation on the basis of a combination of form (encoding) and meaning. As indicated in the discussion that follows *Tables 3.2 – 3.11* below, differences that relate purely to form do not necessarily indicate different varieties of relation. However, certain differences may be semantically salient.

***Table 3.2*: Conjoining: Longacre (1972a)**[81]

Varieties	Description	Examples
Coupling	• Concerned with conjoining in which time is irrelevant (p. 52). • There are four types of *Coupling*: (a) Coupling with the same first term (see examples (i) - (iii)); (b) Coupling with different first terms and without reciprocity (see example (iv)); (c) Coupling with different first terms and with reciprocity (see example (v)); and (d) Parallel coupling (see examples (vi) and (vii)) (p. 53).	(i) She's big and she's tall (p. 52). (ii) He swims and plays tennis (p. 52). (iii) He collects stamps and his wife does amateur painting (p. 52). (iv) She lectured him on his personal morals and he listened meekly to her (p. 53). (v) He drives and she goes along with him (p. 53). (vi) The men talk English, the women talk English, the children talk English (p. 53). (vii) They talk English, they talk French, they talk Russian (p. 53).

[81] The Conjoining relation consists of *Coupling* and various sorts of *Contrast* (p. 52).

Table 3.2 (continued): **Conjoining: Longacre (1972a)**

Varieties	Description	Examples
Contrast	• Lexical opposites in which there are at least two opposed pairs of lexical items (p. 53). • One such pair consists of a negative-positive use of the same predicate (or a negated predicate plus its synonym), or a pair of antonyms (p. 53). • Include not only dictionary antonyms (good, bad; black, white), but also opposed roles (husband, wife; employer, employee), spatial oppositions (this bank, that bank; underneath, on top), and temporal oppositions (day, night; morning, afternoon/evening) (p. 53). • The second pair in deep structure may be simply differing participants, or a further pair of antonyms (p. 54). • There exists another subvariety of *Contrast* called *Exception*. *Exception* has two opposed pairs; one pair consists of a negative-positive or positive negative use of the same predicate, the second pair is peculiar to the structure of *Exception*, in that one term of the first predicate consists of the universal set minus a given member of that set, while the corresponding term of that second predicate only consists of that member (p. 56).	(i) She sleeps in every morning, but her husband gets up (p. 54). (ii) I'm not sleeping but John is (p. 54). (iii) Boys can't do this job but men can (p. 54). (iv) I don't spend much time sleeping but John spends half his life in bed (p. 54). (v) Men can't give birth to babies but women can produce them (p. 54). (vi) She's good but he's bad (p. 54). (vii) They work when the moon is out; they sleep when the sun is out (p. 55). (viii) The Mianmin will come to this bank, and the Telefomins will come down to that bank (p. 55). (ix) I worked with Velma in the morning; I worked with Helen in the afternoon (p. 55). *Examples of Exception*: (x) Nobody spoke up except John (p. 56). (xi) Everybody died except Grandfather (p. 56). (xii) He looked everywhere except in his hip pocket (p. 56). (xiii) He fined everyone except John (p. 56). (xiv) He expected her anytime except today (p. 56). (xv) He didn't kill anything except a mouse (p. 56).

What is interesting about the relationships which are listed under the heading '*Conjoining*' is that they do not include *Comparison* in terms of similarity as a separate subcategory. In fact, although the sixth example under the heading of *Coupling* does actually appear to involve comparison, the category of *Comparison* is treated under the heading of '*Illustration*' (see *Table 3.9*). What is also interesting is that many of the decontextualised examples that are provided could be interpreted in different ways. Thus, the first example listed under the heading of *Contrast* could be interpreted as a relationship of *Expectancy Reversal* and the fourth example under the heading of *Coupling* could be interpreted as involving *Temporal Overlap*. Furthermore, it is not immediately clear why *Coupling* and *Contrast* are listed under the same heading (*Conjoining*) since the first (*Coupling*) appears simply to add information, something that is rather different from the addition of information in a *contrastive* environment. In fact, almost all relations listed could be said to involve *Coupling* in one form or another.

The examples listed under the heading of *Conjoining* suggest the possibility of three general relational categories rather than one: one involving comparison in respect of similarity (comparative similarity), one involving comparison in respect of difference (contrast), and one simply involving the addition of information that is neither comparative nor contrastive and that does not involve choice. Longacre's description of 'varieties' appears therefore to be largely based on surface form.

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Determining underlying relations largely in terms of surface forms has, I believe, the potential to subordinate coherence to cohesion in a way that ultimately presents a threat to the development of a theory of coherence that has genuine cross-linguistic validity. Indicative of this is the fact that there is no discussion of the relevance of inferencing to interpretation even though the examples provided are decontextualised.

Table 3.3: **Paraphrase: Longacre (1972a)** [82]

Varieties	Description	Examples
Equivalence Paraphrase	• Sometimes a speaker feels that to say something only once is not sufficient but that they need to say it twice or more in differing words (p. 57).	(i) He capitulated immediately; he surrendered on the spot (p. 57). (ii) Shouldn't we call in the law, or notify the police, or get some sort of protection? (p. 58).
Negated Antonym Paraphrase	• There are two types of possibility here, in that while a pair of antonyms is required in such a sentence and it is required that one of the antonyms be negated, the negation may occur either in the first base or in the second base of a *Paraphrase* (p. 58).	(i) It's white, not black (p. 58). (ii) It's not white, it's black (p. 58). (iii) It's not black but white (p. 58). (iv) I'm not sleeping, I'm wide awake (p. 59). (v) I'm not sleeping but wide awake (p. 59). (vi) I'm not sick but well (p. 59).
Generic-Specific Paraphrase	• A more specific lexical item (or items) is used in the second base than in the first base, thereby narrowing down the meaning indicated in the first (p. 59).	(i) He cooked it, he fried it in vegetable oil (p. 59). (ii) He was executed yesterday, he was shot by the firing squad (p. 59). (iii) Christ was revolutionary, he was a foe of the established order (p. 59).
Specific-Generic Paraphrase	• The counterpart to Generic-Specific, that is, a more specific lexical item (or items) is used in the first base than in the second base, thereby narrowing down the meaning indicated in the second (p. 59).	They dug up Assyrian ruins, they spent the season excavating (p. 59).

[82] Longacre (1972a) notes that what are treated here as varieties of the *Paraphrase* relation are grouped together under *Affirmation*: *Identity-Equivalence*, *Generic-Specific*, *Specific-Generic*, and *Statement-Specification* in Ballard, Conrad and Longacre (1971a, 1971b). All of them are treated as being different from *Negated Antonym* as a distinct variety of *Paraphrase*, "turning on the use of the negative". Longacre (1972a) notes that he has added *Summary* as a further type of *Paraphrase*, and also "decided that *Statement-Specification* might well be called *Amplification* as it was so termed by many of [his] colleagues in the New Guinea project". Furthermore, he posits *Contraction* as a "logically and empirically verifiable counterpart" to *Amplification*. He decided it best to "abolish the heading of *Affirmation* (verses Negated Antonym), and simply posit seven varieties of *Paraphrase*" (p. 57).

Table 3.3 (continued): **Paraphrase: Longacre (1972a)**

Varieties	Description	Examples
Amplification Paraphrase[83]	• The first base is repeated in substance (often by means of a synonym), and a further phrase or two is added which gives additional information (p. 60).	(i) He was unconscious; Dabonay, a woman, had knocked him unconscious (p. 60). (ii) He sang, he sang two songs (p. 60). (iii) He went away, he went away two weeks ago (p. 60). (iv) He went away, I saw him go (p. 60).
Contraction Paraphrase	• The converse of *Amplification*, in that, lexical items (often noun phrases) which are found in the first base are not found in the second base (p. 60). • Information from the first base is given by repeating the predicate of the base or by giving it in the form of a synonym (p. 60).	(i) Wait, we'll bury the fish in the ashes, we'll hide it (p. 60). (ii) One by one they tried to find wells, they dug (p. 60). (iii) I won't go to see him, I just won't go (p. 60).
Summary Paraphrase	• A type of paraphrase which employs a generic lexical item in the base after a series of more specific lexical items in the preceding bases (p. 61).	John works at the sawmill; Jim at the repair shop; and Al at the printshop – that's what they're doing (p. 61).

The 'varieties' listed under the heading *Paraphrase* do not, in fact, seem (with one exception) to involve paraphrase at all. Thus, for example, what is referred to as *Negated Antonym Paraphrase* seems to involve a denial followed or preceded by a correction. To say that something is 'not white' is not to imply that it is necessarily 'black'. Similarly, 'to fry' is not the same as 'to cook' (see *Generic-Specific Paraphrase*). Furthermore, it is difficult to see why *Generic-Specific Paraphrase* and *Specific-Generic Paraphrase* are treated as separate varieties

[83] The first part of the first example of *Amplification Paraphrase* involves a stative proposition (*He was unconscious*). The second part is dual propositional, involving an action (*She knocked him*) and a state that is the outcome of that action (i.e., for which the action is the cause): *(He was unconscious*). There is a causative relation. One of these propositions paraphrases the stative proposition in the first part (unconscious – He was unconscious). So we have a combination of *Paraphrase* and *Bonding*. In the second and third examples, we have a full proposition which is repeated with the addition of one argument. However, since what is paraphrased is itself a full proposition, I would see this as, once again, a combination of *Paraphrase* and *Bonding* (although it is important to note that this is a particular type in which the Bonding involves a two argument proposition that includes *Paraphrase* of a single argument proposition).

since the difference appears simply to be one of surface ordering. In the same way, it is difficult to see why what is referred to as *Amplification Paraphrase* should be treated as being different from *Coupling* (treated as a variety of *Conjoining*) unless the motivation for establishing separate categories relates only to the surface form rather than to a combination of surface form and relational meaning. The first example of *Amplification Paraphrase* appears to involve an inverted cause-effect relation. The first two examples of the variety referred to as *Contraction Paraphrase* appear to involve cause and effect (possibly involving *means* and *purpose*). The third example under this heading appears to involve the addition of an adverbial for emphasis (rather than a *Contraction Paraphrase*). In fact, since there is repetition of the proposition (involving ellipsis) – as well as the addition of an adverbial – this example could be treated as a variant of *Equivalence Paraphrase*. The single example of *Summary Paraphrase* is odd in that the first three clauses have habitual aspect whereas the final one has progressive aspect. Even if we assume that this is simply a translation problem, it is difficult to see why this is classified as a *Summary Paraphrase* rather than as a combination of *Similarity* or *Contrast* (depending on the context) plus *Specific* (the first three clauses) - *Generic* (the final clause).

Table 3.4: **Temporal: Longacre (1972a)** [84]

Varieties	Description	Examples
Overlap	• There are four types of *Overlap*: (i) Two coterminous activities (presumably, the two activities start and end about the same time); (ii) There may be a punctiliar[85] event which takes place during a continuum; (iii) A continuum in which a punctiliar event takes place (e.g., Punctiliar - Continuous or Continuous - Punctiliar); (iv) Two punctiliar events taking place at the same time (p. 63).	(i) As/While he walked along, he prayed (p. 63). (ii) He glanced back as he walked along (p. 63). (iii) While he was walking, he stumbled (p. 63). (iv) Just as he came out, the car drove away (p. 63).

[84] Real-world chronological sequence (p. 62).
[85] An event which occurs briefly and only once.

Table 3.4 (continued): **Temporal: Longacre (1972a)**

Varieties	Description	Examples
Succession	• There are four types of *Succession*: (i) Span-Span: A prolonged event followed by another prolonged event; (ii) Event-Span: An event followed by a prolonged event. In English, the event preceding a span of activity may be encoded as a nominalised verb (which is made the object of a preposition); (iii) Span-Event: A prolonged event followed by an event; (iv) Event-Event: Several events reported in a sentence (p. 64).	*Examples of Span-Span:* (i) They played tennis for an hour, then swam for another hour (p. 64). *Examples of Event-Span:* (ii) He put wood in the stove and then sat there for an hour (p. 64). (iii) After the death of his wife, he lived in isolation for years (p. 64). *Example of Span-Event:* (iv) He stayed for five years and then returned (p. 64). *Examples of Event-Event:* (v) He grabbed the axe, hit the door, and broke it down (p. 64). (vi) She gave him some water and he drank it (p. 64).

What is indicated in the descriptions of *Overlap* and *Succession* is the variety of surface forms in which a single relational type may be encoded and, thus, I believe, the fact that focus/perspective is a matter of surface form – something that raises questions about attempts to treat some relational members as being equivalent to others, and some as being essentially subordinate to others.

Table 3.5: **Implication: Conditionality: Longacre (1972a)** [86]

Varieties	Description	Examples
Hypotheticality	• This relation expresses a condition which implies nothing as to the factuality of either member of the condition, i.e., the consequent does not follow unless the condition stated in the antecedent also holds (p. 65). • In languages with a distinction between sentence margins and sentence nuclei, we may find the conditionality expressed either in a Conditional Margin appended to the nucleus, or in a nuclear pattern, i.e., some sort of 'If . . . then' conjunction pattern (p. 65).	If he goes, I won't (p. 65).
Contrafactuality	• Contrafactuality combines elements of Hypotheticality and Efficient Cause, i.e., it both presents a condition and an explanation (p.66). • It is possible to have a negative in the first clause and a positive in the second, or a positive in the first and a negative in the second (pp. 66-67).	(i) He had gone, I would have gone too (p. 65). (ii) If he had gone, I would have gone too (p. 66). (iii) If he hadn't gone, I wouldn't have gone either (p. 66). (iv) If he hadn't gone, I would have gone (p. 67). (v) If he had gone, I wouldn't have gone (p. 67).
Warning	• It expresses obligation in regard to a course of action or presents that course of action as highly desirable (p. 67).	(i) We shouldn't let our torches go out because if we let our torches go out we'll never find our way home (p. 67). (ii) We shouldn't let our torches go out or we'll never find our way home (p. 67). (iii) It is good that we burn some paper, otherwise it would bury us (p. 67).

[86] There are various relations in the *Implication* category which are subsumed under *Conditionality*, *Frustration*, and *Causation* relations (p. 65).

Table 3.5 (continued): **Implication: Conditionality: Longacre (1972a)**

Varieties	Description	Examples
With Universal Quantifier of Temporal Terms or Other Terms	• Can have the structure of a Universal quantifier modifying a temporal term, either overt or implicit (p. 67). • It can also have a Universal quantifier associated with some term other than temporal (p. 67).	(i) Whenever you come, I'll be waiting (p. 67). (ii) Whomever he sent got lost (p. 67). (iii) Whatever he did, it went wrong (p. 67). (iv) Whoever tried to do it never succeeded (p. 67).
Contingency	• Involves both a temporal reference and implication (p. 68). • Similarly a Span (activity or state) may be contingent on a prior Event (p. 68). • Temporal Overlap and Implication may be involved (p. 68).	(i) I made sure that she was well, then I let her work in the garden (p. 68). (ii) You have to be paid before you are enthusiastic (p. 68). (iii) Then I will marry when I have some money (p. 68).

Longacre lists *Warning* as a separate variety of *Implication: Conditionality*. In fact, however, what we appear to have here is a unitary value rather that a binary one. In other words, *Warning* appears to be similar to unitary values such as 'suggestion', 'insult' and 'threat' (see Searle, 1969, 1971). The first example of the variety referred to as *Warning* appears to combine two relations: one involving a *reason* and a *result*, the other involving a *condition* and a *consequence*. The same is true of the second and third examples, where 'or' (example (ii)) and 'otherwise' (example (iii)) operate in the same way as does the combination of 'because' and 'if' (example (i)). In the second two examples, propositional embedding appears to be involved.

Longacre also lists *Universal Quantifier* as a separate variety of *Implication: Conditionality*. The relationship between the two propositions in each case appears to involve temporal succession rather than conditionality, the presence of the universal quantifier signalling the fact that either the time (example (i)) or the person (example (ii) to (iv)) are non-specific.

In the case of the varieties that Longacre refers to as *Contingency*, only the second appears to involve *Implication*. In the first example, what we appear to have is a form of *Reason-Result* (inverted) in which the *Reason* is embedded in the first clause (i.e., I checked X and because X was the case, I . . .). The third example appears, in the absence of any context that would indicate otherwise, to be a straightforward example of temporal succession.

Table 3.6: **Implication: Frustration: Longacre (1972a)**

Varieties	Description	Examples
Expectancy Reversal	• Natural languages contain in their lexical structure certain expectancy chains which may involve (p. 68): (a) A succession of actions which customarily follow each other in chronological order;[87] (b) An intent to act plus the action itself; (c) An obligation to act plus the action; or (d) The ability to act plus the action. • With an *Expectancy Reversal*, the anticipated course of action is blocked (p. 68). • There are four types of *Expectancy Reversal*: (i) *Frustrated Succession*; (ii) *Frustrated Intent*; (iii) *Frustrated Obligation*; and (iv) *Frustrated Facility* (pp. 68-72).	*Examples of Frustrated Succession:* (i) I searched for it in the grass but my glasses broke, and I couldn't find it, so I went home (p. 69). (ii) I left for Paris but didn't arrive (p. 69). (iii) He killed and cooked his game but never ate it (p. 69). (iv) He fell out of a tree but some low-lying limbs broke his fall and he didn't get hurt very badly (p. 70). *Examples of Frustrated Intent:* (v) I intended to go but didn't (p. 70). (vi) I didn't intend to go but George urged me to go so I went (p. 71). *Examples of Frustrated Obligation:* (vii) I should have gone but didn't (p. 71). (viii) You found it and you should have given it to him (p. 71). *Examples of Frustrated Facility:* (ix) I could have promoted him but I didn't (p. 72). (x) I could have promoted him but his irresponsibility offended me and I didn't; instead I fired him (p. 72).

[87] For example: 'leave (someplace) . . .go . . . arrive', and somewhat more culturally conditioned chains, e.g., New Guinea, 'see a pig . . . catch or kill it' and expectancy chains involving different actors such as: 'shoot . . . die'; 'call . . . answer' (Longacre, 1972a, p. 69).

Table 3.6 (continued): **Implication: Frustration: Longacre (1972a)**

Varieties	Description	Examples
Mistaken Idea	• It involves a predicate which is identified as a mistaken idea in the following predicate (p. 72).	(i) I thought it was a pushover, but it really wasn't (p. 72). (ii) I thought you were quite wrong, but you weren't (p. 72). (iii) I thought I could do it, but I couldn't (p. 72).
Conflicting Premises	• Here we have a proposition that implies a quality and another proposition that implies a different quality, while the propositions are brought together in the same sentence (p. 72).	(i) The food didn't look hygienic, but I was hungry (p. 72). (ii) Although the food didn't look very hygienic, I was hungry (p. 72). (iii) She is attractive, but sharp-tongued (p. 72). (iv) Although she's attractive, she's sharp-tongued (p. 73).

Longacre lists three separate varieties of this relation – *Expectancy Reversal*; *Mistaken Idea*; *Conflicting Premises*. The first two examples listed under *Conflicting Premises* are interesting in that what is counter to expectation (i.e., 'eating the food') is implied rather than directly stated.

Three of the examples listed under the heading of *Expectancy Reversal* appear to combine relations. The final example seems to involve both *Reason-Result* and *Expectancy Reversal*. The reason for the decision not to do something (i.e., 'his irresponsibility') is provided. In the case of the eighth example in the *Table*, there appears yet again to be a combination of *Reason-Result* and *Expectancy Reversal*. The unexpected (i.e., 'that something was not given to him') is, however, implied rather than directly stated. In the case of the sixth example, we appear to have, once again, a combination of *Reason-Result* and *Expectancy Reversal*. In all of these examples, we appear to have dual relationships involving a combination of explicit and implicit propositions. Furthermore, there appear to be no fundamental differences among the three varieties listed.

Table 3.7: **Implication: Causation: Longacre (1972a)** [88]

Varieties	Description	Examples
Efficient Cause	• The cause that pushes something teleological (p. 73). • In English, it may be encoded as the first base of a *Result* sentence (as in the first example), or as the second base of a *Reason* sentence (as in the second example), or as a *Cause Margin* (as in the final example) (p. 73).	(i) You were afraid so you didn't go (p. 73). (ii) You didn't go for you feared the outcome (p. 73). (iii) You didn't go because you were afraid (p. 73).
Final Cause	• The cause that pulls something teleological (p. 73). • This relation is expressed in various ways in surface structure, i.e., it may involve a juxtaposed sentence structure in which the second clause contains the verb with anticipatory mode (an example based on Trique provided in example (i)) or a special *Purpose Margin* (as shown in examples (iii) and (iv)) (p. 73).	(i) He took it, he will eat (p. 73). (ii) He took it in order to eat it (p. 73). (iii) You came in order to eat (p. 73). (iv) You came that you might eat (p. 73).
Circumstance	• A rather watered-down version of *Causation* (p. 73).	(i) In view of the fact that he is ill, we must be careful (p. 73). (ii) In that he is ill, we must be careful (p. 73). (iii) In that the President is doing his best to execute an orderly retreat from Vietnam, we should refrain from irresponsible criticism (p. 73).

Under the heading of *Implication: Causation*, Longacre lists three varieties. The difference between the first two – *Efficient Cause* and *Final Cause* – appears to

[88] All three varieties – *Efficient Cause*, *Final Cause* and *Circumstance* – are treated as being essentially causative.

relate to the fact that the 'effect' proposition is realised in the case of *Efficient Cause* (e.g., 'you didn't go') and potentially unrealised in the case of *Final Cause* (e.g., 'in order to eat'). The focus of *Final Cause* is, thus, purpose rather than result.

What Longacre refers to as the *Circumstance* variety of *'Implication: Causation'* does not appear to be different in any essential way from *Efficient Cause*.

Table 3.8: **Alternation: Longacre (1972a)**

Varieties	Description	Examples
Alternation with Excluded Middle (Exclusive Disjunction)	• May turn either on the use of a negative or an antonym (p. 74). • Antonyms must be defined not simply as dictionary antonyms but as situational and contextual opposites, e.g., opposed roles, spatial oppositions, and temporal oppositions (p. 74). • *Excluded Middle* must also be defined situationally and according to the presupposition of the context (p.74).	(i) Either he'll come or he won't (p. 74). (ii) Will he come or not? (p. 74). (iii) Either he's awake or sleeping (p. 74). (iv) Is he awake or asleep? (p. 74). (v) Either the man is working or his wife is working (p. 74). (vi) Either he'll come right now or some other time (p. 74).
Alternation without Excluded Middle (Inclusive Disjunction)	• This may include two or more terms (p. 74). • In English it is preferable to reduce to a conjunction of nouns (Example (i)), while in certain parts of the world the preference is for the full structure (as in Example (ii)) (p. 75).	(i) Either John or Mary or Sue will come (p. 74). (ii) Either John will come, or Mary will come, or Sue will come (p. 74).

Longacre includes two separate varieties under the heading of *Alternation*. In both cases, we are concerned with choice. In the first case, the choice involves contrast (negative/positive, antonym or adverbial distinction). In the second case, the choice is non-contrastive. Even so, the difference between the two relations does not appear to be substantial. The issue here, as elsewhere, is whether

varieties are simply different surface manifestations of the same underlying relation, or whether the differences are sufficient to suggest a difference in terms of relational meaning and, hence, of underlying relationship.

Table 3.9: **Deixis: Longacre (1972a)**

Varieties	Description	Examples
Existence-Predication	• The existence of something is predicated and then a further predication is made about it (p. 75).	(i) There was a man named Amkidit; he was the one who showed the Spaniards the way up here (p. 75). (ii) There was a cow that died of the cold; we boiled that one and ate it (p. 75).
Predication-Equation	• A predication is made and then some term of the predication is equated with something else (p. 76). • Usually it is the second term of the predication that is equated with something else (p. 76).	The Spanish picked him up on their way, and he was the one who guided them to this place (p. 76).

In the case of the varieties listed under the heading of *Deixis* (*Existence-Prediction*, *Prediction-Equation*), what we actually appear to have is an additive relation, a type of conjoining. In both cases, the second proposition expands on the content of the first in a way that does not involve comparison, choice, or cause/ effect.

Table 3.10: **Reporting: Longacre (1972a)** [89]

Varieties	Description	Examples
Speech	• In this relation, we are reporting (directly or indirectly) in the surface structure, something said by somebody else (p. 76).	(i) I said, 'He's not very alert' (p. 76). (ii) I said that he wasn't very alert (p. 76).
Awareness	• Expresses awareness within the surface structure (p. 76).	(i) I know that he's coming (p. 76). (ii) I saw that he was in a bad mood (p. 76). (iii) I felt that things weren't working out right (p. 76). (iv) I sensed that all was well (p. 76).
Metalanguage	• In this relation, we explain the name of something to somebody else who is either concerned with a new universe of discourse within the same language or is learning a new language (p. 77).	This is a *jata*, a bird of prey with a six-foot wing span (p. 77).

In the first two varieties, the non-specific argument of one underlying proposition (e.g., 'I said *something*') is specified in the second proposition. In the third variety, one of the members of the relation contains an argument which is related, in the other proposition, to a definitional predicator. In all three cases, there is a relationship of the *Generic-Specific* type. *Reporting* as a variety of *Generic-Specific* (with among its sub-varieties *Speech/Knowledge Attribution* and *Definition*) clearly has an important role to play in certain text types.

[89] In this relation a speaker is either reporting on something said, expressing their awareness about an event, or explaining something (pp. 76-77).

Table 3.11: **Illustration: Longacre (1972a)** [90]

Varieties	Description	Examples
Comparison	• Some languages have special sentence structures for *Comparison*, and they can be very involved and exacting (p. 77). • Trique[91] utilises identical verb bases (as in Examples (i) and (ii)) (p. 77).	(i) Like does this, so does that (p. 77). (ii) Like goes this, so goes that (p. 77). (iii) She is like a rose (p. 77). (iv) She acts like a baby (p. 77). (v) A pretty girl is like a melody (p. 77).
Exemplification	• A Universal set is introduced along with the citing of an example or a member of that set (p. 77). • *Exemplification* and *Comparison* are both expressed either on the sentence or paragraph level in discourse (p. 77).	(i) Choose a good name, e.g., Michael (p. 77). (ii) He has had a bold and innovating career, as seen in his introduction of the Mariachi Mass in the Sunday morning service at the Cathedral (p. 77).

Under the heading '*Illustration*', Longacre lists the varieties: *Comparison* and *Exemplification.* It is not immediately clear why *Comparison* is listed under the heading of '*Illustration*', while *Contrast* is listed under the heading of '*Conjoining*'. Nor is it clear why *Exemplification* is not treated as a type of non-contrastive Matching.

The observations that I have made in connection with the relational typology provided by Longacre (1972a) have generally been related specifically to varieties and examples. Nevertheless, they have the following implications so far as the proposed deep structure relations are concerned:

> **Conjoining:** The removal of *Contrast* as a variety would result in a situation in which the remaining examples could be defined as involving

[90] A speaker or writer can illustrate a point by using a comparison or citing an example (p. 77).
[91] A language of Mexico, primarily spoken in the western part of the state of Oaxaca.

addition that is not comparative or contrastive and that does not involve choice (i.e., is non-elective). There would be one variety: *Coupling*

Temporal. There would be no change here.

Implication: Conditionality. There would be only two varieties – *Hypotheticality* and *Conditionality*

Implication: Frustration. There would be only one variety – *Expectancy Reversal*

Implication: Causation. There would be only two varieties – *Efficient Cause* and *Final Cause*

Alternation. There would be no change.

Paraphrase, Deixis, Reporting and Illustration. In all four cases, there seems little justification, in terms of the varieties suggested and the examples provided, for retaining these deep structure relations. In the case of *Paraphrase*, only the first example provided appears to involve two members with essentially the same propositional content. Furthermore, that example could be readily accommodated under the heading of *Conjoining* as could all of the varieties and examples included under the heading of *Deixis*. In the case of *Reporting* and *Illustration* (along with some of the examples under the heading of *Paraphrase)*, the varieties and examples provided suggest a single, new deep structural relational category (which I shall refer to as 'Matching') with two main varieties: *Comparison* (including *Generic-Specific* (and *Exemplification* as a type of *Generic-Specific*)) and *Contrast.*

The revised model would therefore be as follows:

Conjoining

Involving addition that is not comparative or contrastive and that does not involve choice (i.e., is non-elective).

Variety: Coupling

Temporal

Varieties: Overlap; Succession

Implication: Conditionality

Varieties: Hypotheticality; Conditionality

Implication: Frustration

Variety: Expectancy Reversal

Implication: Causation

Varieties: Efficient Cause; Final Cause

Alternation

Varieties: Exclusive Disjunction; Inclusive Disjunction

Matching

Varieties: Comparison (including *Generic-Specific* and *Exemplification* (as a type of *Generic-Specific*) and *Paraphrase*); *Contrastive*

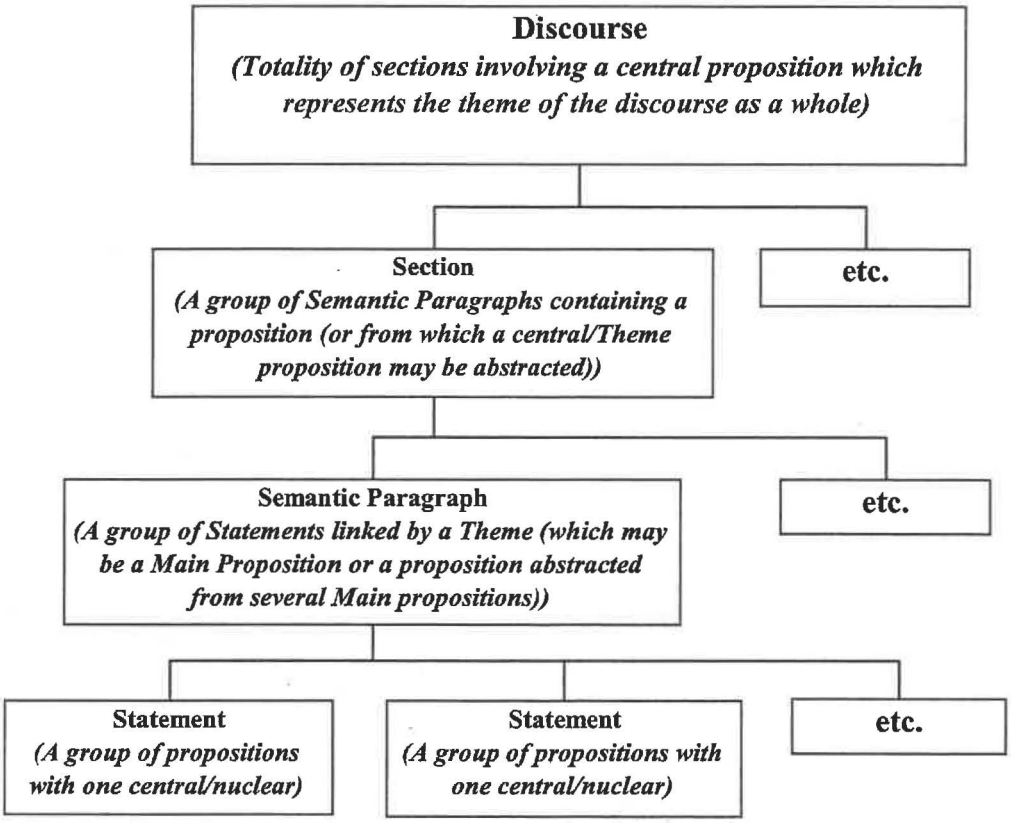
3.3.3 Beekman and Callow (1974)

Beekman and Callow (1974) propose the 'semantic unit' as the fundamental component of meaning. 'Semantic units' are grouped around 'concepts', which may be "represented in the grammar of a language by a morpheme, word, or phrase" (p. 272). Although, the concept remains "unaltered in the translation process . . . its formal expression in the grammatical structure may vary considerably" (p. 272).

Propositions are made up of concepts. A grouping of propositions (with one that is identified as central or nuclear) is a *Statement*, the central/nuclear proposition being classified as the *Main* proposition, the other propositions supporting it in various ways. *Statements* combine into larger units (*Semantic Paragraphs*): "[Semantic] paragraphs will have a *Theme* proposition that is central; the *Theme* proposition may be a Main proposition, or it may have to be abstracted from several Main propositions". Semantic paragraphs combine into *Sections* from

which a "central Theme proposition is stated or may be abstracted, and Sections combine into larger units until the total *Discourse* is reached. When the whole discourse has been analyzed, a final central proposition will represent the theme of the total discourse" (p. 272).

Figure 3.1: **Structure of discourse: Beekman & Callow (1974)**



Each semantic unit may relate to another semantic unit of the same type, or to a unit at a higher level. Where it relates to a higher-level unit, it is said to function in the same way as does the higher-level unit. Each semantic unit has a central proposition (encoded or derived) that is related to the central proposition of another unit that is, or functions as, the same type/level of semantic unit.

A comparison of the relational varieties proposed by Longacre (1972a) and the conceptual relations proposed by Beekman and Callow (1974) will be provided after the discussion of Beekman and Callow's conceptual relations.

Where a proposition is related to another proposition, we have an *inter*-propositional relation. Where a proposition is related to a statement, or a statement is related to another statement, we have an inter-stative relation. Where a statement is related to a semantic paragraph, or a semantic paragraph is related to another semantic paragraph, we have an inter-paragraph relation. Where a semantic paragraph is related to a section, or one section is related to another section, we have an inter-section relation.

Beekman and Callow (1974) distinguish between relations in which one of the propositions is in focus and the other is not (*SUPPORTING*), and relations in which propositions have equal focus (*ADDITION*), arguing that "these choices [affect] the grammatical form" (p. 284).[92]

Table 3.12: **Addition relations (conceptual): Beekman & Callow (1974)**

Addition Relations	
Chronological Sequence	*Conversational Exchanges*
Simultaneity	*Matched support*
Alternation	

Table 3.13: **Associative relations (conceptual): Beekman & Callow (1974)**

Associative Relations	
Manner	*Condition-Consequence*
Comparison	*Concession-Contraexpectation*
Contrast	*Grounds-Conclusion*
Equivalence	*Time*
Generic-Specific	*Location*
Amplification-Contraction/Summary	*Circumstance*
Reason-Result	*Identification*
Means-Result	*Comment*
Means-Purpose	*Content*

Beekman and Callow refer to the relations outlined as 'conceptual' in *Tables 3.12* and *3.13* as being "based on the [smaller set of] relations [perceptual relations]

[92] Beekman and Callow use different labels for the same relation in different places in *Translating the Word of God.* Thus, for example, *Sequence* on p. 284 is referred to as *Chronological Sequence* on p. 291. The labels used in the *Tables* below are those used on p. 291ff.

which can be perceived in the real world". The perceptual set of relations outlined by Beekman and Callow is as follows (p. 287):

Temporal	Sequence in time:	One event is perceived as following another.
	Simultaneously in time:	Two or more events are perceived as occurring at the same time.
	Alternatives:	Two or more things or events are perceived as alternatives.
	Differences:	Two events or things or abstractions are perceived as different.
	Similarities:	Two events or things or abstractions are perceived as the same or similar.

Thus, Beekman and Callow distinguish between *perceptual relations* (i.e., relations which may be perceived in the real world) and *conceptual relations* (i.e., relations which can be expressed linguistically). Conceptual relations "derive from the fact that a writer or speaker is not content simply to state perceptions of the real world". Rather, "deductions are made from what is perceived; hypotheses are put forward to explain what is perceived; statements are repeated for emphasis; some of the information is made prominent, some of it is not; some of it develops a train of thought". In brief, "a speaker or writer selects the content of his [sic] communication, and also the function of that content, so as to achieve the purpose of his [sic] communication" (p. 288).

In *Table 3.14* below, the perceptual relations proposed by Beekman and Callow (1974) are compared with the deep structure relations proposed by Longacre (1972a) and both are compared with the list of deep structure relations that resulted from the discussion of Longacre (1972a) on pp. 89-111.

***Table 3.14*: A comparison of deep structure relations proposed by Longacre (1972a), deep structure relations resulting from the discussion of Longacre (1972a) and perceptual relations proposed by Beekman & Callow (1974)**

Deep Structure Relations (Longacre 1972a)	*Deep Structure Relations* resulting from discussion of Longacre (1972a)	*Perceptual relations* Beekman & Callow (1974)
Conjoining	*Conjoining*	Ø
Temporal	*Temporal*	*Sequence in time*
		Simultaneity in time
Implication: Conditionality	*Implication: Conditionality*	Ø
Implication: Frustration	*Implication: Frustration*	Ø
Implication: Causation	*Implication: Causation*	Ø
Alternation	*Alternation*	*Alternation*
Paraphrase	Ø	Ø
Deixis	Ø	Ø
Reporting	Ø	Ø
Illustration	Ø	Ø
Ø	*Matching*	*Differences*
		Similarities

As we have seen, Beekman and Callow claim that propositions either develop or support semantic units. Propositions which develop semantic units are *developmental propositions*. They are related to one another by *Addition* and have equal rank semantically. Propositions which support semantic units are *support propositions*. Support proposition are considered to be of unequal rank relative to the supported proposition and may be classified as performing one of the following functions:

(i) clarifying another proposition by explaining or highlighting it;

(ii) arguing for another proposition by giving its logical antecedent or consequent;

(iii) orienting another proposition by giving its setting relative to time or space or other events (pp. 289-290).

On the basis of these semantic functions, Beekman and Callow establish four subsets of 'support propositions' (those which clarify being divided into two subsets according to whether the meaning of the supporting propositions is *distinct* from or *similar to* that of the supported proposition) (p. 290):

Table 3.15: **Type of support relation: Beekman & Callow (1974)**

Support by Clarification (using a proposition with distinct information)
Manner *Comparison* *Contrast*
Support by Clarification (using a proposition with similar information)
Equivalence *Generic-Specific* *Amplification-Contraction/Summary*
Support by Argument
Reason-Result *Means-Result* *Means-Purpose* *Condition-Consequence* *Concession-Contraexpectation* *Grounds-Conclusion*
Support by Orientation
Time *Location* *Circumstance*

In addition to these four subsets of support types, Beckman and Callow posit three other types of support as indicated in *Table 3.16* following (Beekman & Callow, 1974, p. 290).

Table 3.16: **Type of support holding between whole and part relations: Beekman & Callow (1974)**

Support between a Whole proposition and Part of another one
Identification *Comment* *Content*

It is difficult to determine (a) how the set of perceptual relations proposed by Beekman and Callow (1974) was derived, and (b) whether any specific mapping between what are referred to as 'perceptual relations' and what are referred to as

'conceptual relations' is intended. Since perceptual relations are described as relations which may be perceived in the real world and conceptual relations as relations that can be expressed linguistically, it is tempting to make a connection between perceptual relations and what are now often referred to as 'discourse relations' or 'coherence relations', and conceptual relations and what are sometimes referred to as 'cohesive relations' (see, for example, Martin, 1992), the latter category resulting, I believe, from a fundamental misunderstanding about the nature of relational meaning and relational signalling (see *section 3.5*). To make a connection between 'perceptual relations' and 'coherence relations' on the one hand, and 'conceptual relations' and 'cohesive relations' on the other, would, however, be misleading since the set of relations presented under the heading of 'conceptual relations' parallels in many respects those relations that linguists generally identify as 'discourse relations' or 'coherence relations'. It may, in fact, be more appropriate to link what are referred to here as 'perceptual relations' to what Crombie (1985a, 1985b, 1987) refers to as 'perceptual processes' (see *Table 3.17* below). The absence of a causal category could then be linked to the fact that causation is *derived from* sequence.

***Table 3.17*: Perceptual relations (Beekman & Callow, 1974) and perceptual processes (Crombie, 1985a&b, 1987)**

Perceptual relations (Beekman & Callow, 1974)	**Perceptual processes (Crombie, 1985a&b, 1987)**
Sequence in time	*Contiguity in time and place*
Simultaneity in time	
Alternatives	*Resemblance/ Matching*
Differences	
Similarities	
	Cause and Effect

It is also difficult to determine why some relations are referred to in this model, and elsewhere, as 'additive' and others as 'supporting'. Relations may, or may not, be signalled, and the surface form in which relational members occur may, or may not, be grammatically subordinate (see *section 3.5*). There seems little

reason, therefore, to consider relations themselves, rather than their surface structure manifestations (which may vary), to be additive or supporting:

> Because he felt ill, he left early.
> He felt ill so he left early.
> It was because he felt ill that he left early.
> The reason he left early was that he felt ill.
> He left early. The reason was that he felt ill.
> He felt ill. He left early.

Thus, although it may be intuitively appealing to treat relations themselves as additive or supporting, this intuitive appeal seems to relate largely to typical patterns of surface structure realisation. Thus, for example, although the members of a *Chronological Sequence* relation typically occur in English in co-ordinate constructions of equivalent grammatical status, they need not do so:

> After having eaten, he left.

For the reasons discussed above, the relations that Beekman and Callow (1974) outline under the heading of 'conceptual relations' will be compared here with the relations that Longacre (1972a) describes as 'deep structure relations', and the distinction that Beekman and Callow make between 'additive' and 'supporting' relations' will not be highlighted in the discussion that follows.[93]

The specific types of *Addition* relations and the specific types of *Associative* relations proposed by Beekman and Callow (1974, pp. 291-312) are outlined in *Tables 3.18, 3.19, 3.20, 3.21, 3.22* and *3.23* following alongside examples drawn from Beekman and Callow (1974, pp. 291-312):

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[93] This should not be taken as an indication that I am myself arguing that propositions can be identified as 'deep structures'.

Table 3.18: **Addition Relations: Beekman & Callow (1974)** [94]

Relations	Description	Examples
Chronological Sequence	• One proposition follows another in time in the referential world (p. 291). • The events may occupy a short period of time or a longer period (p. 291). • May connect any pair of events whether they are short or long in duration, and they may take place in the past or future (p. 291).	He came back and took her hand and lifted her up (p. 291).
Simultaneity	• Two events that overlap in time in the referential world of the discourse (either partially or completely) (p. 292). • Events may be short or long in duration and past, present or future (p. 292).	(i) There arose a great storm and the waves beat into the ship and he was asleep on his pillow (p. 292). (ii) I stand at the door and knock (p. 292).
Alternation	• May be either contrastive or supplementary. • The contrastive form always occurs in pairs which are either antonyms (i.e., dead-alive, present-absent) or situational opposites (i.e., God-man, by air-by sea) (p. 292). • Supplementary forms occur with a series of two or more choices, all of which stay within the same domain (p.292).	(i) What shall we drink? or, What shall we eat? (p. 292). (ii) Are you the one or are you not? (p. 292).

[94] Generally, *Chronological Sequence* and *Simultaneity* are set in the general framework of time and therefore tend to predominate in narrative-type discourses. For *Alternation*, *Conversational exchanges*, and *Matched Support*, the time framework is in the background, and so they tend to be more common in discourse genres other than narrative (Beekman & Callow, 1974, p. 291).

Table 3.18 (continued): **Addition Relations: Beekman & Callow (1974)**

Relations	Description	Examples
Conversational Exchanges	• Not clearly defined by Beekman and Callow. They do note however that "at the present stage of analysis, the relation of *Addition* also describes the relation between the two halves of a conversation. One speaker 'adds' to what the other speaker said and so on" (p. 292).	
Matched support	• Two or more propositions have the same relation to some other proposition which they support (p. 293).	(i) And if ye be Christ's, then are ye Abraham's seed, and heirs according to the promise (two conclusions) (p. 293). (ii) 'saying, Neither go into town, nor tell it to any in the town' (two statements of the content of 'saying') (p. 293).

Decontextualisation of examples can prove problematic. Note, for example, that the first example under the heading *Simultaneity*, could, depending on context, be interpreted as involving *Concession-Contraexpectation* (see '*Associative relations: Support by Argument*').

Conversational Exchanges, listed here under the heading of *Addition Relations*, appear to be quite different in type, involving what Longacre (1996) describes as 'repartee calculus' and what Crombie (1984, 1985a, 1985b, 1987) describes as 'interactive acts'. *Conversational Exchanges* may *involve* relations of the type in focus in this chapter, but it is difficult to see why they should be included in this category.

The relation referred to here as *Matched Support* seems to be a simple case of one member of a relation involving more than one encoded proposition, the propositions involved being in a further relation – in this case, the relation referred to as *Conjoining* by Longacre (1972a).

Table 3.19: **Associative Relations/Support (using a proposition with distinct information which clarifies): Beekman & Callow (1974)** [95]

Relations	Description	Examples
Manner	• Links two propositions in such a way that the supporting proposition clarifies the Event in the supported proposition by telling how it took place and in what way it happened (p. 293). • Answers the question: 'How did this Event take place?' (p. 293). • A *MANNER* proposition does not repeat any of the components of the event being clarified, whereas a specific proposition does (p. 294). • Adds distinct information to the proposition (p. 294).	He walked along the road, limping awkwardly because his right ankle was sprained (p. 293).
Comparison	• A relation based upon some point of similarity between two things, events or abstractions (p. 294). • Both sides of the comparison must be positive and there also must be a point of difference (p. 294). • Except for the case of metaphor, which is implicit comparison, the comparison is signalled by some sort of surface structure such as 'like' or 'as' (in English) (p. 294).	(i) And it was restored whole, like the other (the point of similarity is the abstraction 'whole', and the point of difference is the two hands (mentioned earlier)) (p. 294). (ii) But he was in all points as we are (the point of similarity is the abstraction 'in all points' and the point of difference is the participants) (p. 294).

[95] The two propositions are said to be related to each other and to have distinct content, their purpose in the discourse being to clarify another proposition either by describing how its event took place, or by comparing or contrasting it, thus both adding new information to it and highlighting it (Beekman & Callow, 1974, p. 293).

Table 3.19 (continued): **Beekman and Callow (1974): Associative Relations (using a proposition with *distinct* information which *clarifies*)**

Relations	Description	Examples
Contrast	• Occurs between two propositions if there are at least two points of difference between them, and if one of the points is a positive-negative opposition (p. 295). • There is at least one point of similarity (p. 295). • There are five possible ways (in English) that this relation can occur, depending on the particular way in which the negative-positive opposition is expressed: Negation of the predicate; Negation of synonyms; Negation implied by antonyms; Negation implied by difference of degree; and Negation of an alternative (p. 295).	*Negation of the predicate:* (i) He sings in his bath, but I don't (sing in the bath) (p. 295). (ii) He is clever, but I am not (p. 295). *Negation of synonyms:* (i) Bill came yesterday, but John didn't arrive (p. 295). (ii) He is healthy, but I am not well (p. 295). *Negation implied by antonyms:* (i) He stayed, but I left (p. 295). (ii) He is strong, but I am weak (p. 295). *Negation implied by difference of degree:* (i) He doesn't eat as quickly as I do (p. 295). (ii) He isn't as heavy as I am (p. 295). *Negation of an alternative:* (i) He fell into the lake, not the river (p. 295). (ii) He wasn't first in the race, he was second (p. 295).

The example of the relation referred to under the heading *Manner* involves a superordinate (i.e., *walk*) in the first proposition and could, therefore, be seen as an example of the relation referred to by Beekman and Callow as *Generic-Specific*. However, as in the case of the example listed under *Generic-Specific*, it might equally be treated as an example of the relation that Longacre (1972a) refers to as *Conjoining*. Furthermore, it also involves a relation of *Reason-Result* (inverted).

Table 3.20: **Associative Relations (using a proposition with similar information which clarifies): Beekman & Callow (1974):**[96]

Relations	Description	Examples
Equivalence	• Two propositions which convey the same meaning are linked by *equivalence* (p. 297). • There are two forms of this relation: (a) The same content is expressed by means of words or expressions which are synonymous in the particular context; this is given the label 'synonymous expression'. (b) The content of the supporting proposition is in the form of a 'negated antonym' (this is used as the label for this type) (p. 297). • Equivalence in the form of a negated antonym could be confused with *Contrast*, since one form of that relation involves antonyms. However, there are two criteria by which these relations can be distinguished: (a) *Contrast* is saying something different, while *Equivalence* is saying the same thing; (b) The *Equivalence* antonym is negated, whereas this is not the case for *Contrast* (p. 298).	(i) Rejoice and be glad (p. 297). (ii) For either he will hate the one and love the other; or else he will hold to the one, and despise the other (p. 297). (iii) I have great sorrow and unceasing anguish (p. 297). (iv) Vengeance is mine; I will repay, saith the Lord (p. 297). (v) I am not come to destroy, but to fulfil (p. 297). (vi) If ye have faith, and doubt not (p. 298). (vii) Speak, and hold not your peace (p. 298).

[96] Two propositions are related to each other and there is an 'overlap' in content between the two related propositions, this 'overlap' being an essential part of the relation. The 'overlap' may involve things, events, or abstractions, or any combination of them. The 'overlap' is not necessarily one of grammatical or lexical form; the 'overlap' may be different in form, but the same in meaning (p. 297).

Table 3.20 (continued): **Associative Relations (using a proposition with *similar* information which *clarifies*): Beekman & Callow (1974)**

Relations	Description	Examples
Generic-Specific	• What is stated generically in one proposition is restated in the other using specific terms covered by the generic term(s) of the other (p. 298).	(i) He cometh unto them, walking upon the sea (p. 298). (ii) Yes, brother, I want some benefit from you in the Lord. Refresh my heart in Christ (p. 298).
Amplification-Contraction/ Summary	• More information is provided in one of the propositions than the other. This means that one of the two propositions is expressed with less detail (p. 298). • There are three forms of this relation: (a) *Summary*: A summary is a particular form of *contraction* in which the focal content of a group of propositions is stated. (b) *Leading Questions*: A question in which the speaker indicates what they are expecting the answer to be. (c) *Rhetorical Question with an answer* (pp. 299-300).	(i) And the word of God increased; and the number of disciples multiplied in Jerusalem greatly; and a great company of priests were obedient to the faith (p. 299). (ii) You are going to come, aren't you? (p. 299). (iii) Master, it isn't I, is it? (p. 299). (iv) You didn't lack anything, did you? (p. 299). (v) Shall we continue to sin, that grace may abound? God forbid (p. 299).

The example of the relationship referred to here as *Equivalence* generally seems to involve some form of paraphrase. Example (v) however, involves a denial and a correction rather than paraphrase. It may be, however, that *Denial-Correction* is simply a variety of *Contrast.*

Amplification-Contraction/ Summary has three varieties. The first (*Summary*) is difficult to differentiate from *Generic-Specific* in terms of overall meaning. In the case of the variety referred to as *Leading Questions*, there seems to be only one

proposition involved, the appearance of two seeming simply to relate to the surface grammar of the tag question. In the case of the variety *Rhetorical Question with an answer*, what we appear to have is a rhetorical form of an interactive act in which there is, in fact, only one speaker involved. In that the members of related propositions or propositional groups can occur in either order, there seems no reason to distinguish between *Generic-Specific* and *Amplification-Contraction/ Summary.*

***Table 3.21*: Associative Relations (support by argument): Beekman & Callow (1974)** [97]

Relations	Description	Examples
Reason-Result	• The *Reason* states why the particular *Result* came about, whether by the action of a rational agent, or otherwise (p. 301). • This relation may be signalled by different forms (e.g., 'therefore', 'insomuch that', 'because', etc) or by none at all, and not only may it occur in the temporal and reverse temporal orders, but it may also occur in a 'multiple' form. That is, a given result may arise from a number of reasons, or reasons may be related to several results, or both may be multiple (p. 301).	(i) There arose a great tempest in the sea, insomuch that the ship was covered with waves (p. 301). (ii) His lord commanded him to be sold. The servant therefore fell down and worshipped him (p. 301). (iii) And he marvelled because of their unbelief (p. 301). (iv) It seemed good to us to send chosen men unto you. We have sent therefore Judas and Silas (p. 301). (v) Ye have not because ye ask not (p. 301).

[97] Associated with the general relation of *Cause-Effect* in that one of the two propositions represents a cause and the other the effect. It is in this sense that one of the propositions is said to argue for the other by providing its causal antecedent or subsequent (Beekman & Callow, 1974, p. 300).

Table 3.21 (continued): **Associative Relations (support by argument): Beekman & Callow (1974)**

Relations	Description	Examples
Means-Result	• How a result comes about (p. 300). • Not to be confused with *Instrument* which is "usually an inanimate object used to do something" (p. 302). • The term 'means is applied when an 'event' is involved, by means of which the stated result takes place (p. 302). • The order of relations may occur in any order (p. 302).	(i) What things God had wrought among the Gentiles by his ministry (p. 302). (ii) We through patience and comfort of the scriptures might have hope (p. 302). (iii) Any you . . . hath he reconciled in the body of his flesh through death . . . (p. 302). (iv) He saved us, by the washing of regeneration, and renewing the Holy Ghost (p. 302). (v) Ye were ransomed not with perishable things such as silver or gold, but with precious blood of Christ (p. 302).
Means-Purpose	• In the *Means-Purpose* relation, the result is desired, but it is not stated whether it took place or not (p. 303). • The emphasis is on intention rather than achievement (p. 303). • There is an implicit volitional element in this relation, and if this volitional factor is made explicit, then the purpose becomes the motivating cause and the means becomes the result or effect (p. 303). • The use of the word 'lest' signals negative purpose in English (p. 303).	(i) Full well ye reject the commandment of God, that ye keep your own traditions (p. 303). (ii) Whom I have sent unto you for the same purpose; that he might know your estate, and comfort your hearts (p. 303). (iii) For judgement I come into this world, that they which see not might see; and that they which see might be blind (p. 303). (iv) Watch ye and pray, lest ye enter into temptation (p. 303). (v) Watch and pray, in order that you do not enter into temptation (p. 303).

Table 3.21 (continued): **Associative Relations (support by argument): Beekman & Callow (1974)**

Relations	Description	Examples
Condition-Consequence	• In this relation, the speaker presents the cause-effect relation in the light of his/her own contrafactual assumptions, or certainty concerning the cause (pp. 303-304). • A division between two semantic subtypes is made in this relation: (a) The speaker assumes the condition stated is false to reality as he/she conceive of it. The speaker indicates the event referred to in the conditional proposition never actually took place, or the facts stated are not true in his/her opinion, realisation is precluded, so far as the speaker is concerned (p. 304). (b) The speaker is uncertain – he/she just does not know whether the cause is in accord with what will happen or not. Thus, the facts referred to in the conditional proposition are open to realisation. If the condition is true or is realised, then the consequence will follow. With general conditions, the speaker assumes it is certain that the condition will happen at some time. This type of relation is often introduced in English with '*when, whenever* or *he/she who*'. It also can occur in the negative form and is often signalled in English by '*unless* and *except*' (pp.304-305).	(i) If we had been in the days of our fathers we would not have been partakers with them in the blood of the prophets (p. 304). (ii) Good were it for that man if he had never been born (p. 304). (iii) This man, if he were a prophet, would have known who and what manner of woman this is (p. 304). (iv) Ye neither know me, nor my Father: if ye had known me, ye should have known my Father also (p. 304). (v) If God were your father, you would love me (p. 304). (vi) And if the blind lead the blind, both shall fall into the ditch (p. 304). (vii) If a man die, having no children, his brother shall marry his wife (p. 304). (viii) If a virgin marry, she hath not sinned (p. 304). (ix) Except a man be born again (If a man is not born again), he cannot see the kingdom of God (p. 304). (x) He is not crowned, except he strive lawfully (if he does not strive lawfully) (p. 304).

Table 3.21 (continued): **Associative Relations (support by argument): Beekman & Callow (1974)**

Relations	Description	Examples
Concession-Contraexpectation	• In this relation, the effect takes the form of an unexpected result. The result is definite but the concessive proposition carries the implication that this is not the expected result, but a different one. It is this component of *expectancy*, and its reversal, that characterises this type of CAUSE-EFFECT relation (p. 305).	(i) Which in time past was to thee unprofitable, but now profitable to thee and to me (p. 305). (ii) For if, when we were enemies, we were enemies, we were reconciled to God by the death of his Son, much more, being reconciled, we shall be saved by his life (p. 305).
Grounds-Conclusion	• This relation states an observation or known fact and a conclusion. The observation or fact represents the ground; the deduction represents the conclusion. The, so-called 'result' is not actual or desired but concluded (p. 306).	(i) She is looking very pale today, so she must be feeling ill (p. 306). (ii) She is looking pale today, so I conclude she must be feeling ill (p. 306).

As noted in other cases, the relations in this category need not necessarily involve association/support. Note, for example, that (ii) under the heading *Reason-Result* involves independent clauses whereas (iii) involves a complex preposition (because of) followed by a nominalization.

The relations of *Grounds-Conclusion* and *Reason-Result* are very similar, the only real difference being that in one case what is presented as a fact is presented as a deduction in the other case. It is this type of differentiation that has led some linguists to propose a semantic verses pragmatic relational differentiation.

Table 3.22: **Associative Relations (support by orientation): Beekman & Callow (1974)** [98]

Relations	Description	Examples
Time	• This relation gives the time at which the main proposition took place. It answers the question, 'When?' (p. 309). • The *Time* proposition may precede or follow the supported one in time, or it may be simultaneous with it (p. 309). • This proposition looks similar to *Chronological Sequence* and *Simultaneity* but it differs in the fact that *Time* is a support proposition of unequal rank which simply provides background information (p. 309).	(i) But while men slept, his enemy came and sowed tares (simultaneous in time, the main event occurring at an indefinite point during the setting) (p. 309). (ii) When the sun did set, they brought him (the main event takes place after the event stated in the setting, i.e., there is a sequence in time) (p. 309). (iii) This day, even in this night, before the cock crow twice, thou shalt deny me (the main event takes place before the event stated in the setting, so this is a case of reversed sequence in time) (p. 309). (iv) And as he sowed, some seed fell by the wayside (simultaneous events covering the same period, but the sowing is continuous, the falling by the way side intermittent) (p. 309). (v) But the same day that Lot went out of Sodom it rained fire and brimstone from heaven (simultaneous events taking place on the same day which is itself identified by an event) (p. 309). (vii) While I was with them in the world, I kept them (coterminous simultaneous events) (p. 309).

[98] This group of propositions is said to provide background information or setting, giving orientation with respect to time, or place, or some other accompanying event. It is claimed that because the members of this group have this particular semantic function, they are often related to groups of propositions, such as paragraphs, providing the orientation for the whole group, especially in narrative material (Beekman & Callow, 1974, p. 309).

Table 3.22 (continued): **Associative Relations (support by orientation): Beekman & Callow (1974)**

Relations	Description	Examples
Location	• This relation provides the background information concerning the place where the main event happened. It answers the question 'Where?' (p. 309). • It often appears with *Time*, and since *Location* is one of the relations communicated by a state proposition, it can occur in that form (p. 310). • If a proposition indicating location clarifies a 'thing' word rather than a proposition, then it is not an example of the relation *Location*, but *Identification* or *Comment*. For example, the italicised clause (following) identifies which particular house: 'Follow him into the house *where he entereth in*' (p. 310).	(i) And he went throughout Galilee, preaching in their synagogues and casting out demons (the main events of 'preaching' and 'casting out' are located throughout the whole of Galilee by the first proposition) (p. 310). (ii) Yea, so have I strived to preach the gospel, not where Christ was named (a negative definition of the places where Paul preached) (p. 310). (iii) And there were in the same country shepherds . . . (*Location* is mentioned and a new group of participants is introduced) (p. 310). (iv) And, behold, there was a man in Jerusalem, whose name was Simeon (*Location* and a new participant are given) (p. 310).
Circumstance	• This relation answers the question 'What else?' The support proposition centres on an event which is simultaneous with the main one, and which also has the same subject. The background information does not relate the main proposition to time or location, but to another simultaneous event (p. 310).	Then came Jesus forth, wearing the crown of thorns, and the purple robe (p. 310).

The examples of what is referred to here as the *Time* relation involve either temporal overlap or temporal succession. Where they involve temporal succession, there seems no reason to distinguish them from *Chronological Sequence*. Removing the orientation focus would allow for a re-classification of the others as belonging to the category referred to by Longacre (1972a) as

Succession. The examples of the relations referred to here as *Location* and *Circumstance* could be reclassified as varieties of *Conjoining* (Longacre, 1972a).[99]

Table 3.23: **Associative Relations (support propositions which are related to *part* of a proposition): Beekman & Callow (1974)** [100]

Relations	Description	Examples
Identification	• Serves to identify a 'thing', in contrast with other 'things' (it singles them out semantically) (p. 311). • The semantic equivalent of a restrictive relative clause (often occurs in that form but not necessarily so) (p. 311). • May occur singly, in the general flow of the discourse, or it may occur in a series of identificational propositions, in connection with the introduction of a new participant into the discourse (p. 311).	This is the bread which cometh down from heaven (The relative clause singles this bread out from all other sorts of bread) (p. 311).
Comment	• An identification proposition picks one 'thing' out from other similar 'things' so as to distinguish it (p. 311). • This relation is the semantic equivalent of a non-restrictive relative clause, though it does not necessarily occur in that form (p. 311).	(i) God, who separated me from my mother's womb and called me by his grace (two comments on God) (p. 311). (ii) For the hope which is laid up for you in heaven, whereof ye heard before in the word of the truth of the gospel; which is come to you (two comments on hope, and one on the gospel) (p. 311).

[99] As soon as we start discussing 'background information' or 'foregrounding' or 'main information' or anything of that sort, I believe that we have moved beyond relationships themselves. What Beekman and Callow appear to be responding to in their treatment of *Location* and *Circumstance* as 'support by orientation' is syntactic structure. Thus, the first example of what they refer to as 'Location' has a finite construction in the first clause and non-finites in the others. Similarly, the example of what they refer to as 'Circumstance' has a finite and a non-finite construction.

[100] In accounting for the relations of all the propositions in a paragraph, it is sometimes necessary to make use of the relations which link a whole proposition with only part of another proposition (Beekman & Callow, 1974, p. 311).

Table 3.23 (continued): **Associative Relations (support propositions which are related to *part* of a proposition): Beekman & Callow (1974)**

Relations	Description	Examples
Content	• Some clauses which contain verbs like *know, understand, think, see, tell, and said* (i.e., verbs of perception, cognition, speech, desire etc) and are followed by 'that' and one or more further clauses, contain semantic information in the relation of *CONTENT* to that particular verb (pp. 311-312). • Any proposition which completes the predicate of another proposition by answering the question 'What?' (p. 312).	(i) Ye have not heard that it was said by them of old time (p. 312). (ii) And when the women saw that she was not hid (p. 312). (iii) These have known that thou has sent me (p. 312).

The examples of what is referred to as the *Comment* relation seem to involve a specific type of the relation that Longacre (1972a) refers to as *Conjoining*. In the case of the example referred to as *Identification*, non-restrictive relativisation is involved and we appear to have a proposition expressing general identity ('bread') linked to one expressing specific identity. This could be treated as either *Generic-Specific* or as a type of *Conjoining* (Longacre, 1972a), the distinction between the two requiring clarification.

The examples of the relation referred to as *Content*, could be treated as involving a specific type of *Generic-Specific* relation.

***Table 3.24*: A comparison of the list of relations resulting from the discussion of Longacre (1972a) and Beekman & Callow (1974)**

***Relations* resulting from discussion of Longacre (1972a)**	***Relational varieties* resulting from discussion of Longacre (1972a)**	***Relations* resulting from discussion of Beekman and Callow (1974)**
Conjoining	*Coupling*	*Conjoining*
Temporal	*Overlap*	*Simultaneity*
	Succession	*Chronological Sequence*
Implication: Conditionality	*Conditionality*	*Condition-Consequence*
	Hypotheticality	
Implication: Frustration	*Expectancy Reversal*	*Concession-Contraexpectation*[101]
Implication: Causality	*Efficient Cause*	*Reason-Result*
	Final Cause	*Means-Purpose*
		Means-Result
		Grounds-Conclusion[102]
Alternation	*Exclusive disjunction*	*Alternation*
	Inclusive disjunction	
Matching Comparison	*General Comparison*	*Comparison*
	Paraphrase	*Equivalence*
	Generic-Specific (including *Exemplificaton*)	
Matching Contrast	*General Contrast*	*Contrast*

3.3.4 Hollenbach (1975)

A different approach to the categorisation of *inter*-propositional relations is proposed by Hollenbach (1975), who defines discourse as "a structured group of propositions", regarding propositions as "the counterpart in logical structure of a surface clause" (p. 2). According to Hollenbach, a proposition "consists of a verbal predicate, typically manifested in surface structure as a verb phrase, and a number of nominal elements, manifested in surface structure as noun phrases or

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[101] Those who separate relations they regard as semantic from those they regard as pragmatic would include this relation in the latter category.

[102] Those who separate relations they regard as semantic from those they regard as pragmatic would include this relation in the latter category. Others might treat it as a variety of *Reason-Result*.

sentential complements".[103] Propositions in a discourse are said to be "joined two-by-two into strings", strings which may extend through larger parts of the discourse being referred to as 'central strings' and representing discourse themes. All of the propositions in a central string are said to be thematic, and all others are said to be non-thematic. Thematic propositions are, except in the case of the first and last thematic propositions in a paragraph, connected backwards and forwards (p. 2).[104] Thus, "the propositions of a discourse are joined together into strings by another class of predicates called relational predicates or interpropositional relations" [underlining in original] (p. 2). Discourse themes link together to form sections, and "themes and, where relevant, sections are the largest constituents of discourses". A discourse "must comprise at least one theme and may comprise many" (p. 7):

> For a given language, a subset of the entire set of interpropositional relations will relate nonthematic propositions to each other or to thematic propositions. We can call these intra-sentential relations for that language. Another subset will relate only thematic propositions and can be called inter-sentential relations. And another set will relate only themes to each other and can be called inter-paragraph relations (p. 20, fn.7).

Thus, Hollenbach (1975) proposes three types of *inter*-propositional relation:

> Intra-sentential relations: relate nonthematic propositions to each other or to thematic propositions;
> Inter-sentential relations: relate thematic propositions to one another;
> Inter-paragraph relations: link themes to each other.

Hollenbach notes that although these three subsets "will have a high degree of overlap", they "probably will not be equivalent". He also notes that "the

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[103] This definition makes reference to encoding and therefore runs the risk of being too closely linked to particular languages. Replacing 'verbal predicator' by 'predicator' and 'nominal elements' by 'arguments' and deleting all reference to surface encoding would provide us with a definition that avoided making assumptions about linguistic structure.

[104] Hollenbach (1975) uses the term 'theme' to refer to "the essential development of a discourse or part of a discourse". By this, he does not mean 'topic', that is, he does not mean "'that which is being talked about', or 'the main point' of a discourse" (p. 2).

membership of any of them will probably not be the same for all languages" (p. 20, fn.7). Thus, although the proposal that there are three types of relation is asserted with confidence, there is considerable uncertainty about the membership of these groups and about their possible universality.

The proposal forwarded here needs to be treated with caution. The labelling of the proposed three types of relation – intra-sentential, inter-sentential and inter-paragraph – immediately suggests a possible confusion of levels. If we are discussing *inter*-propositional relations, then we are dealing with relationships of meaning. If, however, we are discussing intra- and inter-sentential relations and inter-paragraph relations, we are dealing with surface form. Furthermore, if, as Hollenbach observes, there is likely to be a high degree of overlap among what he refers to as the three 'sub-systems', the possibility arises that there is only one system made up of one group of relations, each of which may be *encoded* in different ways. In other words, the interaction between propositions and *inter*-propositional relations may provide the basis for *discourse coherence,* whereas the surface structure encoding of these propositions and *inter*-propositional relations may play a significant role in *textual cohesion.*

Hollenbach divides relations into five categories (pp. 14-19):

Temporal:

Cooccurrence, Simultaneous, Circumstance-Included Event, Antecedent-Subsequent, Beginning-Post-Span, Pre-Span-End.

Causal:

Means-Purpose, Means-Result, Reason-Result, Cause-Effect, Stimulus-Response.

Logical:

Grounds-Implication, Condition-Consequence, Contrary-to-fact Condition – Contrary-to-fact Consequence, Concession-Contraexpectation.

Equivalence:

Greater-Lesser, Comparison, Generic-Specific, Restatement, Positive-Negative, Contrast.

N-Ary:

Coordination, Inclusive Alternation, Exclusive Alternation.

These relations are outlined in *Tables 3.25, 3.26, 3.27, 3.28 and 3.29* alongside examples drawn from Hollenbach (1975, pp. 14-19).

Table 3.25: **Temporal Relations: Hollenbach (1975)**

Relations	Description	Examples
Cooccurrence	• Proposition 'p' occurs repeatedly in time and for every occurrence of 'p' there is also an occurrence of 'q' simultaneous or adjacent in time (p. 14).	Every time Edgar calls I am in the bath tub (p. 14).
Simultaneous	• Two propositions that occur uniquely and precisely at the same time (there being no point at which one occurs but not the other) (p. 14).	(i) The bell rang as she dropped her handkerchief (p 14). (ii) The boys played baseball outside while Willie practised the piano (p. 14).
Circumstance-Included Event	• Two propositions occurring uniquely and there is no point at which the second proposition occurs when the first proposition does not occur (p. 16).	It was a dark and stormy night. Suddenly a shot rang out (p. 16).
Antecedent-Subsequent	• Proposition 'p' is related to 'q' if 'p' precedes 'q' in time and there is no overlap in their occurrence in time (p. 16).	He left after the film ended (p. 16).
Beginning-Post-Span	• Proposition 'p' is related to 'q' and 'p' is conceived of as punctiliar and occurs simultaneously with the initiation of 'q', the latter being durative (p. 16).	Nick has loved spinach since he was born (p. 16).
Pre-Span-End	• Proposition 'p' is related to 'q' and 'p' is conceived of as punctiliar and occurs simultaneously with the termination of 'q', the latter being durative (p. 16).	He raised pigs until the price of pork went down (p. 16).

Although each of the six categories included in *Table 3.25* is treated as a separate relation, three of them – *Cooccurrence*, *Simultaneous* and *Beginning-Post-span* – appear to parallel the relation of *Overlap/Simultaneity* in *Table 3.24*, and the others – *Circumstance-Included Event*, *Antecedent-Subsequent* and *Pre-span-end* – appear to parallel the relation of *Succession/Chronological Sequence* outlined there. It is also interesting to note that the first example under the heading of *Cooccurrence* can be compared with the variety of *Implication: Conditionality*

referred to by Longacre (1972a) as involving a universal quantifier. In discussing that variety, I indicated (p. 103) that it appears to involve temporal succession rather than conditionality.

Table 3.26: **Causal Relations: Hollenbach (1975)** [105]

Relations	Description	Examples
Means-Purpose	• Proposition 'p' is related to 'q' if 'p' occurs and if the agent of 'p' intends that 'p' will bring about the occurrence of 'q' (p. 16).	He said that just to make you mad (p. 16).
Means-Result	• Proposition 'p' is related to 'q' if not only the conditions for *Means-Purpose* are met, but if also 'q' in fact occurs consecutive to 'p' with the same agent as 'p' and 'p' entails 'q' (p. 16).	He succeeded by working hard (p. 16).
Reason-Result	• Proposition 'p' is related to 'q' if 'p' and 'q' occur consecutively and if 'p' entails 'q' and if there is a common agent of 'p' and 'q' (p. 16).	He failed by being lazy (p. 16).
Cause-Effect	• Proposition 'p' is related to 'q' if 'p' and 'q' occur consecutively and if 'p' entails 'q' (the difference between Reason-Result and Cause-Effect is that in the case of Cause-Effect no specification of the participants 'p' or 'q' is involved) (p. 17).	Lulu left Fred because he kept sitting on her cat (p. 17).
Stimulus-Response	• Proposition 'p' is related to 'q' if 'p' and 'q' occur consecutively and if 'p' meets certain appropriateness conditions imposed by 'p' (p. 17).	How is it going? Fine (p. 17).

In the case of the *Causal Relations*, there appears to be no clear distinction between *Reason-Result* and *Cause-Effect*. Indeed all of the relations included here are categorised as causal and therefore involve both cause and effect.

The relation referred to as *Stimulus-Response*, appears to involve interaction between participants (an interaction relation that can be outlined in terms of

[105] Hollenbach (1975, p. 16) notes that these involve both temporal sequence and logical implication.

repartee calculus) and, therefore, to have no relevance to the relational categories under examination here.

The examples of *Means-Result* and *Reason-Result* indicate that the same surface realisation may occur in the presence of two different relations, the difference between them relating to the nature of the non-finite verb (active in one case, stative in the other).

Table 3.27: **Logical Relations: Hollenbach (1975)**

Relations	Description	Examples
Grounds-Implication	• Proposition 'p' is related to 'q' if 'p' occurs and if 'p' entails 'q' (p. 17).	She must be sick, she is so pale (p. 17).
Condition-Consequence	• Proposition 'p' is related to 'q' if 'p' entails 'q' and if the occurrence of neither 'p' nor 'q' is indicated (p. 17).	If we hurry, we will not be late (p. 17).
Contrary-to-fact Condition – Contrary-to-fact Consequence	• Proposition 'p' is related to 'q' if 'p' entails 'q' and if 'p' and 'q' are denied as in fact occurring (p. 17).	If you had thought ahead, we would not be in this fix (p. 17).
Concession-Contraexpectation	• Concession-*Contraexpectation* involves the component that it is generally believed that 'p' entails some proposition mutually exclusive with 'q'. There are three types of *Concession-Contraexpectation*: a) Proposition 'p' is related to 'q' if the above component holds true and if 'p' in fact entails 'q' (as in example (i)). b) Proposition 'p' is related to 'q' if it is generally believed that 'p' entails some proposition mutually exclusive with 'q' and if both 'p' and 'q' occur (the occurrence of 'p' and 'q' provide grounds for denying the truth of the general belief stated) (as in example (ii)). c) Proposition 'p' is related to 'q' if it is generally believed that 'p' entails some proposition mutually exclusive with 'q' and if 'p' in fact does not entail such and if 'p' does not occur (as in example (iii)) (pp. 17-18).	(i) Even if he comes, I will not let him in (p. 17). (ii) Even though he came, I did not let him in (p. 18). (iii) Even if he had come, I would not have let him in (p. 18).

Hollenbach establishes two separate relational categories – *Condition-Consequence* and *Contrary-to-fact Condition – Contrary-to-fact Consequence* – although there appears here to be only one overall relation present, the relation involving *Condition-Consequence* which may take the form of a realisable or unrealisable condition.

As has been noted with reference to other models, the relation referred to as *Grounds-Implication* may simply be a *Reason-Result* relation in which the result takes the form of a deduction rather than a fact.

Table 3.28: **Equivalence Relations: Hollenbach (1975)**

Relations	Description	Examples
Greater-Lesser	• Proposition 'p' is related to proposition 'q' if some semantic component of the predicate of 'p' is equivalent to some semantic component of the predicate of 'q' but if along some parameter or parameters 'p' is true to a greater degree than 'q' is (p. 18).	(i) Harry is taller than Mortimer (p. 18). (ii) Mortimer hangs by his toes less than Harry (p. 18). (iii) Harry swims faster than Mortimer walks (p. 18).
Comparison	• There is an equivalent semantic component common to the predicates of two propositions and there is no difference of the degree to which they are both true (p. 18).	(i) Harry walks like a duck (walks) (p. 18). (ii) Harry looks like I feel (p. 18).
Generic-Specific	• The semantic components of two propositions are equivalent but the semantic content of 'p' could at least potentially include more than the semantic content of 'q' (p. 18).	He is out fishing, probably trolling around the lake (p. 18).
Restatement	• The semantic content of two propositions is equivalent and neither is potentially more inclusive (must be either both positive or both negative) (p. 18).	Stop immediately! I say, cease this instant (p. 18).
Positive-Negative	• Involves two equivalent propositions ('p' and 'q') where the predicate of 'q' involves the negated antonym of the predicate of 'p' or the negation of a predicate mutually exclusive with 'p' (p. 19).	Malcolm stayed home. He never left the house (p. 19).
Contrast	• Involves two propositions ('p' and 'q') where 'p' is the negative of 'q' and also 'q' is the negative of 'p' (p 19).	Jane wore a red coat, but Mary wore a blue one (p. 19).

Hollenbach proposes as two separate relations – *Greater-Lesser* and *Contrast* – what appear to be varieties of the same relation.[106]

What is referred to as here as a *Positive-Negative* relation appears to involve *Restatement/ (Paraphrase)*. Interestingly, the second member involves a type of emphasis not evident in the first (something that often characterises examples of what is sometimes referred to as the *Paraphrase* relation).

Table 3.29: **N-ARY Relations: Hollenbach (1975)**

Relations	Description	Examples
Coordination	• Two or more propositions are in the notion of *Coordination* if the truth of all of them is asserted and if they are all related in some way to some part of the discourse context (p. 19).	(After we got home) Jerry mowed the lawns, Suzie did the dishes, and I went to bed (p. 19).
Inclusive Alternation	• Two or more propositions are in the notion of *Inclusive Alternation* if it is asserted that one or another or some combination of them is true and if they are all related in some way to some part of the discourse context (p. 19).	Harry may know, or Eric may know, or Cecil may know . . . (p. 19).
Exclusive Alternation	• Two or more propositions are in the notion of *Exclusive Alternation* if it is asserted that one but not more than one is true and if they are all related in some way to some part of the discourse context (p. 19).	He is here or he is there (p. 19).

[106] Hollenbach gives this example of *Contrast*: *Jane wore a red coat, but Mary wore a blue one.* He says that *Contrast* involves two propositions 'p' and 'q' where "'p' is the negative of 'q' and also 'q' is the negative of 'p'. This is not the case: 'p' is not the negative of 'q' – but they *are* contrastive. He gives as an example of *Greater-Lesser*: *Harry swims faster than Mortimer walks.* All three of his examples of *Greater-Lesser* involve the comparative construction. Certainly the comparative construction involves a scale – but so do many antonymic adverbs: *Harry walks slowly but Jim walks quickly.* Furthermore, many other contrasts are implicitly scalar: *I like accountants but I love mathematicians*; *John's just a plumber but Matthew's an electrician.* Hollenbach's definition of *Greater-Lesser* is: Proposition 'p' is related to proposition 'q' if some semantic component of the predicate of 'p' is equivalent to some semantic component of the predicate of 'q' but if along some parameter or parameters 'p' is true to a greater degree than 'q' is. It would be impossible to apply that definition to examples that do not involve the comparative construction because it is actually a definition of the functioning of the comparative construction.

The relationship referred to here as *Coordination* is defined in a way that appears unnecessarily complex in that what is involved appears to be no different from what is referred to as *Conjoining* by Longacre (1972a).

In *Table 3.30*, the relations resulting from the discussion of Longacre (1972a) and Beekman and Callow (1974) are compared with those resulting from the discussion of Hollenbach (1975).

***Table 3.30*: A comparison of the list of relations resulting from the discussion of Longacre (1972a), Beekman & Callow (1974) and Hollenbach (1975)**

***Relations* resulting from discussion of Longacre (1972a)**	***Relational varieties* resulting from discussion of Longacre (1972a)**	***Relations* resulting from discussion of Beekman & Callow (1974)**	***Relations* resulting from discussion of Hollenbach (1975)**
Conjoining	*Coupling*	*Conjoining*	*Coordination/ Conjoining*
Temporal	*Overlap*	*Simultaneity*	*Simultaneity/ Overlap*
	Succession	*Chronological Sequence*	*Succession/ Chronological Sequence*
Implication: Conditionality	*Conditionality*	*Condition-Consequence*	*Condition-Consequence*
	Hypotheticality		*Hypotheticality*
Implication: Frustration	*Expectancy Reversal*	*Concession-Contraexpectation*	*Concession-Contraexpectation*
Implication: Causality	*Efficient Cause*	*Reason-Result*	*Reason-Result*
	Final Cause	*Means-Purpose*	*Means-Purpose*
		Means-Result	*Means-Result*
		Grounds-Conclusion	*Grounds-Implication/ Grounds-Conclusion*[107]
Alternation	*Exclusive disjunction*	*Alternation*	*Exclusive Alternation*
	Inclusive disjunction		*Inclusive Alternation*
Matching Comparison	*General Comparison*	*Comparison*	*Comparison*
	Paraphrase	*Equivalence*	*Restatement*
	Generic-Specific (including *Exemplificaton*)		*Generic-Specific*[108]
Matching Contrast	*General Contrast*	*Contrast*	*Contrast*

[107] I have indicated that it *may* be better to treat *Grounds-Conclusion* as a variety of *Reason-Result* rather than as a separate relation.

[108] I have indicated that it *may* be better to treat *Generic-Specific* as a variety of *Comparison* rather than as a separate relation.

3.3.5 Grimes (1975)

In *The Thread of Discourse* (1975), Grimes focuses primarily on *intra*-propositional relations. He does, however, refer to *inter*-propositional relations under the heading of *Rhetorical Structure* (pp. 207-229), where he discusses the role of what he refers to as 'rhetorical propositions', that is, propositions that join lexical propositions or other rhetorical propositions together.[109] Thus, for example, 'although' in 'although we were nearly out of milk, the children didn't complain' involves, according to Grimes, the domination of two lexical propositions by a rhetorical one, the rhetorical one (signalled by 'although') establishing an adversative relation (pp. 207-208). Grimes divides rhetorical predicates into three types: paratactic (where arguments are dominated in coordinate fashion), hypotactic (where one of the arguments is central and the other subordinate) and neutral (involving both paratactic and hypotactic forms) (p. 209). He does not, however, propose any specific model of *inter*-propositional relations, confining his discussion to those proposed earlier by Longacre and others.

3.3.6 Longacre (1996)

All of those whose research has been discussed thus far in this chapter are associated with tagmemics, a functional approach to language description and analysis associated, in particular, with the ideas of Kenneth Pike (see, for example, Pike, 1954, 1953), and largely developed in the late 1940s and 1950s.

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[109] Grimes here clearly identifies what he refers to as 'rhetorical propositions'. Following Grimes, Mann and Thompson (1986) refer to what they call 'relational propositions', claiming that their argument that these 'propositions' "rank with indirect speech acts as a variety of implicit communicative expression" (p. 59) is a novel one. In fact, however, almost all accounts of relations treat them, implicitly or explicitly, as illocutionary acts/values. Thus for example, Crombie (1985b), notes that: "If we approach the study of language through the investigation of cognitive processes and their influence on the establishment of binary values, we provide a framework in which binary values (e.g., *Condition-Consequence*) and binary value encodings can be shown to be related to unitary values (e.g., Threat, Inducement) . . ." (p. x). The majority of linguists do not, however, treat these relations as *relational propositions*. There is good reason for this. A proposition is made up of a predicator and one or more arguments. Treating a relation as a proposition means treating each of the propositions to which it is linked as arguments. There is nothing particularly problematic in doing so. What is problematic, however, is determining what an appropriate predicator might be. If, for example, the predicator is 'reason', there is no way of telling from the formulation of the 'relational proposition' which of the two 'arguments' is to be treated, in *intra*-propositional terms, as a 'reason' (and how the other argument could be specified). This is particularly unfortunate in view of the fact that research on *intra*-propositional roles/ relations (see *Chapter 2*) has been concerned to specify each argument in functional terms in relation to the predicator.

Fundamental to tagmemics is the concept of hierarchy and the belief that structure extends beyond the sentence level. Consistent with this approach is Longacre's (1996) view that "notional structure and surface structure [are] similar in broad outline" (p. 299),[110] but that "whenever surface structure becomes well crystallized and marked, it may be thrown out of phase with . . . notional structure" (p. 13). There may, therefore, be fundamental differences among languages in terms of the mapping of underlying and surface categories (p. 307).

An important difference between Longacre (1996) and some others operating within the context of tagmemics, such as, for example, Beekman and Callow (1974), is the fact that Longacre "[stops] short of applying [relations of the type discussed in this chapter] to the discourse as a whole . . . [believing] that there are special discourse-level schemata which are not the same" (p. 101).[111]

Longacre (1996) reorders, revises and expands on "the taxonomy of deep structure interclausal relations" as presented by Ballard, Conrad and Longacre (1971a, 1971b), Longacre (1972a, 1972b, 1976), Beekman (1970), Beekman and Callow (1974), Grimes (1975) and Hollenbach (1975). He refers also to the work of Halliday and Hasan (1976) but considers it to be "quite divergent from . . . these" in that it "attempts to classify interclausal relations in English according to surface structure conjunctions" (p. 53).[112]

In establishing his taxonomy, Longacre (1996, p. 51) proposes, as he had done earlier, a basic apparatus of elaborated statement calculus.

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[110] There are, however, a number of linguists who operate within the context of tagmemics who believe that notional categories should be located within a 'lexical' or 'referential' hierarchy.

[111] Longacre (1996, pp. 33-34) proposes that 'plot' is the notional structure of narrative discourse "in much the same way that expanded statement calculus is the notional structure of sentence and paragraph . . . while repartee is the notional structure of dialogue and interaction paragraphs . . . and case relations in an expanded predicate calculus constitute the notional structure of clauses". He also discusses *hortatory discourse, persuasive discourse, expository discourse* and *procedural discourse* in schematic terms. He claims that underlying *hortatory discourse* (discourse that aims to influence conduct) are four elements: authority or credibility of the text producer, indication of problem/ solution, one or more command elements, and motivation. Underlying *persuasive discourse* (discourse that aims to influence beliefs and values), he also posits four elements: presentation of problem or question, proposed solution or answer, supporting argumentation, and an appeal to give credence or adopt certain values. He sees *expository discourse* as involving problem, solution, supporting argumentation and evaluation of solution (c.f. Hoey, 1983), and many types of *procedural discourse* as involving problem/ need, preparatory procedures, main efficient procedures, and concluding procedures (c.f. Forster & Barnard, 1968).

[112] Halliday and Hasan (1976) and Martin (1992) are discussed in *Section 3.5.*

Longacre's (1996, pp. 54-97) eleven main relations (and an intersecting relation of *Frustration*) are outlined in *Tables 3.31 - 3.42* following. The comments that I made in relation to Longacre (1972a) also apply here. Although I have not repeated them, I have made reference to them as necessary.

***Table 3.31*: Conjoining Relation: Longacre (1996)**

Variety	Description	Examples
Coupling	• Includes nontemporal 'and' relations (p. 54). • Typically from the same semantic domain, although the exigencies of discourse structure may bring together rather unusual items in an ad hoc domain relative to a given discourse (p. 54). • There are five types of *Coupling*: (i) Coupling with the same first term; (ii) Coupling with different first terms and without reciprocity; (iii) Coupling with different first terms and with reciprocity; (iv) Coupling with different first terms and with partial reciprocity; (v) Parallel coupling (p. 55).[113]	(i) He preaches twice a week, milks cows twice a day, plays poker nightly, studies graph theory and typology, writes occasionally for 'Playboy', tinkers with old cars, throws pots and pans at his wife, collects ivory elephants, and peddles heroin (p. 54). (ii) He short and he's fat (p. 54). (iii) He runs track and plays tennis (p. 54). (iv) He collects coins and his wife does ceramics (p. 54). (v) She lectures him and he listens (p. 54). (vi) She lectured him on his personal morals and he listened meekly to her (p. 54). (vii) The men talk English, the women talk English, the children talk English (p. 55). (viii) They talk English, they talk French, they talk Russian (p. 55). (ix) The men, women, and children all talk English (p. 55). (x) They talk English, French, and Russian (p. 55).

[113] Longacre states, "although *Coupling* may encode in various structures . . . there is one surface structure, namely the *coordinate sentence* whose raison de'être seems to be encoding of coupling", adding that "typically in many languages, a coordinate sentence is a highly elastic surface structure; it encodes many things besides notional coupling". He concludes, nevertheless, that encoding of coupling seems to be the primary purpose for the existence of the coordinate sentence in languages where such a sentence type is found (p. 55).

Table 3.31 (continued): **Conjoining Relation: Longacre (1996)**[114]

Variety	Description	Examples
Contrast	• Includes notional 'but' relations; requires paired lexical opposites. (p. 55). • One of the opposed pairs plays a more crucial role in establishing the contrast than does the other (p. 55). • A two-way distinction is made for surface structure: (a) a negative-positive use of the same predicate as a notional structure, and (b) the use of a pair of antonyms. The former involves the negation of a close synonym of a predicate rather than the predicate itself and the latter involves broadly construed antonyms which include not only dictionary antonyms (good, bad), but also opposed roles (husband, wife), binary spatial oppositions (underneath, on top), and binary temporal oppositions (day, night) (p. 56). • There exists another subvariety of *Contrast* called *Exception*. *Exception* has two opposed pairs; one pair consists of a negative-positive or positive-negative use of the same predicate, the second pair is peculiar to this structure, in that one term of the first predicate consists of the universal set minus a given member of that set, while the corresponding term of the second predicate consists only of that member (p. 57).	(i) I don't like hamburgers, but my wife does (p. 56). (ii) I abhor hamburgers but my wife loves them (p. 56). (iii) He's naive about some things but not about others (p. 56). (iv) He's naive about women but not about business (p. 56). (v) He's naive about women but sophisticated about computers (p. 56). (vi) Bill works outdoors during the day and indoors at night (p. 56). (vii) I don't like hamburgers, but my wife does (p. 56). (viii) John spoke but nobody else did (p. 57). (ix) Nobody spoke up except John (p. 57). (x) Everybody died except Grandfather (p. 58). (xi) He looked everywhere except in his hip pocket (p. 58). (xii) He fined everyone except John (p. 58) (xiii) He expected her anytime except today (p. 58). (xiv) He didn't kill anything except a mouse (p. 58)

[114] Payne (1990) notes that contrast, counterexpectation and a kind of paraphrase are encoded in the preverbal constituent in Yagua, a language spoken in the Amazon Basin near Iquitos.

Table 3.31 (continued): **Conjoining Relation: Longacre (1996)** [115]

Variety	Description	Examples
Comparison	• Includes notional 'but' relations; requires paired lexical opposites. (p. 55). • In English, comparison is expressed within domains of a single sentence with two rather closely associated clauses and with adjectives inflected for comparison. This situation, however, should not be assumed in all languages (p. 60).[116]	(i) John is bigger than Bill (p. 59).[117] (ii) John is as big as Bill and John is smaller than Tom (p. 59). (iii) John loves Mary more than he loves Susan (p. 59). (iv) John loves Mary as much as he loves Susan (p. 59). (v) John loves Mary less than he loves Susan (p. 59). (vi) John loves Mary more than Bill loves Mary (p. 59). (vii) John loves Mary as much as Bill loves Mary (p. 59). (viii) John loves Mary less than Bill loves Mary (p. 59).

It is interesting to note that *Comparison* is now listed alongside *Coupling* and *Contrast* as a variety of *Conjoining*. However, as I observed with reference to Longacre's (1972a) earlier model, it is not clear why any varieties other than

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[115] Longacre (1996, p. 59) notes that comparison involves a type of conjoining which may be called *degree conjoining*.

[116] Longacre notes, for example, that "in Wojokeso of Papua New Guinea . . . there is a surface structure called the comparative paragraph. It has two obligatory components, each expounded by a sentence" (p. 60). Typical of this structure is example (i) below:

(i) That sun is good. The rain is bad.

This is equivalent to saying 'The sun is better than the rain'. He notes that "we could allege that notional comparison is expressed by the Wojokeso surface structure paragraph just illustrated" or we could just say that "the Wojokeso surface structure encodes notional contrast, i.e., *that the sun is good* verses *the rain is bad*". Thus, he suggests, that "we need not set up notional structure comparison, i.e., degree conjoining, in Wojokeso at all. At this point possibly the notional structure of English and the notional structure of Wojokeso are dissimilar". Therefore, "it would follow . . . that comparison is not a cultural and linguistic universal, although it is a notional structure found very frequently around the world. The ideas of comparison and contrast are not too very different at all, and apparently in certain portions of the world they may well fall together as the same notional structure". For that reason, "we may not expect to set up one universal catalog of notional structures applicable to all languages. Rather, we may have to settle for a catalog, i.e., a system of notional structures, that is say 90 to 95% universal" (pp. 60-61).

[117] Examples (i), (iii), (v), (vi) and (vii) would appear to involve contrast rather than comparison and example (ii) would appear to involve both contrast and comparison.

Coupling are included in this category. I therefore propose that *Contrast* and *Comparison* each be treated as a separate relation.

Table 3.32: **Alternation Relation: Longacre (1996)** [118]

Variety	Description	Examples
Alternation with only two possible alternatives	• May turn either on a negative or positive use of the same predicate or on the use of a pair of antonyms (p. 61). • Antonyms must be defined not simply as dictionary antonyms but as situational and contextual opposites, e.g., opposed roles, spatial oppositions, and temporal oppositions (p. 61). • This relation must also be defined situationally and according to the presupposition of the context (p. 61).	(i) Either he did it or he didn't (p. 61). (ii) (I don't know whether) John came or not (p. 61). (iii) Is he there or isn't he? (p. 61). (iv) Is he alive or dead? (p. 61). (v) Do something good or evil (that we may know that you are gods) (p. 61).
Alternation with more than two alternatives	• This includes all sorts of alternation which involve two alternatives or two or more terms (p. 62). • In English it is preferable to represent this, as in example (i), as a conjunction of nouns, while in certain parts of the world the preference is for the full structure, as is shown in example (ii) (pp. 62-63). • *Alternation* may turn not on a term but on the predicate itself (p. 62).	(i) Either John or Mary or Sue will come (p. 62). (ii) Either John will come, or Mary will come, or Sue will come (p. 62). (iii) Let's beg, borrow, or steal a new watch (p. 62). (iv) He'll come today, tomorrow, or some time next week (p. 62).

The two varieties of *Alternation* are very similar to those outlined in Longacre (1972a) except that the variety that was discussed in terms of inclusive disjunction there has been replaced by a variety "with more than two alternatives". I believe

[118] *Alternation* includes notional 'or' relations. While contrast turns on two points of difference, alternation turns on one point of difference (p. 61).

that the critical difference between the two categories is not that the second need involve more than two alternatives, but that it does not involve contrast.

Table 3.33: **Temporal Relation: Longacre (1996)** [119]

Variety	Description	Examples
Overlap	• *Overlap* includes notional 'meanwhile' and 'at the same time' relations (p. 63). • There are four types of *Overlap*: (i) Span-span overlap: Two activities which are roughly conceived as starting and stopping at the same time; (ii) Event-Span: An event which takes place during a span; (iii) Span-event (converse of (ii) above): emerges through a process of ordering, a string begins to move toward encoding in a surface structure; (iv) Event-event: Two punctiliar events taking place at the same time (p. 64).	*Examples of Span-Span:* (i) As/While he walked along, he prayed (p. 64). (ii) As/While he prayed, he walked along (p. 64). *Examples of Event-Span:* (iii) She fell asleep while nursing the baby (p. 64). (iv) He glanced back as he walked along (p. 64). (v) There was an earthquake while I was there (p. 64). *Examples of Span-Event:* (vi) While he was walking, he stumbled (p. 64). (vii) During an organ recital, the page turner knocked the music off the rack (p. 64). *Examples of Event-Event:* (viii) Just as he came out, the car drove away (p. 64). As I brought up my head, she tossed the knife (p. 64)

[119] *Temporal* is divided into two relations: *Overlap* and *Succession*. According to Longacre (1996), "distinguishing . . . *temporal overlap* from *temporal succession* is a linguistic universal, i.e., all languages in some way take account of this distinction". He notes that "while in some areas of the world, e.g., Papua New Guinea, this distinction is focal in the surface structure, even in areas where it is not focal it comes in for attention", adding that "in English, although there are no specific sentence types built on temporal overlap verses succession, yet subordinate clauses with *when* and subordinate clauses with *while* carefully distinguish these relations" (p. 63). There are four types of *Overlap* and four types of *Succession* (p. 63).

Table 3.33 (continued): **Temporal Relation: Longacre (1996)**

Variety	Description	Examples
Succession	• *Succession* includes notional 'and then' relations (p. 65). • There are four types of *Succession*: (i) Span-Span: A prolonged event followed by another prolonged event; (ii) Event-Span: An event followed by a prolonged event; (iii) Span-Event: A prolonged event followed by an event; (iv) Event-Event: Several events reported in a sentence (pp. 65-67).	*Examples of Span-Span:* (i) They played tennis for an hour, then swam for another hour (p. 65). (ii) She spent an hour getting supper, then half an hour eating it (p. 65). (iii) After his seven year reign in Hebron, he reigned thirty three years in Jerusalem (p. 65). *Examples of Event-Span:* (iv) He put wood in the stove and then sat there for an hour (p. 65). (v) He started a fire and sat there for an hour enjoying its warmth (pp. 65-66). (vi) After the death of his wife, he lived in isolation for years (p. 66). *Example of Span-Event:* (vii) It rained all morning but cleared up about noon (p. 66). (viii) He watched TV for two hours then got up and walked out (p. 66). *Examples of Event-Event:* (ix) He grabbed the axe, hit the door, and broke it down (p. 66). (x) He took the letter, read the return address, and tore it up (p. 66). (xi) She gave him some water and he drank it (p. 66).

Table 3.34: **Implication Relation: Conditionality: Longacre (1996)**

Variety	Description	Examples
Hypotheticality	• Includes certain unweighted *if* notions (p. 67). • This notional structure expresses a condition which implies nothing as to the factuality of either member of the condition, i.e., the consequent does not follow unless the condition stated in the antecedent also holds (p. 67).	(i) If she is there, I will stay (p. 67). (ii) If large doses of Vitamin C are harmful, I'll stop taking it (p. 68). (iii) If the universe is fundamentally absurd, man's rationality is an anomaly (p. 68). (iv) If meat is going to cost that much, let's eat beans (p. 68).
With Universal Quantifier of a Term (in the Antecedent)	• A frequent use of the *universal quantifier* is to modify a temporal term or locative expression of the antecedent (p.69). • The *universal quantifier* may be associated with the first term of the predicate (p. 69). • In Philippine languages, the typical surface structure for encoding universal quantifier on a term in the antecedent is to use an interrogative pronoun in a concessive margin (p. 69).	(i) Whenever you come, I'll be waiting (p. 69). (ii) Whenever you go, I'll be thinking of you (p. 69). (iii) Whoever we sent got lost (p. 69). (iv) Whatever he did, it went wrong (p. 69).
Contingency	• A type of deep structure *if* notion which involves temporal reference, i.e., an implication relation and a temporal relation are brought together in spite of the fact that these two relations would normally be distinct from each other (pp. 69-70).	(i) I made sure that she was well, then I let her work in the garden (p. 70). (ii) You have to be paid before you are enthusiastic (p. 70). (iii) Then I will marry, when I have some money (p. 70). (iv) Then you should plant, when next April comes (p. 70).

Table 3.34 (continued): **Implication Relation: Conditionality: Longacre (1996)**

Variety	Description	Examples
Proportions (correlative statements)	• A type of notional structure which involves *proportionality* (p. 70). • Also includes inverse proportions (p. 71).	(i) The bigger they are, the harder they fall (p. 70). (ii) The harder they work, the sooner they go home (p. 70). (iii) The harder I study, the less I know (p. 71). (iv) The harder I work, the less money I earn (p. 71).

The varieties listed here under the heading of *Implication: Conditionality* differ from those listed under the same heading in Longacre's (1972a) earlier model only insofar as *Warning* and *Contrafactuality* here have been removed and *Proportions* added. *Hypotheticality*, *Contingency* and *With Universal Quantifier* remain. As I indicated in discussing the earlier model, the category *With Universal Quantifier* appears to involve temporal succession rather than conditionality. So far as *Contingency* and *Hypotheticality* are concerned, it is difficult to see (in translation at least) any real difference between the two sets of examples.

Table 3.35: **Implication Relation: Causation: Longacre (1996)** [120]

Variety	Description	Examples
Efficient Cause	• This is the notional *because* relation (p. 72). • In English, it may be encoded as the first base of a *Result* sentence (as in example (i)), or as the second base of a *Reason* sentence (as in example (ii)), or as a *Cause Margin* (as in example (iii)) (p. 72). • Some languages do not have both a result sentence and a reason sentence but simply settle for one structure or the other (p. 72).[121]	(i) You were afraid so you didn't go (p. 72). (ii) You didn't go for you feared the outcome (p. 72). (iii) You didn't go because you were afraid (p. 72).
Final Cause	• This is the notional *in order to* relation (p. 73). • Languages with systems of sentence margins often have a *Purpose* margin involving a morpheme which can be translated 'in order to', 'for the sake of' (p. 73). • On the other hand, nuclear structures may be employed to express a *Purpose* as well, for example, a juxtaposed sentence structure in which the second clause contains the verb with anticipatory mode. An example based on Trique is provided as example (i) (p. 73).	(i) He took it, he will eat (p. 73). (ii) He took it in order to eat it (p. 73).

[120] *Causation* involves not simply an implication, but a given (Longacre, 1996, p. 71). There are three types of *Causation*: *Efficient Cause*, *Final Cause* and *Circumstance*.

[121] Longacre notes that in Wojokeso, which does not "have a margin system on the sentence level, one surface structure is found, the 'cause and effect sentence' (or simply: a result sentence), where English has three, i.e., cause margin plus nucleus, result sentence, and a reason sentence" (Longacre, 1996, p. 72).

Table 3.35 (continued): **Implication Relation: Causation: Longacre (1996)**

Variety	Description	Examples
Circumstance	• A rather watered-down version of *Causation*, i.e., a notional structure which indicates *in the circumstances* (p. 73). • In English, we use such expressions as *in view of the fact that*, *in that*, and *since* to express something not quite as strongly put as efficient cause (p. 73).	(i) In that he can't sign his name, it's going to be difficult to sell the house that he owns (p. 73). (ii) In the view of the fact that his health is steadily improving, let's just await an outcome (p. 73).

Table 3.36: **Implication Relation: Contrafactuality: Longacre (1996)** [122]

Variety	Description	Examples
Contrafactuality	• *Contrafactuality* combines elements of *Hypotheticality* and *Efficient Cause*, i.e., it both presents a condition and an explanation (p. 74). • Not only confined to examples with positive in both cases (p. 74). • It is possible to have a negative in the first clause and a positive in the second, or a positive in the first and a negative in the second, with both of them still understood in the opposite positive-negative values (pp. 74-75). • *Contrafactuality* conditions are expressed in various ways in the surface structures of languages of the world. [123]	(i) He had gone, I would have gone too (p. 74). (ii) He didn't go and because he didn't go, I didn't go either (p. 74). (iii) Had he gone, I would have gone too (p. 74).

[122] Longacre claims that this requires a given and a double implication (1996, p. 74).

[123] Longacre notes, for example, that the Chicahuaxtla Trique language in Mexico, "has no ready way to express a contrafactual condition", adding that a pattern "exists in the grammar of the language but is of infrequent use and is not used with equal facility with all speakers". However, a more common way of expressing contrafactuality in Chicahuaxtla Trique is to use a "paraphrase which recasts the whole paragraph" (p. 75).

Table 3.37: **Implication Relation: Warning: Longacre (1996)**

Variety	Description	Examples
Warning	• Involves an inflected predicate which expresses obligation in regard to a course of action or presents that course of action as highly desirable (p. 76).	(i) We shouldn't let our torches go out because if we let our torches go out, we'll never find our way home (p. 76). (ii) We shouldn't let our torches go out or/otherwise we'll never find our way home (p. 76). (iii) It is good that we burn some paper, otherwise it would bury us (p. 76).

Whereas *Contrafactuality* and *Warning* were treated as varieties of *Implication: Conditionality* in the earlier model (Longacre, 1972a), they are now treated as separate relations *Implication: Contrafactuality* and *Implication: Warning*. With reference to the second of these (*Implication: Warning*), it remains the case – as I argued earlier – that the examples appear to involve a combination of two relations – *Efficient Cause* and *Hypotheticality*.

Table 3.38: **Paraphrase Relation: Longacre (1996)** [124]

Variety	Description	Examples
Equivalence Paraphrase	• Sometimes a speaker feels that to say something only once is not sufficient but that they need to say it twice or more in differing words (p. 77).	(i) He capitulated immediately; he surrendered on the spot (p. 77). (ii) All the soldiers left, all the Japanese left (p. 77). (iii) Shouldn't we call in the law, or notify the police, or get some sort of protection? (p. 78).

[124] Longacre (1996) distinguishes between seven varieties of paraphrase which he groups into three (plus summary paraphrase): (1) equivalence and negated antonym paraphrase which do not perceptually involve addition or loss of information between the two bases; (2) generic-specific paraphrase and amplification paraphrase which involve an increase in information; and (3) specific-generic paraphrase and contradiction paraphrase which involve a decrease in the amount of information (pp. 76-77).

Table 3.38 (continued): **Paraphrase Relation: Longacre (1996)**

Variety	Description	Examples
Negated Antonym Paraphrase and similar structures	• There are two types of possibility here, in that while a pair of antonyms is required and it is also required that one of the antonyms be negated, the negation may occur either in the first base or in the second base of a *Paraphrase* (p. 78). • There are three very similar types of *Negated Antonym Paraphrase*: (i) *Negated Higher Gradient Paraphrase*: A pair of lexical items which belong to a gradience scale (one of the two items is of higher rank than the other), the higher ranking item being negated; (ii) *Negated Lower Gradient Paraphrase*: A lower gradient item may be negated; (iii) *Negated Extremes*: Involves gradience scales with three values (pp. 78-79).	*Examples of Negated Antonym Paraphrase:* (i) It's white, not back (p. 78). (ii) It's not black but white (p. 78). (iii) It's not black, but on the contrary it's white (p. 78). *Examples of Negated Higher/Lower Gradient Paraphrase:* (iv) It's not hot but it's warm (p. 79). (v) It's warm but it's not hot (p. 79). (vi) Although it's not hot, it's warm (p. 79). (vii) It's not hot; it's just warm (p. 79). (viii) He's a good man but he's no paragon of virtue (p. 79). (ix) He's no master mechanic but he does manage to keep things repaired around here (p. 79). (x) She's not just attractive, she's beautiful (p. 79). *Examples of Negated Extremes:* (xi) It's neither hot nor cold; it's just warm (p. 79). (xii) It's not black or white; it's grey (79). (xiii) She's neither beautiful nor ugly; she's a plain, wholesome, ordinary kid (p. 79) (xiv) He's not tall and he's not short (either) (p. 79). (xv) She's neither beautiful nor ugly (p. 79).

Table 3.38 (continued): **Paraphrase Relation: Longacre (1996)**

Variety	Description	Examples
Generic-Specific Paraphrase	• A gain of information in the second member (p. 80). • A more specific lexical item (or items) is used in the second base than in the first base, thereby narrowing down the meaning indicated in the first (p. 80).	(i) He cooked it, he fried it in vegetable oil (p. 80). (ii) He was executed yesterday, he was shot by the firing squad (p. 80).
Amplification Paraphrase	• The first base is repeated in substance (often by means of a synonym), and a further phrase or two is added which gives additional information (p. 80).	(i) He was unconscious; Dabonay, a woman, had knocked him unconscious (p. 80). (ii) He sang, he sang two songs (p. 80). (iii) He went away, he went away two weeks ago (p. 80). (iv) He went away, I saw him go (p. 80).
Specific-Generic Paraphrase	• Here there is a loss of information in the second base as compared to the first base (p. 81).	They dug up Assyrian ruins, they did some excavation (p. 81).
Contraction Paraphrase	• The converse of *Amplification*, in that lexical items (often noun phrases) which are found in the first base are not found in the second base (p. 81). • Information from the first base is given by repeating the predicate of the base or by giving it in the form of a synonym (p. 81).	(i) Wait, we'll bury the fish in the ashes, we'll hide it (p. 81). (ii) One by one they tried to find wells, they dug (p. 81). (iii) I won't go to see him, I just won't go (p. 81).
Summary Paraphrase	• A type of paraphrase which employs a generic lexical item in the base after a series of more specific lexical items in the preceding bases (p. 81).	John works at the sawmill; Jim at the repair shop; and Al at the printshop – that's what they're doing (pp. 81-82).

In both models, Longacre (1972a) and Longacre (1996), the *Paraphrase* relation has associated with it the same seven varieties: *Equivalence*, *Negated Antonym*,

Generic-Specific, *Specific-Generic*, *Amplification*, *Contraction* and *Summary*. As I argued with reference to aspects of the earlier model, all except the variety referred to as *Equivalence Paraphrase* appear to involve something rather different from what is generally understood by the word 'paraphrase'. All of them, however, need to be accommodated. In accommodating them, I would include *Denial-Correction* (along with *Exception*) as a variety of *Contrast*, and *Reporting* (with among its sub-varieties *Speech/Knowledge Attribution* and *Definition*) as a type of *Generic-Specific* relation (involving comparison).

The members of a number of relations and relational varieties may appear in either order. I believe, however, that each of these need be listed only once. So far as *Paraphrase* itself is concerned, it can be treated as variety of *Comparison* in which the content of two propositions matches.

Table 3.39: **Illustration Relation: Longacre (1996)** [125]

Variety	Description	Examples
Simile	• Two dissimilar things are paired by virtue of their possessing one point of similarity (p. 83). • Differing culture areas of the world differ as to the similes that they employ (p. 83). • Trique, for example, utilises identical verb bases (as in examples (i) and (ii)) (p. 83).	(i) Like does this, so does that (p. 83). (ii) Like goes this, so goes that (p. 83). (iii) She is like a rose (p. 83). (iv) She acts like a baby (p. 83). (v) A pretty girl is like a melody (p. 83).
Exemplification	• A Universal set is introduced along with the citing of an example or a member of that set (p. 83).	(i) Choose a good name, e.g., Michael (p. 83). (ii) He has had a bold and innovative career, as seen in his introduction of the Mariachi Mass in the Sunday morning service at the Cathedral (pp. 83-84).

[125] Longacre observes that a speaker or writer can illustrate a point by using a simile or citing an example (Longacre, 1996, p. 82).

As in case of the earlier model, *Illustration* is included as a separate relation. However, whereas the two varieties of *Illustration* were *Comparison* and *Exemplification* in the earlier model, they are now *Simile* and *Exemplification* although the examples included under the heading of *Simile* are the same as those that were earlier included under the heading of *Comparison*. As I indicated earlier, it is not clear why *Comparison* is not treated as a separate relation (with *Exemplification* as a variety).

Table 3.40: **Deixis Relation: Longacre (1996)** [126]

Variety	Description	Examples
Introduction	• A notional structure in which the existence is predicated of something and then a further predication is made about its existence (p. 84).	(i) There was a man named Amkidit; he lived in the mountains (p. 84). (ii) And there was one who went for wood, they cornered him and killed him and took his head (p. 84).
Identification	• A participant is introduced via a predication and then their function in the discourse is identified (p. 85).	(i) And he bought a dog, and that was what the old man ate (85). (ii) Kimboy went back and got a hammer and that was what they used (p. 85). (iii) The Spanish picked him up on their way, and he was the one who showed the way up here (p. 85).

In both models, a *Deixis* relation is included. In the earlier model (Longacre, 1972a), the varieties were *Existence-Predication* and *Predication*-Equation. In this model (Longacre, 1996), the varieties are *Introduction* and *Identification.* Once again, as in the case of the earlier model, I can see no reason why all of the examples listed should not be included under the general heading of *Conjoining* and included in the category earlier referred to as *Coupling*.

[126] Longacre notes that these involve existential or equative expressions (1996, p. 84).

Table 3.41: **Attribution Relation: Longacre (1996)** [127]

Variety	Description	Examples
Speech Attribution	• The function of attributing the actual words or the general substance of what is said to a specific speaker (p. 87). • Quotations emerge in the surface of some languages in two divergent forms: the *direct quote* and the *indirect quote*. The *direct quote* purports to give the actual words of the speaker and the *indirect quote* involves adaptation of the words (p. 87). • The surface structure direct quotation is the primary device for encoding speech attribution (p. 88). • Speech attribution not only characterises statements but also questions and commands (p. 88).	(i) But I gave you the actual words! (p. 87). (ii) He said, "I'll go over there tomorrow" (p. 87). (iii) He said that he would come here today (p. 87). (iv) He asked, "Are you coming or not?" (p. 87). (v) He commanded, "Don't come tomorrow" (p. 87).
Awareness Attribution	• Probably the typical verb here is *know* (p. 89). • A speaker-spoken dichotomy parallels here the knower-known (cognitive content) dichotomy (p. 87).	(i) I know that he's coming (p. 89). (ii) I saw that he was in a bad mood (p. 89). (iii) I feel that things aren't working out right (p. 89). (iv) I sensed that all was well (p. 89). (v) Susan really knows algebra (p. 89).

In the earlier model (1972a), there was a *Reporting* relation. This is replaced in the later model (Longacre, 1996) by an *Attribution* relation. In each case, the varieties *Speech* and *Awareness* are included. However, one variety, *Metalanguage*, which was included in the earlier model, is not included in the later one. As I indicated in discussing the earlier model, *Reporting* seems to be a

[127] Longacre groups under the label *Attribution* "two sorts of notional structure, specifically the attribution of an utterance or the substance of an utterance to a speaker; and the attribution of cognitive content to a conscious subject (Longacre, 1996, p. 86).

type of *Generic-Specific* which itself seems to be a variety of some form of *Comparison.*

Table 3.42: **Frustration Relation: Longacre (1996)** [128]

Variety	Description	Examples
Frustrated Coupling	• A collocational expectancy in an unstated blocking circumstance is blocking the normal expectancy (p. 91).	She's fat but she's not sloppy (p. 91).
Frustrated Succession	• Languages contain in their lexical structure certain expectancy chains which may involve a succession of actions which customarily follow each other in chronological order, e.g., 'leave (someplace) . . .go . . . arrive', and somewhat more culturally conditioned chains, e.g., New Guinea, 'see a pig . . . catch or kill it' and expectancy chains involving different actors are such as: 'shoot . . . die'; 'call . . . answer' (p. 91). • A *Frustrated Succession* occurs when a succession of actions that customarily follow each other in chronological order is blocked and the anticipated course of action is blocked (p. 91).	(i) I looked for it but couldn't find it (p. 92). (ii) It fell down but didn't break (p. 92). (iii) They left for Paris but didn't arrive (p. 92). (iv) He killed and cooked his game but never ate it (p. 92). (v) I went to look for it but my glasses broke, and I couldn't find it (p. 92). (vi) He fell out of a tree but some low-lying limbs broke his fall and he didn't get hurt very badly (p. 92). (vii) I searched for it in the grass but my glasses broke, and I couldn't find it, so I went home (instead) (p. 92).

[128] Longacre (1996) claims that many of the main relations he outlines have frustrated counterparts in which *frustration* is a notional parameter which intersects the system of relations. Other possible labels for *Frustration* are *Expectancy Reversal* or even *Counterexpectation* (p. 90). He includes varieties of *Frustration*: *Frustrated Coupling*, *Frustrated Succession*, *Frustrated Overlap*, *Frustrated Hypothesis*, *Frustrated Contingency*, *Frustrated Efficient Cause*, *Frustrated Final Cause*, *Frustrated Attribution*, and *Frustrated Modality.*

Table 3.42 (continued): **Frustration Relation: Longacre (1996)**

Variety	Description	Examples
Frustrated Overlap	• Involves an *Overlap* relation in which the customary anticipated course of action is unexpected, e.g., it is assumed that while one drives down a crowded street, the driver is looking for pedestrians (pp. 92-93).	(i) He drives down crowded streets but doesn't look out for pedestrians (p. 92). (ii) He drives down crowded streets but is often preoccupied and doesn't look out for pedestrians (p. 93). (iii) He drives down crowded streets but doesn't look for pedestrians so he struck a child the other day (p. 93).
Frustrated Hypothesis	• Based on hypotheticality in which the customary anticipated hypothesis is unexpected (p. 93).	(i) Even if she comes, I'm not going to go with her (p. 93). (ii) She may come for me, but I'm not going to go with her (p. 93). (iii) She may come for me, but I'm not feeling well so I'm not going to go with her (p. 93). (iv) Even if she comes, I'm not going to go with her because I'm not feeling well (p. 93). (v) She may come for me, but I'm not going to go with her; I'm going to stay home instead (p. 93).
Frustrated Contingency	• *Contingency* is a type of deep structure *if* notion which involves temporal reference. *Frustrated Contingency* involves a blocking circumstance even when the presupposition is met in the temporal reference (pp. 93-94).	(i) Even when I had made sure that she was well, I didn't let her work in the garden (p. 93). (ii) Even when I have money, I'm not getting married (p. 93). (iii) Even when I had made sure that she was well, I didn't let her work in the garden because I was afraid of what the neighbours might say (p. 94). (iv) Even when I have money, I'm not getting married because I am a confirmed bachelor (p. 93).

Table 3.42 (continued): **Frustration Relation: Longacre (1996)**

Variety	Description	Examples
Frustrated Efficient Cause	• A notional *because* relation in which the customary anticipated outcome is unexpected (p. 94).	(i) He was poisoned but didn't die (p. 94). (ii) He was poisoned but they rushed him to hospital and he didn't die (p. 94).
Frustrated Final Cause	• A notional *in order to* relation in which the customary anticipated outcome is unexpected (p. 94).	(i) He came but didn't get a free meal (p. 94). (ii) He came but the women's husband was at home so he didn't get a free meal (p. 94).
Frustrated Attribution	• *Frustrated Attribution* is the function of attributing a thought or claim to a specific speaker, but the implication is that the claim is incorrect (p. 94).	(i) He says that she is intelligent but she really isn't (p. 94). (ii) He says that she is intelligent but I've seen her in action, and I know that she isn't (pp. 94-95). (iii) I thought you were quite wrong, but you weren't (p. 95). (iv) I thought that I could do it, but I couldn't (p. 95).
Frustrated Modality	• A predicate is specified as to intent, obligation, or ability, but the action thus specified is not carried through (p. 95). • There are three types here: (i) *Frustrated Intent*: The intent was to do something but the intent was not undertaken; (ii) *Frustrated Obligation*: The obligation was to do something but the action was not undertaken; (iii) *Frustrated Facility (ability)*: The facility was to do something but the action was not undertaken (pp. 96-97).	*Examples of Frustrated Intent:* (i) I intended to go but didn't (p. 70). (ii) I didn't intend to go but visitors came, so I didn't go but stayed home and entertained for the evening (p. 71). *Examples of Frustrated Obligation:* (iii) I should have gone but didn't (p. 96). (iv) I shouldn't have gone but I went away (p. 96). (v) I should have gone but I was tired and didn't go (p. 96). *Examples of Frustrated Facility:* (vi) I could have promoted him but I didn't (p. 97). (vii) I could have promoted him but his irresponsibility offended me and I didn't; instead I fired him (p. 97).

In the earlier model (Longacre, 1972a), there is a relation labelled *Implication: Frustration* with three varieties – *Expectancy Reversal*, *Mistaken Idea* and *Conflicting Premises*. I indicated with reference to *Implication*: *Frustration* in that model that there seemed to be no clear differences among the three varieties (except for the fact that some of the examples appeared to involve two different relations). In the later model (Longacre, 1996), *Implication: Frustration* is replaced by *Frustration*. There are now nine varieties, *Frustration* being now seen as intersecting the other relational categories. In fact, however, the critical factor in all cases seems simply to be that an inference that would usually be drawn is blocked.

If Longacre's later model (Longacre, 1996) were adjusted in line with the discussion here, it would result in the following relations:

Conjoining (including *Coupling*);
Comparison (including *Generic-Specific*, *Exemplification* and *Paraphrase*);
Contrast (including *Denial-Correction*);
Alternation (non-contrastive and contrastive);
Temporal overlap;
Temporal succession;
Implication: conditionality;
Implication: causation (including *Efficient Cause* and *Final Cause*);
Frustration.

Comparing this list with those summarized in *Table 3.30* yields the lists provided in *Table 3.43* below in which the only varieties included are those that appear to relate to meaning rather than to surface form only.

***Table 3.43*: A comparison of the list of relations resulting from the discussion of Longacre (1972a), Beekman & Callow (1974), Hollenbach (1975) and Longacre (1996)**

***Relations* resulting from discussion of Longacre (1972a)**	***Relational varieties* resulting from discussion of Longacre (1972a)**	***Relations* resulting from discussion of Beekman and Callow (1974)**	***Relations* resulting from discussion of Hollenbach (1975)**	***Relations* resulting from discussion of Longacre (1996)**
Conjoining	*Coupling*	*Conjoining*	*Coordination/ Conjoining*	*Conjoining* (including *Coupling*)
Temporal	*Overlap*	*Simultaneity*	*Simultaneity/ Overlap*	*Temporal* (including *Overlap* and *Succession*)
	Succession	*Chronological Sequence*	*Succession/ Chronological Sequence*	
Implication: Conditionality	*Conditionality*	*Condition-Consequence*	*Condition-Consequence*	*Implication: Conditionality*
	Hypotheticality		*Hypotheticality*	
Implication: Frustration	*Expectancy Reversal*	*Concession-Contraexpectation*	*Concession-Contraexpectation*	*Frustration*
Implication: Causality	*Efficient Cause*	*Reason-Result*	*Reason-Result*	*Implication: Causation* (including *Efficient Cause* and *Final Cause*)
	Final Cause	*Means-Purpose*	*Means-Purpose*	
		Means-Result	*Means-Result*	
		Grounds-Conclusion	*Grounds-Implication/ Grounds-Conclusion*[129]	
Alternation	*Exclusive Disjunction*	*Alternation*	*Exclusive Alternation*	*Alternation* (including contrastive and non-contrastive varieties)
	Inclusive Disjunction		*Inclusive Alternation*	
Matching Comparison	*General Comparison*	*Comparison*	*Comparison*	*Comparison* (including *Generic-Specific* and *Exemplification*)
	Paraphrase	*Equivalence*	*Restatement*	*Paraphrase*
	Generic-Specific (including *Exemplificaton*)		*Generic-Specific*[130]	
Matching Contrast	*General Contrast*	*Contrast*	*Contrast*	*Contrast* (including *Denial-Correction*)

[129] I have indicated that it may be better to treat *Grounds-Conclusion* as a variety of *Reason-Result* rather than as a separate relation.

[130] I have indicated that it may be better to treat *Generic-Specific* as a variety of *Comparison* rather than as a separate relation.

3.4 Pragmatic and semantico-pragmatic taxonomies: van Dijk (1977); Mann and Thompson (1986); Crombie (1985a & b, 1987)

Thus far, I have examined relational taxonomies that are semantic, or primarily semantic, in nature. Here, the concept of pragmatic relations (van Dijk, 1977) will be introduced, followed by the discussion of two taxonomies, the first presented in semantico-pragmatic terms (Crombie, 1985a, 1985b, 1987), the second combining relations that are treated as being semantic in nature and relations that are treated as being pragmatic in nature (Mann & Thompson, 1986, 1988).

3.4.1 The concept of pragmatic relations: Van Dijk (1977)

In a chapter entitled *The Pragmatics of Discourse*, van Dijk (1977) observes that there is a need to investigate "the relations between the linear, sequential structure of discourse and the linear structure of context, viz between SEQUENCES OF SENTENCES and SEQUENCES OF SPEECH ACTS", noting that "[relations] between propositions cannot exhaustively be described in semantic terms alone" (p. 205): "Implications need not be LOGICAL or necessary, but may also have an INDUCTIVE nature" (p. 212).

Van Dijk distinguishes between *reason* and *explanation*, claiming that P*eter had an accident. He's in hospital* would be likely to be interpreted as an *explanation* if it followed *What happened to Peter?* On the other hand, it would be likely to be interpreted as a *reason* if it followed *Why doesn't Peter answer his phone?* He also argues that there is a relational difference between (58) and (59) below, (58) involving a *conclusion* drawn by the speaker, and (59) involving a *factual causal* connection. He describes inter-clausal 'so' as a 'semantic connective', and sentence initial 'so' as a 'pragmatic connective' (van Dijk, 1977, p. 208). He also observes (p. 210), however, that inferential/ sentence initial 'so' and, sometimes, sentence-initial 'therefore' (with rising-falling intonation and followed by a pause (a comma in writing), may not only introduce *conclusions*, but may also introduce *inferred reasons or causes* as in the case of (60) below:

(58) Peter had an accident. So, he is in hospital.

(59) Peter had an accident, so he is in hospital.

(60) John was drunk that night. So, he went to the pub again.

Van Dijk also observes (pp. 313-314) that 'because' has a semantic interpretation (indicating the relation of denoted facts), claiming that this accounts for the fact that it cannot be used in cases such as example (61) below where what is involved, he argues, is not a *causal* relation but a *conditional* one involving two speech acts, the first proposition/ speech act "[providing] a condition of the next speech act":

(61) *because I have no watch, what is the time?

In connection with this argument, van Dijk proposes that just as a sequence of actions may be interpreted as one action "if they can be assigned one global intention or plan", so "sequences of speech acts may [sometimes] be interpreted as one speech act, consisting of several component or auxiliary acts" (p. 315). He argues that (62) below involves a composite speech act (request) in that the assertion can be seen to be "in some sense part of the request", the second sentence providing a *justification* or *motivation* for the request and thereby making it more 'acceptable'. On the other hand, where 'if' is stressed (often preceded by 'at least' or 'that is'), two different speech acts may be involved, a promise being linked to a *correction* or *specification* of that promise (see (63) below):

(62) Please shut the window. I am cold.

(63) I'll send you a postcard this summer. At least, if I go to Italy.

Similarly, where a subordinate clause is introduced by 'because', the content of that clause may combine with the content of a preceding or following clause to express a single speech act (e.g., *promise*), or may represent one of two separate assertions (pp. 222-223). In the first case (which I exemplify in (64) below), the second clause may be interpreted as providing a *reason* for the content of the first clause; in the second case (which I exemplify in (65) below), the first clause may be interpreted as providing an *explanation* for the speech act (e.g., promise) in the second:

(64) I'll send you a postcard because I'm going to France.

(65) I'll send you a postcard because I really like you.

However, although van Dijk argues that the nature of relationships may hinge on whether what is involved is treated as two speech acts or as one composite speech act, he also notes that "[the] distinctions are . . . subtle and depend upon context (p. 216).

The distinction that van Dijk makes between semantic relations and pragmatic relations is in some senses a very useful one. It highlights what is clearly an important difference between sequences such as (66) and (67) below:[131]

(66) He's thin because he eats too little.

(67) He's thin because I saw him.

His explanation of this difference appears, however, to be unnecessarily complex and, in one sense, misleading. A more straightforward explanation might simply be that there are relations that directly involve illocutionary force (referred to by van Dijk as 'pragmatic') and relations that do not (referred to by van Dijk as 'semantic'). However, in that all relations necessarily involve inferencing, all could be said to be pragmatic.

The naming/labelling of relations might, at first sight, seem to be relatively unimportant. However, this is not necessarily the case. Van Dijk notes that *Peter had an accident. He's in hospital* would be likely to be interpreted as a *reason* if it followed *Why doesn't Peter answer his phone?* and as an *explanation* if it followed *What happened to Peter?* In fact, however, it is difficult to determine why the label 'explanation' was selected. In fact, the two sentences together -

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[131] The important difference, in this context, between (66) and (67) is simply that the first provides a reason for something that is stated and the second provides a reason for making the statement and therefore involves illocutionary force. However, to argue that one involves a pragmatic relation and the other a semantic relation is misleading in that "all relations necessarily involve inferencing and so all could be said to be pragmatic.

Peter had an accident and *He's in hospital* – provide specification in relation to 'happened'. The interactive relationship (*Elicitation/Reply*) is accompanied by a relationship in which a generic term 'happened' is provided with specification. The connection might, therefore, be better labelled *Generic-Specific*, which might itself be seen as a type of *Matching*. Where the same two sentences follow the question *Why doesn't Peter answer his phone?* the two sentences together provide a *reason for* Peter's not answering his phone (*the result*) and, in addition, the first of the two sentences (*Peter had an accident*) provides a reason for Peter's being in hospital.[132]

Van Dijk also uses different labelling ('conclusion'/ 'reason') to differentiate between what he refers to as a 'factual causal' connection and an 'inferential' one. In fact, however, both types of connection are inferential. The fact that inference/ deduction is involved can be highlighted in a variety of ways (e.g., by adding the auxiliary 'must', e.g., . . . so he must he/ must have etc.). This is a distinction for which a number of languages have a built-in metalanguage (e.g., *Grounds-Conclusion* vs. *Reason-Result*). This should not be taken as a signal that there are two different relationships involved. *Grounds-Conclusion* is a variety of *Reason-Result*. Causal links are deduced even where they appear to be based on simple observation. Similarly, labelling the relationship between *Please shut the window and I am cold* in example (62) above as *justification* or *motivation* suggests that the relationship involved is essentially different from *Reason-Result* (inverted). The fact is, however, that *I am cold* is a *reason for* the request (*Please shut the window*). What the different labelling appears to capture is not an essential difference in the relation involved, but a difference in the focus of the relation.[118]

This seems to be equally true in the case of example (63) above where the introduction of the labels 'correction' and 'specification' suggest that a different relation is involved from the one involved in example (68) below:

(68) I'll send you a postcard this summer if I go to Italy.

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[132] W. Crombie (personal communication, March 1, 2005).

In both cases (examples (63) and example (68)), the fundamental relation is one of *contingency* (*Condition-Consequence*).

3.4.2 A semantico-pragmatic taxonomy: Crombie (1984, 1985a & b, 1987)

Crombie (1984, 1985a, 1985b, 1987) approaches *inter*-propositional relational coherence from the perspective of a tripartite categorical distinction formulated on the basis of the three 'associating qualities' that David Hume identified in *A Treatise of Human Nature* (published 1737) – *resemblance*, *contiguity* in time or place, and *cause and effect* – qualities which Hume identified as being "the reason why . . . languages so nearly correspond to each other (Hume, Volume 1 p. 19).

Crombie argues that (1985b, p. vii) "these operations account for *inter*-propositional coherence, that is, they account for the relationships that hold between one proposition (or a group of propositions) and another". She regards 'coherence' as being both *intra*-propositional and *inter*-propositional, in that, "each proposition expresses at least one semantic relationship (e.g., *Agent-Action*)". Furthermore, "a single clause may encode either a single proposition or more than one proposition", and "where a single clause encodes more than one proposition (e.g., *His intervention caused her defeat*) . . . it . . . also [encodes] the type of *inter*-propositional relationship (e.g., *Cause-Effect*) which is normally associated with inter-clausal and inter-sentential coherence (e.g., *He intervened. Therefore she was defeated*)". Thus, "a single clause may . . . exhibit both *intra*-propositional coherence (e.g., *Agent-Action*) and *inter*-propositional coherence (e.g., *Cause-Effect*)" (pp. vii-viii). Thus, in common with those whose research is linked to tagmemic theory, Crombie brings together 'case grammar' (which deals with relationships within the proposition) and theories and models which deal with relationships *between* propositions. She attempts to emphasise the binary nature of all of relationships involved using binary labels (e.g., *Agent-Action*; *Reason-Result*) wherever possible.

In her discussion of *inter*-propositional relations, Crombie also links these relations to notions of discourse value, dividing discourse values/illocutionary acts into two different types: 'unitary values' and 'binary values'. She observes that

unitary values (for example, "*warning*, *threat*, *insult*, with which Austin (1962) and Searle (1971) are largely concerned) are related to, but different from, binary values (e.g., *Condition-Consequence*, *Reason-Result*") (p. 2). Binary values and unitary values may be linked. Thus, for example, the unitary value 'threat' is composed, explicitly or implicitly, of the binary value *Condition-Consequence.* This observation is central to my critique of Mann and Thompson's approach to relational specification (*section 3.4.3* following). Thus, the term 'binary value' is used "to refer to the significance that attaches to utterances by virtue of the specific type of relationship which they bear to one another". Thus, *inter*-propositional "binary values have two parts (or members): they require for their realization two related propositions or groups of propositions" (Crombie, 1985b, p. 2). In discussing the terms *Reason-Result* and *Condition-Consequence* (which she identifies as possible labels for specific types of binary value), she notes that "you cannot simply have a *reason*, you must have a *reason for* something; you cannot simply have a *result*, you must have a *result of* something". Similarly, in the realm of *intra*-propositional relations, it is clear that you cannot simply have an *agent*; you must have an *agent of* something.

Crombie divides binary values into two types: 'interactional' and 'general' discourse values. 'Interactional' values concern "the functional components of a conversational discourse and generally [relate] to the interaction between the conversational contributions of different speakers" (p. 3). 'General' discourse values can "occur in any type of discourse, including conversational discourse" (p. 3).

Fundamental to Crombie's approach is the treatment of all *inter*-propositional relations as being semantico-pragmatic in nature (Crombie, 1987, p.7, fn1):

> These relations might . . . be referred to as semantico-pragmatic . . . in that they are recovered by inferencing (see Urquhart, in Selinker, Tarone and Hanzeli, 1981 Clark and Haviland, in Freedle, 1977). Inferencing is based on the encoded propositions (the *text*) and world knowledge. . . . A relationship (such as *reason-result*) may, or may not be . . . indicated textually by, for example, the occurrence of a word such as 'because'.

> Furthermore, the establishment of a particular relationship between encoded propositions (e.g., between 'John cried' and 'Mary said she loved Bill') will normally involve additional assumptions (e.g., that John and Mary are related in a particular way), or the recovery of additional known information which will add to the propositional store which constitutes for the hearer/reader the discourse base (see Schank & Abelson, 1977). It will also involve the establishment of a chain of relations between these additional propositions and between these and the encoded propositions which then constitute the discourse relational base. For example, in interpreting the relationship between 'John left the party early' and 'Mary's father was ill' as causative, one may add to the discourse base propositions such as for example, 'Mary is John's wife', 'Mary and John live in a particular place X', 'Mary's father lives in the place X' etc. This propositional enrichment will lead to a relational chain involving reason. . . . However, since it will not always be necessary, or indeed possible, to supply propositions among which such a relational chain may be established, hearers/readers must sometimes take on trust the fact that there *is* relevant information which would, if it were known to them, allow for the establishment of a relational chain. . . . Thus, the lack of . . . intersubjectivity between speaker/writer and hearer/reader ensures that the discourse base and discourse relational base will rarely be exactly the same for both. Nevertheless, the text itself, together with the cues (including simple juxtaposition) which it provides for the implementation of those universal perceptual processes which establish relation, provides a base for the implementation of communicative assumptions. In particular, the textually encoded propositions provide the beginning and end-point of the relational process – the necessary conditions for its operation.

Crombie recognises the significance of the types of argument forwarded by van Dijk (1977). She notes, for example, that "[in] addition to the Grounds-Conclusion realization of the General Causative relation, it may be useful to distinguish a further realization-type: Claim/Statement-Reason", noting that "children often use *because* (with a heavy stress on the following verb) to link

propositions related in this way, the second of which gives the basis for the claim in the first: 'He did it because I **saw** him'" (Crombie, 1985a, pp. 48-49, fn5).

In the following *Table*, the specific relations proposed by Crombie in various works are grouped under the three headings she uses to mirror those of Hume and to express cognitive process types: [133, 134]

Table 3.44: **Cognitive processes and related *inter*-propositional relations**

Cognitive processes	Associative	Logico-deductive	Tempero-contigual
***Inter*-propositional relations**	***Simple Contrast; Comparative Similarity; Statement-Affirmation; Statement-Denial; Denial-Correction; Concession-Contraexpectation; Supplementary Alternation; Contrastive Alternation; Paraphrase; Amplification***	***Condition-Consequence; Means-Purpose; Reason-Result; Means-Result; Grounds-Conclusion*** [135]	***Chronological Sequence; Temporal Overlap; Bonding***

These relations outlined by Crombie together with examples from Crombie (1985b), are provided below in *Tables 3.45*, *3.46* and *3.47*:

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[133] This table is adapted from Houia-Roberts (2004b, p. 79).

[134] Crombie (1987) refers to David Hume's categories in a book on literary style. It is interesting to note that Hobbs (1990, pp. 101-102) also refers to David Hume's three general principles for the association of ideas (in a book called *Literature and Cognition*). Kehler (2002, p. 4) claims that Hobbs "was the first to point out that Hume's principles could be used as a basis for categorizing coherence relations", but observes that "he did not pursue such categorization in depth".

[135] *Reason-Result, Means-Result,* and *Grounds-Conclusion* are treated as sub-categories of the *General Causative* relation (p. 103).

Table 3.45: **Crombie (1985b): Associative relations**

Relations	Description	Examples
Simple Contrast	• Involves the comparison of two things, events or abstractions in terms of some particular in respect in which they are different (Crombie, 1985b, p. 19). • One common realization of this relation involves the word *except/exception*. This type of realization is referred to as *Exception* (p. 19).	(i) Paris was a Trojan; Helen, a Greek (p. 19). (ii) The one was meek; the other, savage (p. 19). (iii) Everyone, except Achilles, fought (p. 19).
Simple Comparison/Comparative Similarity	• Involves the comparison of two things, events or abstractions in terms of some particular in respect of which they are similar (p. 19).	(i) The princes were afraid and so were their followers (p. 19). (ii) The princes fought and their followers did too (p. 19).
Statement-Affirmation	• The truth of a statement is affirmed. Where only one speaker is *directly* involved, a reported content clause is involved (p. 21).	(i) A: Achilles should resume the fight. (i) B: Absolutely/I agree/Quite so/Yes he should (p. 21). (ii) He said the Achilles should resume the fight and I agree (p. 21).
Statement-Denial	• The truth of a statement, or the validity of a proposition (or propositions), is denied. The denial may be direct, or indirect. Indirect denial involves antonymic substitution of some word or expression (p. 21).	(i) A: Achilles was right. (i) B: (No), he wasn't/ I deny that/ That's false/ On the contrary (p 21). (ii) A: The Greeks won. (ii) B: They lost (p. 21).

Table 3.45 (continued): **Crombie (1985b): Associative relations**

Relations	Description	Examples
Denial-Correction	• In this relation, one member is a denial involving a negated word or expression; the other, which contains a corrective, non-antonymic substitute for the negated word or expression is, in relation to it, a contrary assertion (p. 21).	He wasn't a soldier, he was a priest (p. 21).
Concession-Contraexpectation	• In this relation, the truth of an inference is directly or indirectly denied (p. 22). • Because *Concession-Contraexpectation* involves the unexpected, it provokes the question 'why'. This accounts for the fact that it is often combined, either directly or indirectly, with a General causative (providing a *reason*) (p. 22).	(i) Although the seeds were sown and nurtured, the plants failed to appear (p. 22). (ii) They intended to attack but they defended (p. 22).
Supplementary Alternation	• Involves two or more non-antithetical choices (p. 23).	(i) Nobody insulted him or fought with him (p. 23). (ii) Kill him or maim him or bring him to justice (p. 23).
Contrastive Alternation	• Involves the choice between two antitheses. Where two things, events or abstractions are involved, they are treated as being in opposition (p. 23).	(i) Either Achilles fought, or he didn't (p. 23). (ii) Patroclus has deserted, or else he has been killed (p. 23).

Table 3.45 (continued): **Crombie (1985b): Associative relations**

Relations	Description	Examples
Paraphrase	• The same propositional content is expressed in different ways in both members of the relation. It may involve a negated antonym (p. 25). • *Paraphrase*, except in its negated antonym form, does not often occur. Normally, except in the case of explanation or direct translation, what appears to be a restatement will not, when stress and intonation are taken into account, be found to be one (p. 25). • Although *Paraphrase* involving negated antonym in its realisation looks structurally similar to *Denial-Correction*, the difference is that the corrective substitute in the case of *Denial-Correction* is not an antonym of the negated word or expression which replaces it (p.25).	(i) Achilles began combat: he started to fight (p. 25). (ii) He's not good: he's bad (p. 25).

Table 3.45 (continued): **Crombie (1985b): Associative relations**

Relations	Description	Examples
Amplification (including Term Specification, Predicate Specification and Term Exemplification)	• One member of the relation amplifies the information in the other by providing a specific term as a substitute for a general one. The general term may be implicit (p. 26). • One member of the relation amplifies the information in the other by specifying the content of its semantic predicate. Direct or indirect reporting may be involved (p. 26). • Here, a general term (or a word or phrase which is inclusive) is illustrated with reference to a particular (p. 26).	*Examples of Term Specification*: (i) Paris seized someone. It was Helen (p. 26). (ii) He was invited: Agamemnon invited him (i.e., *someone* invited him: it was Agamemnon) (p. 26). (iii) This is the warrior that he killed (i.e., he killed *someone*: it was a warrior) (p. 26). *Examples of Predicate Specification*: (i) Priam knew that Hector was dead (Priam knew something: Hector was dead) (p. 26). (ii) He regretted what had happened (p. 26). (iii) He said, 'The truce is uneasy' (p. 26). (iv) He said that the truce was uneasy (p. 26). *Example of Term Exemplification*: All long battles, the Trojan war, for example, have several reversals of fortune (p. 26).

The relations referred to here as *Statement-Affirmation* and *Statement-Denial* would appear at first sight to be misplaced in that they can involve interactive acts and, as such, might be said to belong to that group of relations that are sometimes discussed in terms of repartee calculus (and referred to by Crombie herself (Crombie, 1985a, p. 45ff) as 'interactive'). Even so, it *is* possible to affirm, or deny or correct one's own statement. On balance, therefore, *Statement-Affirmation* and *Statement-Denial*, along with *Denial-Correction* appear to have a role to play. However, all three appear to be sub-categories of the other relations rather than relations in their own right. If two over-arching relations – *Matching*

Contrast and *Matching Compatibility* – were established, and if it were accepted that compatibility and contrast could involve illocutionary force as well as locutionary force, then *Simple Contrast*, *Statement-Denial* and *Denial-Correction* could be treated as a variety of a *Matching Contrast* relation along with *Exception* (currently included under the heading of *Simple Contrast*), and *Simple Comparison*, *Statement-Affirmation* and *Paraphrase* (along with *Exemplification* (currently listed as one example of *Amplification*)) could be treated as varieties of a *Matching Compatibility* relation. In similar vein, *Supplementary Alternation* and *Contrastive Alternation* could be treated as sub-categories of an over-arching *Alternation* relation. Renaming *Amplification* as *General-Particular* (whilst, of course, acknowledging that the members of the relation could occur in either order) would bring it into line with the terminology used by many other linguists. Doing so would have the additional advantage of highlighting the fact that this too, like *Simple Comparison*, *Statement-Affirmation* and *Paraphrase*, would appear to be a sub-category of a single relation – *Matching Compatibility*. The relation referred to as *Concession-Contraexpectation* would appear to belong not to the *Associative* category, but to the *Logico-Deductive* one. Under the heading of *Associative*, we would than have the following relations and sub-categories of relations:

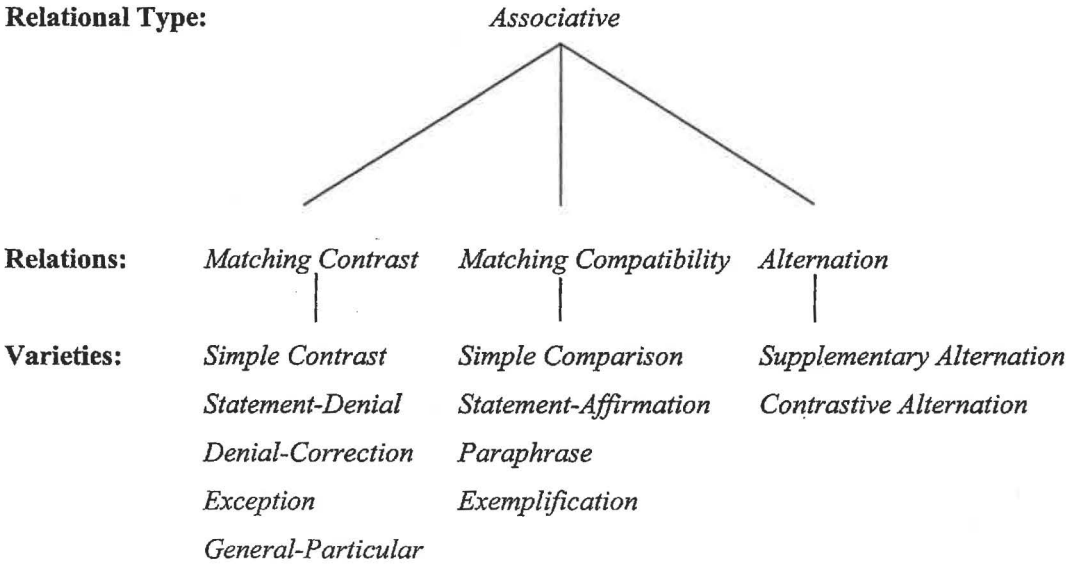


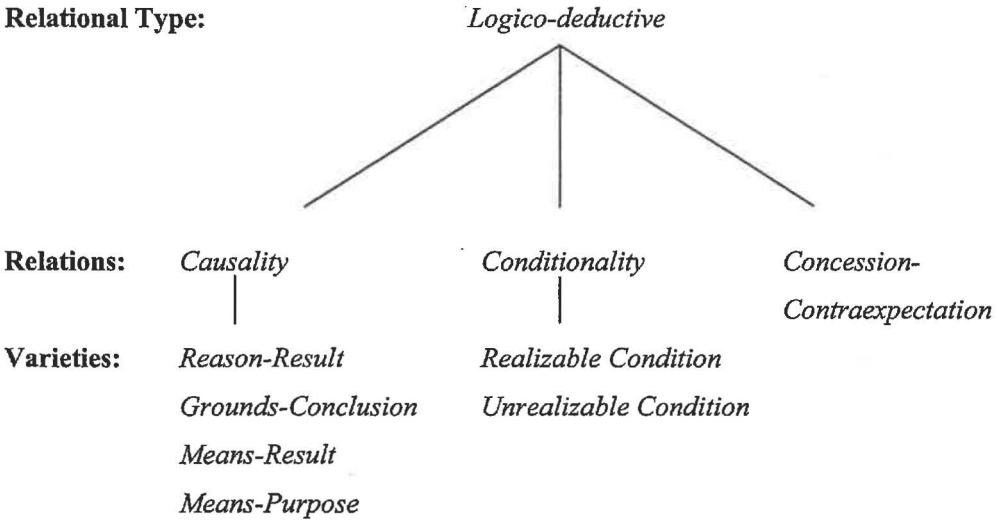
Table 3.46: **Crombie (1985b): Logico-deductive relations**

Relations	Description	Examples
Condition-Consequence	• In this relation, the consequence is dependent on a unrealisable condition or on a hypothetical contingency. The Causative member is hypothetical here (p. 20). • The relation of *Condition-Consequence* often co-occurs with *Means-Purpose* or *General Causative* (p. 20).	(i) If Agamemnon confiscates Brises, (then) Achilles will withdraw (p. 20). (ii) Had Achilles fought, the Greeks would have won (p. 20). (iii) The leaders have to be given encouragement, before they'll fight/or they won't fight (p. 20).
Means-Purpose	• In this relation, the purpose member outlines the action that is/was/will be undertaken with the *intention* of achieving a particular result (p. 20). • The Causative member in this relation has an *intended* effect (which need not be the actual one) (p. 19).	Agamemnon surrendered the girl in order to propitiate Apollo (p. 20).
Reason-Result	• The reason member (which very often follows the result member in English) gives a reason *why* a particular event came about (p. 20).	Agamemnon was pleased because the princes fought (p. 20).
Means-Result	• Here, the means member states *how* a particular effect came or will come about (p. 20).	Agamemnon antagonized the priest by refusing the ransom (p. 20).
Grounds-Conclusion	• Here, a deduction is drawn on the basis of some observation (p. 20).	The man is leading the Greek forces so/therefore/ I conclude that he must be Achilles (p. 20).

The five relations listed under the heading of *Logico-deductive* could be reduced to two – *Causality* and *Conditionality*, with *Reason-Result* and *Means-Purpose* being sub-categories of *Causality* and *Grounds-Conclusion* being a sub-category

of *Reason-Result.*[136] So far as *Conditionality* is concerned, the examples include realisable (examples (i) and (iii)) and unrealisable (example (ii)). These could usefully be recognised as separate varieties although these, and all other sub-varieties, are very likely to prove to be specific to particular languages.

Bearing in mind that the relation of *Concession-Contraexpectation* would also appear to belong to the *Logico-deductive* category, we would then have the following framework:



[136] In discussing Longacre (1996), I noted that he had only three causal relations (with varieties of each) – *Efficient Cause*, *Final Cause* (involving purpose) and *Circumstance.* With reference to the first two, I noted (pp.102-103) that the difference . . . appears to relate to the fact that the 'effect' proposition is actualised in the case of *Efficient Cause* (e.g., 'you didn't go') and potentially unrealised in the case of *Final Cause* (e.g., 'in order to eat'). In discussing Van Dijk's distinction between *Conclusion* and *Reason* (p. 165), I note that he uses different labelling ('conclusion'/ 'reason') to differentiate between what he refers to as a 'factual causal' connection and an 'inferential' one. The fact that a number of languages have a built-in metalanguage (e.g., *Grounds-Conclusion* vs. *Reason-Result*) that differentiates the two should not be taken as a signal that there are two different relationships involved. *Grounds-Conclusion* is a variety of *Reason-Result.* Causal links are *deduced* even where they appear to be based on simple observation. Labelling the relationship between *Please shut the window* and *I am cold* as *justification* or *motivation* suggests that the relationship involved is essentially different from *Reason-Result* (inverted). The fact is, however, that *I am cold* is a *reason for* the request (*Please shut the window*). What the different labelling appears to capture is not an essential difference in the relation involved, but a difference in the focus of the relation.

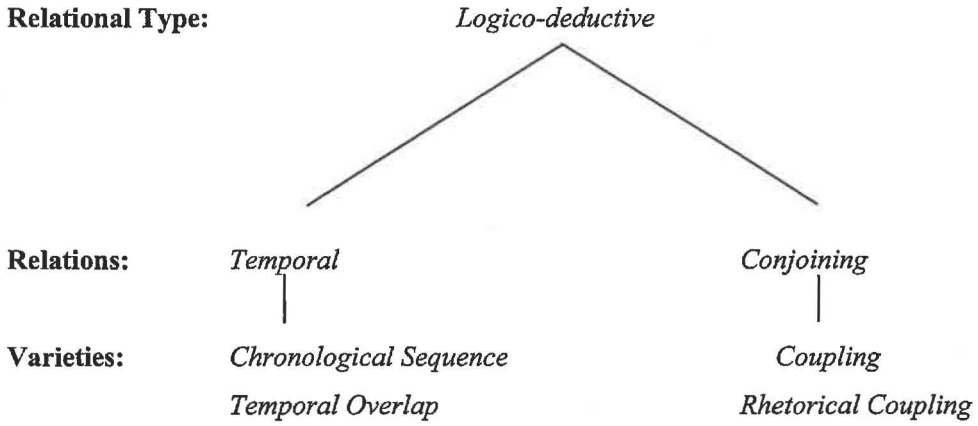
Table 3.47: **Crombie (1985b): Tempero-contigual**

Relations	Description	Examples
Chronological sequence	• Provides the semantic link between event propositions, one of which follows the other in time (p. 18). • These events, which need not be in the past, may be long or short in duration (p. 18). • The relation need not be realised by propositions expressed in separate clauses. Two nouns or nominal groups representing embedded event propositions may be linked to a verb such as *precede* or *follow* (p. 18).	(i) Paris seized Helen and left Greece (p. 18). (ii) He will seize Helen and leave Greece (p. 18). (iii) He will seize Helen. Afterwards, he will leave Greece (p. 18). (iv) After he has seized Helen, he will leave Greece (p. 18). (v) The thunderstorm followed the explosion (p. 18).
Temporal Overlap	• Links two events which overlap, either wholly or partly, in time (p. 18).	(i) As he fled, Paris looked over his shoulder (p. 18). (ii) While fleeing, Paris looked over his shoulder (p. 18).

Table 3.47 (continued): **Crombie (1985b): Tempero-contigual**

Relations	Description	Examples
Bonding (including Coupling, Contrastive Coupling, Statement-Exemplification and Statement-Exception)	• *Coupling*: the second member adds at least one new proposition to the first and the members are not connected in an elective, a comparative or a sequential way (p. 23). However, certain realisations involve the assertion or implication that the information in the first member of the relation is inadequate or insufficient on its own (i.e., without the information in the second member) (p. 25). • *Contrastive Coupling*: two propositions (or groups of propositions) have the same first terms, one member has a positive predication, and the other has a negative predication (see example (i)), or a predication and a negative paraphrase are involved (e.g., 'failed' in example (ii)) (p. 24). • *Statement-Exemplification*: the first member provides a general statement and the second adds a proposition (or more than one proposition), which is presented as an exemplification of the general statement in the first member (p. 24). • *Statement-Exception*: the first member provides a general statement and the second adds a proposition (or more than one proposition), which is presented as an exception to the statement in the first member (p. 24).	*Examples of Coupling*: (i) Achilles wore a robe and carried a shield (p. 23). (ii) Achilles was furious and (he was) savage (p. 23). (iii) Achilles, who was a savage fighter, joined the fray (p. 23). (iv) You need some high tensile steel, but you need a Bunsen burner too (p. 25). *Examples of Contrastive Coupling:* (i) He talked about the battle; (but) he didn't talk about the aftermath (p. 24). (ii) He tried to remember the details but he failed (p. 24). *Examples of Statement-Exemplification*: (i) Battle always leads to unnecessary savagery. Witness Achilles' treatment of the body of Hector (p. 24). (ii) War leads to a lowering of standards of personal conduct. For example, Achilles became increasingly immoral during the course of the Trojan war (p. 24). *Example of Statement-Exception*: Generally the effects of our actions have few repercussions beyond our immediate environment. An exception to this was the way in which one misdemeanour by Paris resulted in the Trojan war (p. 24).

So far as the *Tempero-Contigual* category is concerned, *Chronological Sequence* and *Temporal Overlap* appear to be varieties of a single relation – *Temporal.* So far as *Bonding* is concerned, what we appear to have, as exemplified in *Coupling*, is a non-comparative, non-elective, non-sequential relation. Reference to *Contrastive Coupling* seems, therefore, to be misleading. Furthermore, what are referred to as *Statement-Exemplification* and *Statement-Exception* would appear to be varieties of *Matching Compatibility* and *Matching Contrast* respectively. This leaves only one variety of *Bonding* although Crombie has referred elsewhere to another variety: *Rhetorical Coupling*, often signalled in English by 'not only . . . but also'. If *Bonding* were renamed *Coupling* to bring it into line with terminology typical of other linguists, we would have two relations – *Conjoining* and *Temporal* – under the *Tempero-Contigual* heading, each with only two varieties.



In *Process and Relation in Discourse Language Learning* (Crombie, 1985b), there is a further group of relations referred to as *Setting-Conduct* relations (see *Table 3.48* following):

Table 3.48: **Crombie (1985b): Setting-Conduct relations:**

Relations	Description	Examples
Event/State-Location	• Here, an adverbial gives the location of an event (p. 27).	Patroclaus was killed under the walls of Troy (p. 27).
Event-Direction	• Here, an adverbial outlines the direction of an event (p. 27).	Achilles hurled the Trojans into their town (p. 27).
Event-Manner	• Here, an adverbial outlines the manner in which an event is/was/will be conducted (p. 28).	(i) Achilles maltreated the body of Hector savagely (p. 28). (ii) Resentfully, Priam viewed the destruction (p. 28).

Crombie's explanation for the inclusion of these relational categories is that, following Chafe (1970), adverbials should be treated as embedded propositions (Crombie, 1985b, p. 27):

> Adverbials are . . . one member of a semantic relation between propositions, the other member being the remainder of the clause in which they occur. There are, of course, (e.g., *It is ten o'clock*) exceptions to this treatment. . . . The Event-Manner relation involves manner adverbials such as *indiscriminately*, *with courtesy*, *to win* (e.g., *He played to win*). It may also involve subject adjuncts and formulaic adjuncts.

At first sight, this argument is a convincing one. However, as I argued in *Chapter 2* with reference to example (14) (see p. 20), an encoded predicator may include an adverb. It is equally possible to argue that an encoded predicator includes other types of adverbials such as, for example, preposition headed groups such as 'into town'. Such an argument would immediately remove the necessity for inclusion of relations of the type included in *Table 3.48*, as would the more traditional argument which treats adverbs and adverbials as having an essentially modifying role in relation to propositions.

***Table 3.49*: A comparison of the framework resulting from a discussion of the relational model presented by Longacre (1996) and that presented by Crombie (1985a&b, 1987)**

Framework resulting from discussion of Crombie (1985a&b, 1987)			Framework resulting from discussion of Longacre (1996)[137]	
Perceptual Process	**Relation**	**Variety**	**Relation**	**Variety**
Associative	**Matching Contrast**	*Simple Contrast*	**Contrast**	
		Statement-Denial		
		Denial-Correction		*Denial-Correction*
		Exception		
		General-Particular		
	Matching Compatibility	*Simple Comparison*	**Comparison**	*Generic-Specific*
		Statement-Affirmation		
		Paraphrase	**Paraphrase**	
		Exemplification		*Exemplification*
	Alternation	*Supplementary Alternation*	**Alternation**	*Non-contrastive Alternation*
		Contrastive Alternation		*Contrastive Alternation*
Logico-deductive	**Causality**	*Reason-Result* (including *Grounds-Conclusion*)	**Implication: Causation**	*Efficient Cause*
		Means-Result		
		Means-Purpose		*Final Cause*
	Conditionality	*Realisable Condition*	**Implication: Conditionality**	
		Unrealisable Condition		
	Concession-Contraexpectation		**Frustration**	
Tempero-contigual	**Temporal**	*Chronological Sequence*	**Temporal**	*Succession*
		Temporal Overlap		*Overlap*
	Conjoining	*Coupling*	**Conjoining**	*Coupling*
		Rhetorical Coupling		

[137] Only those relational varieties which seem to encapsulate some semantic or pragmatic (as opposed to morpho-syntactic only) distinctions are included here.

3.4.3 A relational taxonomy that combines semantic relations and pragmatic relations: Mann and Thompson (1986)

Mann and Thompson (1986) discuss relations largely from an interpretative perspective, that is, from the perspective of readers (hearers) rather than from that of composers. They treat relationships as being themselves propositional (that is, as being 'relational propositions') whose predicates may be named mnemonically (e.g., *Elaboration*) (p. 58),[138] claiming that these 'relational propositions' hold not between parts of a text, but between "more conceptual entities . . . derived from those text portions" (p. 59). They introduce fifteen relations (see *Table 3.50* following), observing that they do not regard the relations and relational descriptions they provide as definitive, expecting that "people will rename, reclassify, redefine, split, join, and add to the relations", their expectation being, nevertheless, that "the character of the relations will remain unchanged" (p. 60). In each case, the relations are introduced, named and exemplified in a way that is reminiscent of van Dijk (1977) although there is very little discussion of the type of reasoning that motivated van Dijk to propose that relations could be pragmatic in nature. Nor are any of the issues relating to van Dijk's treatment of relations that I raised in *section 3.4.1* addressed.

***Table 3.50*: The relations included in Mann & Thompson (1986)**

Relations	Description	Examples
Solutionhood	• The second part of the text provides a solution to the problem posed by the first part of the text (p. 60).	(i) I'm hungry. Let's go to the Fuji Gardens (p. 60). (ii) Do you want to get your Easter tan early, even in the rain? Come to the TANNING CONNECTION in Sherman Oaks (p. 61).

[138] They note that their "decompositions and namings may be debatable", that there may be "finer subdivisions and other reorganizations which could be made" (Mann & Thompson, 1986, p. 58).

Table 3.50 (continued): **The relations included in Mann & Thompson (1986)**

Relations	Description	Examples
Evidence	• The second part of the text provides evidence for the claim put forth in the first part (p. 61).	(i) They're having a party again next door. I couldn't find a parking space (p. 61). (ii) Smith seems to have a new girlfriend. He's been paying a lot of visits to New York lately (p. 61). (iii) Jenny's not coming. Her mother just called from San Diego (p. 61).
Justification	• One part of a text attempts to establish the appropriateness or acceptability of performing speech act(s) performed by the other part (p. 61).	(i) Let me be perfectly clear. I am not a crook (p. 61). (ii) I'm Officer Krupke. You are under arrest (p. 61). (iii) I'm the moderator of this meeting. Your motion is out of order (p. 61).
Motivation	• May arise in directive text, where it is often deemed advisable to provide the addressee with motivation for complying with the directive (p. 62).	Take Bufferin. The buffering component prevents excess stomach acid (62).
Reason	• One part of the text provides a rationale for the volitional action expressed in the other part (p. 62). • Includes cases in which many inferential steps are required (p. 62).	(i) I'm not going to start learning Dutch. You can't teach an old dog new tricks (p. 62). (ii) I'm going to the corner. The walk will do me good (p. 62). (iii) Sally is going to the Good Earth. She likes the spice tea (p. 62).
Sequence	• Two parts of the text convey events, where the second is understood to follow the first (p. 63).	The huge rod was released at an altitude of about 6 miles. It struck with such force that it buried itself deep into the ground (p 63).

Table 3.50 (continued): **The relations included in Mann & Thompson (1986)**

Relations	Description	Examples
Enablement	• One part of the text provides information that enables the addressee to comply with the directive (p. 63).	Could you open the door? Here's the key (p. 63).
Elaboration	• Part of the text elaborates or further specifies the concepts conveyed by the other part (p. 63). • There are five kinds of relationship subsumed under *Elaboration* (p. 64): (i) Set-member; (ii) Generalization-instance; (iii) Whole-part; (iv) Process-step; and (v) Object-attribute.	*Example of Set-member* I love to collect classic automobiles. My favourite is my 1899 Duryea (p. 64). *Examples of Generalization-instance* (i) Your performance distresses me. You come in drunk and you insult the busboy (p. 65) (ii) I like ice cream. I really have a sweet tooth (p. 64). *Example of Whole-part* Karen is so photogenic. Her smile is perfect (p. 64). *Example of Process-step* It's time to make our cake. I'm going to take out the milk and eggs (p. 64). *Example of Object-attribute* I'm Officer Jordan. I was born in 1952 and I joined the police force in 1970 (p. 64).
Restatement	• The second part of the text restates the first part (p. 64).	He sure beat me up. I really took a thrashing from him (p. 64).
Condition	• One proposition provides the condition under which the proposition holds. Often signalled by 'if' in English (p. 64).	Slowly stir the powder in the fluid. The mixture will be very thick (p. 64).

Table 3.50 (continued): **The relations included in Mann & Thompson (1986)**

Relations	Description	Examples
Circumstance	• Holds between two parts of a text if one of the parts establishes a circumstance or situation, and the other part is interpreted within or relative to that circumstance or situation (pp. 64-65).	I went hitchhiking in Norway. Nobody would pick me up (p. 65).
Cause	• One portion of a text presents a cause for a condition conveyed by the other portion (p. 65).	(i) There were landslides in Malibu last week. Four neighborhoods lost their electricity (p. 65) (ii) I went riding last week. I was sore for three days (p. 65). (iii) The highway department set up a jackhammer in my parking place. I took two Fizzy-Seltzers (p. 65).
Concession	• A speaker acknowledges, in one part of the text, the truth of a point which potentially detracts from a point in another part of the text (p. 65).	I know you have great credentials. You don't fit the job description because the job requires someone with extensive experience (p. 65).
Background	• One part of the text provides background information without which the other part of the text cannot be adequately comprehended (p. 65).	Hayes just resigned. He's our chancellor (p. 66).
Thesis-Antithesis	• Two conceptions are contrasted, the speaker committing to one and decommiting from the other (p. 66).	(i) Players want the referee to balance a bad call benefiting one team with a bad call benefiting the other. As a referee, I just want to call each play as I see it (p. 66). (ii) This book claims to be a guide to all trees of Indiana. It's so incomplete that it doesn't even have oak trees in it (p. 66). (iii) We don't want orange juice. We want apple juice (p. 66).

Mann and Thompson's treatment of relations as being themselves propositional in nature results in (a) the prioritisation of one member of the relation over the other

and, as a result, the suppression/ loss of many of the insights that have motivated linguists to consider this area of research to be fundamental to an understanding of coherence, (b) the confusion of unitary and binary vales, often resulting in a type of labelling that is more appropriate for unitary values, and (c) the treatment of different varieties of the same relation, varieties that are different in terms of their unitary value, as separate relations.[139]

In demonstrating their treatment of relationships as themselves being propositional, Mann and Thompson (1986, p. 58) note that "we call the predicate which arises in the proposition in examples 1 and 2 [examples that are intended to illustrate what they refer to as an 'elaboration' relation] the 'elaboration' predicate". However, the fundamental characteristic of relations is that they are binary in nature. Thus, for example, as Crombie (1985b, p. 2) observes, "you cannot simply have a *reason*, you must have a *reason for* something; you cannot simply have a *result*, you must have a *result of* something". Thus, to define/ label a 'relational predicate' as 'elaboration' or 'reason' or 'motivation' does violence to the binary nature of relations in that it prioritises the function of one member of the relation (e.g., *reason; condition*) over the function of the other (e.g., *result/ outcome; consequence*). This is not simply a matter of naming/ labelling; it is fundamental. *Relations* cannot be treated as being propositional if the effect of this is to associate the two members of the relation (the 'arguments' of the proposition) with a predicator that is associated with the value/ illocutionary force of one of them only.[139]

To illustrate the fact that there appears to be a confusion of unitary and binary values resulting in the treatment of sub-categories of a single relation as if they were distinct relations, I shall make reference to two of the relations proposed by Mann and Thompson – *Motivation* and *Reason*. As an example of the first, Mann and Thompson include the example provided in (69) below; as an example of the second, they include the example provided in (70) below:

(69) Take Bufferin. The buffering component prevents excess stomach acid.

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[139] W. Crombie (personal communication, March 1, 2005).

(70) I'm going to the corner. The walk will do me good.

In line with van Dijk's distinction between relations that refer to speech acts ('pragmatic relations') and those that do not ('semantic relations'), Mann and Thompson (1986, p. 62) note that the second part of example (69) above provides a motivation for compliance with the directive in the first part, but that the second part of example (70) above provides a rationale for the volitional action expressed in the other part. Clearly, there is a difference between examples such as (69) and (70) above. Equally clearly, that difference, as van Dijk (1977) argued, relates to the fact that in one case (example (69)), one part of the relation should be interpreted in relation to the illocutionary force of the other. However, in both cases, the fundamental relationship is one of *Reason-Result*. In the first example, the second part provides a reason/ justification for the directive; in the second example, the second part provides a reason/ justification for the content of the first part. However, given that the first part of the relation in example (69) could, in fact, in terms of illocutionary force, be described as an 'assertion' or 'informative', this relationship could also be treated as one that involves illocutionary force. Either way, the underlying relation appears to be the same (*Reason-Result*), the primary difference relating to the unitary value (justification for the content of a directive; justification for the content of an assertion) assumed by the second member of the relation.[140] From this perspective, the 'relations' referred to by Mann and Thompson (1986, pp. 60-62) as *Solutionhood, Evidence, Justification, Reason, Enablement and Cause* all appear to be varieties of a single relation – *Reason-Result*. Mann and Thompson (p. 62) claim that *Evidence, Justification, Motivation* and *Reason* differ in the following respects: "'Evidence' is discriminated from the others on the basis that all of the others address an action, but 'evidence' does not. 'Justification' is discriminated from the remainder in that it addresses a speech action found within the same text, while the others do not. 'Motivation' addresses a potential action, whereas 'reason' does not". In fact, however, these discriminators do not appear to have any real validity. For example, in claiming that 'motivation' addresses a potential action and that it does not involve a speech action found within the same text, Mann and

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[140] See the treatment of *Claim/Statement – Reason* as a realisation type of the General Causative relation in Crombie (1985b, pp. 48-49, fn5).

Thompson underline the bias towards discourse interpretation (rather than discourse creation) that characterises their approach. Furthermore, the examples they provide clearly demonstrate a relationship that involves the speech act *Directive*.[141]

Sequence (not accompanied by any equivalent of *Temporal Overlap*), *Condition, Concession* and *Restatement* are identified as relations by Mann and Thompson (1986, pp. 63-65). Each of these is the equivalent of a relation that is generally recognised in the literature in this area. What Mann and Thompson refer to as *Thesis-Antithesis* (pp. 66-67) seems, in terms of the examples provided, to combine what are elsewhere identified as *Denial-Correction* (a sub-variety of *Contrast*) and *Concession.*

Mann and Thompson (1986, pp. 63-64) also propose an *Elaboration* relation, noting the fact that it is "reminiscent of one termed 'specifically' by Grimes". They say that "[there] are at least five kinds of relationships which are subsumed under the heading of 'elaboration'" (p. 64). The example of one of these ('generalization-instance') indicates that what we have is, in this particular instance, what is often referred to as a *Generic-Specific* relation (referred to earlier in this thesis as a sub-category of *Matching Compatibility*). The second example ('whole-part') is extremely difficult to classify without further context. It could, however, be interpreted as an example of *Result-Reason* (inverted) as could the following example ('process-step'). The final example ('object-attribute') could be classified as exemplifying a relation of *Conjoining* as could the first example ('set-member').

Mann and Thompson also identify two further relations which they refer to as *Circumstance* and *Background.* These are difficult to differentiate. In any case, the examples of each seem to indicate that what is involved is, once again, a type of *Conjoining.* Certainly, it could be argued that, in terms of information focus, one of the members of the relation is more 'central' than the other. To do so, would, however, require further contextualisation and would not, in any case, provide adequate grounds for an argument that there are different relations

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[141] W. Crombie (personal communication, March 1, 2005).

involved rather than one that indicated that one member of the relation may, in certain contexts, be associated with a different unitary value (see footnote 141, p. 188). I believe that there are some critical problems associated with this approach. It is interesting also to note that both *Elaboration* and *Background* are excluded from the relational model proposed by Knott (1996), a model proposed largely on the basis of a substitutability test relating to conjunctions and conjuncts.

There appear to be problems associated with some of the relations that are included by Mann and Thompson. Equally problematic is what is omitted, such as, for example, *Alternation*. The same types of problem arise in relation to a formulation of relations, that of Hobbs (1985), which also seems to rely heavily on the distinction between 'semantic relations' and 'pragmatic relations' made by van Dijk (1977), but which nevertheless proceeds without any specific recourse to it, appealing instead to four quite different types of what might be termed 'relational sources' for its categorisation. The first category (*Occasion*) subsumes relations that involve deduction from a known event on the basis of background knowledge; the second category (*Evaluation*) subsumes relations that emerge out of a speaker's discourse goals; the third category (*Unnamed*) involves a relationship between text and hearer/reader knowledge; the fourth category (*Expansion*) subsumes relations in which inferences that could be drawn by hearers/ readers under different circumstances are made explicit. It is difficult to see how these very different categories of relation could be brought together in the context of a coherent theory.

3.5 Towards relations as psychological constructs

Longacre (1996, p. 5) places the study of relations firmly within the domain of what he refers to as 'text linguistics' which he defines as "the study of the area of the intersection of the morphosyntax and the discourse/pragmatic structure", noting that "textlinguistics was scarcely inaugurated before the realization of the interdisciplinary ties with many adjacent disciplines caused some . . . to abandon text linguistics for text theory more broadly conceived".

With reference to both relationships *within* predications and relationships *between* predications and groups of predications, Longacre (1996, p. 2) makes the following claims:

- they are not language specific but belong to the general notional structure of language;
- they are independent of particular texts and particular referential content structure in a given language;
- at least some of them resemble categories which we are accustomed . . . to call grammar;
- they emerge as categories which are marked in the surface structure of at least some languages.

For Longacre and his colleagues, the study of relations inevitably involves a consideration of the ways in which these relations may be marked or signposted in the surface structure of particular languages and language families. He argues, however, that "[wherever] surface structure becomes well crystallized and marked, it may be thrown out of phase with the notional structure" (p. 13).

Relationships are not always marked. Where they are marked, that marking will not necessarily be unambiguous. Furthermore, it would appear that some languages have developed more resources for the marking of relations than others. Thus Longacre (1996, p. 52) observes:

> [Looking] at the structure of such a language as English, we note that such relations as the following, which I do not handle as predicates, are nevertheless paralleled by actual predicates in what may be described as a built-in metalanguage: succession, simultaneity . . . coupling, contrast, alternation. In English these various relations are associated with such surface structure conjunctions as *and then, while, and, but* and *or* respectively. Nevertheless, corresponding with the preceding conjunctions are such expressions as *precede/ follow, be simultaneous with, be coupled with, contrast with,* and *alternate/ be mutually exclusive with.* Thus we can say not only *John went downtown and then bought a hamburger*, but

> we can say *John's buying a hamburger followed his going downtown.* We can say *I spent an hour at the library while my wife shopped,* or we can say *My spending an hour at the library was simultaneous with my wife's shopping*. . . . In all these cases, English shows a great versatility of built-in metalanguage along with a sweeping capacity for nominalizing verbs and whole clauses.
>
> It is somewhat shocking to realize . . . that such languages as Trique, in fact the whole Otomanguean stock in Mesoamerica and many languages of surrounding stocks as well, simply have no such broad capacity for nominalization and no built-in metalanguage predicates of the sort which we have just illustrated for English. Nor is this just simply a limitation characteristic of a group of languages of Mesoamerica. In fact, on a global scale it may be the Indo-European languages which are unusual in allowing such a wealth of nominalization with built-in predicates to express relations of this sort.

The research of Eugene Winter (1971, 1974, 1977, 1979, 1982, 1992, 1994) on what he refers to as 'clause relations' focuses on relational signalling. Winter argues that two overall clause relations – the *Matching Relation* and the *Logical Sequence* relation – govern the identification and interpretation of relationships between sentences (and presumably also between clauses). The *Matching Relation* involves the matching of things, actions, people etc. in terms of similarities and difference; the *Logical Sequence* relation involves the observation of change in time or space, the sequencing of meaning in time/space orientation (Winter, 1977, p. 6). With specific reference to English, Winter argues that three types of 'vocabulary' – V*ocabulary 1, Vocabulary 2* and *Vocabulary 3* – play a role in the signalling/ signposting of relations. The first two are 'closed system'. *Vocabulary 1* (made up of subordinators (e.g., 'after', 'although')) and *Vocabulary 2* (made up of sentence connectors (e.g., 'accordingly'; 'in addition')) are related to the extent that *Vocabulary 1* items may "function as sentence connectors (*Vocabulary 2*) when their clause or complement repeats the preceding clause in some way". Thus, for example, "items like 'after', 'before', 'since' and 'until' can function anaphorically when they have such substitute items as 'this'

and 'then' as complement, e.g., 'after this', 'before then', 'since then', 'until then'; etc." (p. 15). It is, however, Winter's proposal in relation to *Vocabulary 3* that is the most interesting. What he argues is that there are lexical items (other than those listed included in *Vocabularies 1* and *2*) one of whose functions is to signpost relationships, sometimes, as in the case of 'contrasting' and 'result' in the two examples below, in anticipation of their occurrence:

(71) They were a contrasting pair of idiots. He risked everything he had on the roll of a dice; she banked every cent that was not strictly required for the bare essentials of living.

(72) She insulted him. One result was an immediate reduction in income.

Winter's *Vocabulary 3* list, which includes nouns such as 'antithesis', 'grounds' and 'distinction', verbs such as 'exemplify', 'distinguish' and 'effect' and adjectives such as 'comparable', 'similar' and 'hypothetical', is included as *Appendix 2* – there are 108 items in the list. Of these, Winter claims that only 13 do not have paraphrase equivalents in *Vocabularies 1* and *2*.[142] These thirteen are grouped into three types which have "three kinds of special connective role in discourse structure" (p. 18): those that relate to what Winter calls 'meta-structure' (such as 'situation', (problem), (solution), (observation), and (evolution)), those that have an attitudinal function (such as 'unfortunately' and 'surprise'), and those that act as "anaphoric connectors of the clause" (such as 'do' and 'happen') (p. 19).

Winter's publications are sometimes difficult to interpret. This is, in part, because the terminology he uses changes frequently and is subject to ongoing redefinition, the same terms sometimes being defined in different ways in the same publication. Even so, his observations about what he refers to as 'Vocabulary 3' indicate that we should be cautious about the findings of those who confine their consideration of relational signalling to conjunctions and conjuncts, particularly in

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[142] These 13 items are Meta Structure items: 'situation', (problem), (solution), (observation), and (evolution); Attitudinal Function items: 'unfortunately' and 'fortunately', 'happily' and 'unhappily' and expect and surprise, which include 'expect' and 'surprise' as paraphrases of the co-ordinators 'and' and 'but'; and Anaphoric Connectors: 'action', 'event', 'do', 'happen', 'move', and 'thing' (p. 19).

view of the fact that comparative and contrastive relations may involve two types of cohesion: cohesion involving repetition in one of its various forms and cohesion involving replacement in one of its various forms (Winter, 1974, p. 105).[143] Even if those lexical items other than conjunctions and conjuncts which play a role in relational signalling should turn out, in English, to paraphrase conjunctions and conjuncts, this seems unlikely to be the case for all languages.

Halliday and Hasan (1976) focus on the *linguistic resources* (grammatical and lexical) through which sentences in English are linked. They identify various types of 'cohesive tie' – grammatical (involving reference, substitution, ellipsis and conjunction) and lexical. Although they observe that "[cohesion] is part of the system of a language", which is "expressed partly through . . . grammar and partly through . . . vocabulary" (p. 5), they also claim that "[the] concept of cohesion is a semantic one, [referring] to relations of meaning that exist within the text" and that it "occurs where the INTERPRETATION of some element in the discourse is dependent on that of another" (p.4). They note, for example, that "although. . . cohesion is achieved through the conjunctive expression *afterwards*, it is the underlying semantic relation of succession in time that actually has the cohesive power" and "this explains how it is that we are often prepared to recognize the presence of a relation of this kind even when it is not expressed overtly at all". Thus, "[we] are prepared to supply it for ourselves, and thus to assume that there is cohesion even though it has not been explicitly demonstrated" (p. 229).

Halliday and Hasan's approach is based on two assumptions which are implicit in the use of the word 'cohesion' in two quite different senses. The first of these is that relations, whilst not necessarily always being reflected in surface structure all of the time, will *necessarily* be so reflected some of the time. The second assumption is that this reflection will be sufficiently direct to allow for a reliable

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[143] Knott (1996) makes use of what he refers to as 'cue phrases' (such as 'but' and 'because') to justify a set of relations, arguing that "[the] taxonomy of cue phrases lends itself to a model of relations as feature-based constructs" (p. 84). He acknowledges, however, that there are dangers in this, observing that "[there] are certainly other means of signalling discourse structure" (p. 59) and noting, for example that these include tense and aspect - (Lascarides & Asher, 1993; Moens & Steedman, 1988) and pronominalization (Grosz & Sidner, 1986). He continues to believe, however, that his own emphasis on cue phrases is a useful "starting point in working out a theory of discourse coherence" (p. 60).

categorisation of relations. In spite of these reservations in relation to the assumptions underlying Halliday and Hasan's approach, I find it interesting that at the most general level their typology - additive, adversative, causal and temporal (see *Table 3.51* following) - reflects that of a number of the models already reviewed.

***Table 3.51*: The higher levels of a cohesive relational taxonomy: Halliday & Hasan (1976)[144]**

Additive	*complex*
	apposition
	comparison
Adversative	*contrastive*
	correction
	dismissal
Causal	*specific*
	conditional
	respective
Temporal	*sequential*
	simultaneous
	conclusive
	correlative

Using a similar approach to that of Halliday and Hasan, but one that is different to the extent that it also examines relations *within* complex sentences, Martin (1992) presents a more detailed relational typology, claiming that "a test for the presence of an implicit connection" is that "the connection could have been explicit" (p. 184). In addition to the *internal/ external* distinction proposed by Halliday and Hasan, Martin (1992) proposes a *paratactic/ hypotactic* distinction. At the lowest level of classification, around one hundred different types of conjunction are identified. *Table 3.52* below outlines the more basic categories identified.

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[144] A further distinction, not reflected in *Table 3.51,* is a distinction between *external* (where the locus of a conjunction is in the phenomena that constitute the content of what is being said) and *internal* (where the locus of the conjunction is in the interaction itself, the social process that constitutes the speech event) (p. 321).

Table 3.52: **The higher levels of a cohesive relational taxonomy: Martin (1992)**

Additive	*addition*
	alternation
Comparative	*similarity*
	contrast
Temporal	*simultaneous*
	successive
Consequential	*purpose*
	condition
	consequence
	concession
	manner

Speculation about the psychological reality of relations has often centred, implicitly or explicitly, on relational signalling. That relations play a role in cognitive representation is not in doubt. Thus, for example, Haberlandt (1982) demonstrates that reading times are faster where linguistic indicators of relations are present, and Traxler, Sanford, Aked and Moxey (1997) show that where short texts involving an inferential relation are preceded by an indicator of that relation, reading speed will be faster than where they are not. So far as the role of relations in text production is concerned, evidential data are more difficult to collect. However, Bereiter and Scardamalia (1987) demonstrate convincingly that children can be helped to generate text where they are provided with relational prompts. Even so, Sanders, Spooren and Noordman (1992, 1993) argue that what is missing from most discussions of relations is a plausible account of *how* relations might play a role in cognitive representation. Their response is to propose a composite structure for relations. They propose four basic notions which result in twelve classes of relation. They are: BASIC OPERATION (causal; additive), SOURCE OF COHERENCE (semantic; pragmatic); POLARITY (negative; positive) and, in the case of causal relations, order of segments (BASIC ORDER; NON-BASIC ORDER). Thus, for example, what they refer to as a 'cause-consequence' relation would be composed as follows: causal (basic operation); semantic (source of coherence); non-basic (order);

positive (polarity). To test this conceptualisation of relations, Sanders, Spooren and Noordman initially conducted two different types of experiment. The first experiment involved asking trained discourse analysts to decide, on the basis of examples and relational definitions, which relation could most appropriately be assigned in the case of a number of sample texts. The second experiment involved asking non-linguists to select appropriate connectives to link text samples. Sanders, Spooren and Noordman claim that where disagreement occurred, it tended to relate to a single feature. Most often, this was the 'source of coherence' feature. It could, therefore, be argued that the results indicate that at least one of the four features is in doubt. In a third experiment, trained discourse analysts were asked to group texts in terms of whether the same relation occurred. Although the results showed four distinct clusters of relations, there was no support for 'order of spans' as a distinguishing feature and very little support for 'source of coherence'.

Knott (1996) also proposes a model that is motivated by a hypothesis about the psychological reality of relations. He examines 'cue phrases', that is "clausal/sentence connectives" in written discourse (p. 40) largely in terms of a substitutability test, arguing that although "it is uncontroversial that discourse structure can be expressed through a wide range of surface linguistic devices" (p. 60), it is nevertheless reasonable to refer exclusively to 'cue phrases' "as a starting point in working out a theory of discourse coherence" and of motivating a particular set of relations (p. 60).[145] Knott proposes a list of eight orthogonal features related to source of coherence (semantic; pragmatic), anchor (cause-driven; result-driven), pattern of instantiation (unilateral; bilateral), focus of polarity (negative; positive), presuppositionality (presupposed; non-presupposed; modal status (hypothetical; actual) and rule type (causal; inductive) (p. 124).

Looking at just one of the sets of oppositions (semantic/ pragmatic) proposed by Knott indicates some of the problems associated with an approach that is based on binary oppositions. Knott (p. 122) notes that his definition of 'semantic' and 'pragmatic' "[brings] together two quite different ideas: on the one hand, the issue

[145] Whether it is equally reasonable to argue that a useful set of orthogonal features can be derived from a set of relations arrived at in this way is quite another matter.

of whether *A* and *C* represent the propositional content of the related clauses (SEMANTIC) or their intended effects (PRAGMATIC); and on the other hand . . . whether the intended effect of the whole relation is that the reader *believes* a relation between two propositions (SEMANTIC) or that a relation between two propositions is *actually the case* (PRAGMATIC)". He claims that "there is no reason a priori why these two dimensions should not be related". Whatever the merit of a distinction articulated in this way, Knott categorises the source of coherence in the case of 'because' as 'pragmatic', and the rule type as 'cause-driven'. It is difficult to see how this type of classification could accommodate both of the examples below, the second of which is, admittedly, more characteristic of spoken rather than written discourse.

He's skinny because he eats too little.

He's skinny because I saw him.

Although the difficulties associated with attempts to define relations in terms of orthogonal primitives are evident, the appeal to defeasible logic and discourse relations in resolving a range of linguistic problems, an appeal that is often associated with the search for orthogonal primitives, has sometimes been difficult to resist (see, for example, Knott (2000))

3.6 Conclusion

Forty years ago, the study of discourse relations was confined to a few linguists, most of whom were working within the context of a particular functionally-based theory of language (tagmemic theory). Now, it would be almost impossible for any linguist of any persuasion, or, indeed, anyone whose discipline impacts in any way on information processing (natural or artificial), to avoid engaging in one way or another with issues associated with discourse relations. Although some critical issues concerning discourse relations are still to be resolved, there are many areas in which there is significant agreement among analysts of very different theoretical persuasions.

Chapter 4

The relational analysis of a Māori language corpus

4.1 Introduction

In this chapter, I apply two relational models, one *intra*-propositional, the other *inter*-propositional, to the analysis of a Māori language corpus of six complete written texts, three by Sir Apirana Ngata (written in the first half of the twentieth century), three by Tīmoti Kāretu (published at the end of the twentieth century). The relational models applied are derived from a consideration of the issues addressed in the critical reviews in *Chapters 2* and *3*.[146] The analysis of these texts relates to (a) the identification of case roles/ relations and discourse relations, and (b) the identification of relational signals.

4.2 Overview of the relational models discussed in Chapters *2* and *3*

4.2.1 Overview of case relation models (*intra*-propositional)

Fillmore (1968) initially lists six case/ role relations (*Agentive, Instrumental, Dative, Factitive, Locative, and Objective*), adding a further three (*Benefactive, Time, Comitative*) in the course of the discussion. Fillmore (1971) revises this model, making a distinction between *Agent* and *Experiencer* and between both of these and *Location. Dative* is replaced by three case/ role relations: *Experiencer*, *Object* and *Goal. Locative* is also replaced by three case/ role relations: *Location,*

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[146] In deriving relational inventories, linguists have generally sought signals or traces in languages (such as preposition types and syntactic contrasts). In applying them, they have generally called upon a combination of signalling and user intuition, the latter being necessary in order to accommodate pragmatic factors. In deriving the models proposed here, I tracked the inventories proposed by a number of linguists and compared and contrasted them with a view to determining whether some of the proposals that had been made could have been accommodated in different ways (*Chapters 2 & 3*). In applying them, to Māori texts, I sought for relational cues as well as paying close attention (in relation to interpretative clues) to a translation of these texts by a native speaker. I then compared my findings with those of other linguists who have looked at Māori from a relational perspective. I do not believe that the models I propose are in any sense definitive. Rather, I believe that they provide a useful starting point for the analysis of Māori texts in relational terms.

Source and *Goal* (subsuming *Factitive*). Note that there are, in fact, five case/ role relations here (*Goal* appears in each set). Although the *Comitative* role has been removed, *Benefactive* remains. Thus, the revised list consists of nine categories: *Agent*, *Experiencer*, *Instrument*, *Object*, *Source*, *Goal*, *Location*, *Time*, and *Benefactive*. Chafe (1970) lists seven similar case/ role relations (which he refers to as noun-verb relations). These are *Patient*, *Agent*, *Experiencer*, *Beneficiary*, *Instrument*, *Complement*, and *Location*. Anderson (1971), on the other hand, proposes only four case/ role relations: *Nominative*, *Ergative*, *Locative*, and *Ablative*. One framework that differs significantly is that of Grimes (1975) in which a distinction is made between orientation roles (orientation to motion or position), process roles (dynamic aspect of change of state and static aspect of stable states) and agentive roles (causative). There are thirteen case/ role relations in Grimes' framework: *Object*, *Source*, *Goal*, *Range*, *Vehicle*, *Material*, *Result*, *Patient*, *Referent*, *Agent*, *Instrument*, *Force*, and *Benefactive*. This framework is an interesting one in terms of its potential applicability to languages other than English, including non-Indo-European languages, because it is motivated largely by considerations of meaning rather than structure. Crombie (1985b) also classifies case/ role relations in terms of predicator type – dynamic, process (including material and experiential processes) and stative (including material and experiential states) but distinguishes five main relational categories - causal, participation (activity-participation; process-participation; state-participation), orientation-transition, relational and abaxiant. The case/ role relations identified in her model are: *Agent*, *Instrument*, *Force*, *Patient*, *Assignee*, *Material*, *Result*, *Mutant*, *Durant*, *Experiencer*, *Appertainant*, *Object*, *Source*, *Goal*, *Range*, *Referee*, *Referent*, *Quantant*, and *Abaxiant*. Finally, Longacre (1996) presents a set of situational roles classified in terms of frames and verb types. Following Chafe (1970), he refers to *Patient* (redefined) rather than *Object*. Following Halliday (1967; 1968), he includes *Range* (rather than *Complement*), his definition of *Range* being closer to Fillmore's definition of *Locative* than it is, for example, to Grimes' definition of *Range*. He also introduces a case/ role relation referred to as *Measure*, the final model having only nine case/ role relations: *Experiencer*, *Patient*, *Agent*, *Range*, *Measure*, *Source*, *Locative*, *Goal*, and *Path*.

4.2.2 Overview of discourse relation models (*inter*-propositional)

Longacre (1972a) includes in his *inter*-propositional relational model ten deep structure relations together with a number of varieties of each. There is no overall categorisation in terms of relational types. This approach is extended in his most recent account (Longacre, 1996) where there are 12 deep structure relations together with a number of varieties of each. Once again, there is no overall categorisation in terms of relational types. So far as the work of Longacre is concerned, therefore, the issue of categorisation of relations into types does not arise.

Beekman and Callow (1974) include two main categories of relation – addition and associative – although the associative category includes five sub-categories: support by clarification (using a proposition with distinct information); support by clarification (using a proposition with similar information); support by argument; support by orientation; support involving the whole of one proposition and part of another. This categorisation leads to some duplication of relations, the final list being made up of addition relations (*Chronological Sequence*; *Simultaneity*; *Alternation*; *Conversational Exchange*; *Matched Support*) and associative/ supporting relations: *Manner*; *Comparison*; *Contrast*; *Equivalence*; *Generic-Specific*; *Amplification-Contraction/ Summary*; *Reason-Result*; *Means-Result*; *Means-Purpose*; *Condition-Consequence*; *Concession-Contraexpectation*; *Grounds-Conclusion*; *Time*; *Location*; *Circumstance*; *Identification*; *Comment*; *Content*).

Hollenbach (1975) posits five relational category types: *Temporal*, *Causal*, *Logical*, *Equivalence* and *N-ary*. All of the relations belonging to the *Causal* category are presented as involving fact or observation; all the relations belonging to the *Logical* category are presented as involving some form of inference, deduction or contingency. At first sight, this distinction appears to be a useful one (capturing a potential semantic/ pragmatic distinction). Thus, for example, the relation referred to by Hollenbach as *Grounds-Implication* (belonging to the logical category) involves a causal member (*Grounds*) which provides a basis for the effect member (*Implication*) whose content is deduced rather than observed. The relations are as follows: causal relations (*Means-Purpose*; *Means-Result*;

Reason-Result; *Cause-Effect*; *Stimulus-Response*), logical relations (*Grounds-Implication*; *Condition-Consequence*; *Contrary-to-fact Condition-Contrary-to-fact Consequence*; *Concession-Contraexpectation*), equivalence relations (*Greater-Lesser*; *Comparison*; *Generic-Specific*; *Restatement*; *Positive-Negative*; *Contrast*), N-ARY relations (*Coordination*; *Inclusive Alternation*; *Exclusive Alternation*).

Crombie (1985a, 1985b, 1987) categorises relations into three cognitive process types: associative, logico-deductive and tempero-contigual. The relations are: associative (*Simple Contrast*; *Comparative Similarity*; *Statement–Affirmation*; *Statement-Denial*; *Denial-Correction*; *Concession-Contraexpectation*; *Supplementary Alternation*; *Contrastive Alternation*; *Paraphrase*; *Amplification*), logico-deductive (*Condition-Consequence*; *Means-Purpose*; *Reason-Result*; *Grounds-Conclusion*), tempero-contigual (*Chronological Sequence*; *Temporal Overlap*; *Bonding*).[147]

4.3 The derived relational models

4.3.1 The case/role relation model (*intra*-propositional)

In *Chapter 2*, I raised a number of issues associated with literature on case/ role relations. Most of these issues had a direct bearing on the relational models proposed. My aim here is to present a model that addresses the issues raised in that chapter. This model is designed to accommodate, at the thematic level[148], as many semantic relational distinctions as can be predicated on the basis of the examples provided in the literature reviewed. It is not based on an analysis of the way in which case/ role relations are represented in any particular language or language family. It is not intended to be situationally-specific. For these reasons, this model should, I believe, provide a useful starting point for the discussion of the representation of case/ role relations in a language (Māori) which has been the subject of only one detailed case/ role relation-based study, a study which was

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[147] Because their focus is on the linguistic resources of English, the proposals forwarded by Halliday and Hasan (1976), Martin (1992) and Knott (1996) are omitted from this summary.

[148] Although the model does not attempt to accommodate macro-roles directly, it is accepted that, as Van Valin (2001) observes, macro-roles may act as an intermediary between thematic case/ role relations and grammatical relations, something that may be reflected in specific groupings of thematic case/ role relations for the purposes of linguistic realisation.

itself conducted largely in terms of models proposed by three researchers on the basis of work conducted in the 1960s and 1970s.[149, 150]

As was the case in *Table 2.17* (*Chapter 3*), case/role relations are classified here in terms of the following predicator types:

- non-transitional activity;
- material process;
- experiential state or process;
- material state;
- spatial state;
- transitional event;
- locational state;
- relational.

Each case/ role relation is associated with one, or more than one, of these eight predicator types, two of the proposed case/role relations – *Temporal Location* and *Temporal Transition* – being distinctive in terms of the extent of their span of predicator type categories.

The resulting model of *intra*-propositional relations is outlined in *Table 4.1* which includes definitions and examples drawn from English.

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[149] The study referred to here is discussed in *Chapter 5*.

[150] The relational models presented here are derived from a comparative analysis of the models discussed in *Chapters 2* and *3*. Another way of deriving relational models would be to attempt to identify relational metacategories by linking all of the relations and relational varieties that have been proposed to general categories (e.g., addition, comparison, alternation/choice, etc.) and deriving specific varieties (e.g., exception as a variety of contrast) with reference to the signaling systems of particular languages.

Table 4.1: **Case/ role relational model (*intra*-propositional)**[151]

Categories	*Intra*-propositional relations	Definitions	Examples
With non-transitional activity predicator	***Source (Non-Transitional) S(NT)***	Entity (entities) from which a non-transitional activity is identified as emanating.	***The dog** ate the rat.*
	Instrument (I)	Entity by means of which a non-transitional activity is carried out by an *Agent.*[152]	*He broke the window with a **hammer.***
	Directional Focus (DF)	The target of a non-transitional activity.	*The dog ate the **rat.*** *He lied about Mary to **John.*** *He bequeathed his house to **John.*** *He awarded a goal to **John.***[153]
	Predicate Range (PRG)	The entity (entitjes)/abstraction over which a non-transitional predicate ranges.	*He lied about **Mary** to John.* *He taught Mary about **Physics.*** *He taught **French** to Mary.*
	Material (M)	Entity (entities) transformed into another specified entity through a non-transitional activity.	*She makes **clay** into bowls.*
	Result (R)	Entity (entities) resulting from a non-transitional activity.	*She makes clay into **bowls.***
	Event Location (EL)	Location of a non-transitional activity.	*He killed Henry **behind the garage.***
With material process predicator	***Mutant (Mu)***	Entity (entities) affected by a process.	***The butter** melted.*
With material state predicator	***Identified State(IS)***	Entity (entities) identified as being in the state referred to in the predicator.	***The door** is green.*
With spatial state predicator	***Entity Location (Spatial) (EL(S))***	Entity (entities) identified as being in a static location.	***The book is in the** drawer.*
With experiential state or process predicator	***Experiencer (E)***	Entity (entities) identified as experiencing an experiential state or process.	***He** heard the music.* ***He** likes music.*
	Appertainant (A)	Entity (entities) identified as the source of an experiential state or process.	*He heard **the music.*** *He likes **music.***

[151] Because these examples are decontextualised, they should be treated with caution.
[152] *Source* (Non-transitional) may be explicit or implicit.
[153] In some languages, predicators such as 'award' and 'bequeath' may be treated as involving metaphoric transition and, therefore, associated with *Source (Transitional)* and *Goal* rather than *Source (Non-transitional)* and *Target.*

Table 4.1 (continued): **Case/ role relational model (*intra*-propositional)**

Categories	*Intra*-propositional relations	Definitions	Examples
With transitional event predicator	***Source (Transitional) (ST)***	Entity (entities) involved in the initiation of a movement.	***He** shifted it **off** the table.*
	Starting Point (SP)	Location of an entity (or entities) at the beginning of a transitional event.	*It fell **from the table** to the floor.*
	End Point (EP)	Location of an entity (or entities) at the end of a transitional event.	*It fell from the table to the **floor**.*
	Transitional Range(TR)	Area covered during a transitional event.	*The egg rolled **down the hill**.*
	Transitor (T)	Entity (entities) in (locational) transition.	***The egg** rolled down the hill.*
With relational predicator	***Possessor (Pr)***	Entity (entities) identified as being the possessor in the case of a relational predicator.	***She** has a Mercedes.*
	Possessed (Pd)	Entity (entities) identified as being the possessed in the case of a relational predicator.	*She has **a Mercedes**.*
	Quantified (Qd)	Entity (entities) identified as being the quantified in the case of a relational predicator.	***It** weighs a tonne.*
	Quantifier (Qr)	Quantifier of entity (entities).	*It weighs **a tonne**.*
	Affector (Afr)	Entity (entities) identified as being the affector in the case of a relational predicator.	*Jean has **typhus**.*
	Affected (Afd)	Entity (entities) identified as being the affected in the case of a relational predicator.	***Jean** has typhus.*
	Relational Specifier (RS)	Topic of a relational predicator.	***The decision** is relevant to John.*
	Relational Target (RT)	Target of a relational specifier.	*The decision is relevant to **John**.*
With activity, experiential and material process, material state, transitional event and locational state	***Temporal Location(TL)***	The temporal point identified as being relevant to the activity, process or state identified by the predicator.	*He ate **at ten o'clock**.*
With activity, material process and material state, experiential process and transitional event	***Temporal Transition (TT)***	The duration of the activity, state or process identified by the predicator.	*He travelled **all day**.*

4.3.2 The discourse relation model (*inter*-propositional)

In relation to the critique of *inter*-propositional relational theory and modelling in *Chapter 3*, I propose here a model based on a four-way distinction in terms of relational types: *temporal, additive, associative* and *causal.*

The *additive* category includes only one relation. Different labels are used in different models to refer to this relation. Since a label such as *Conjoining* (Hollenbach, 1975) is suggestive of an essentially grammatical relationship rather than a semantico-pragmatic one, I prefer the term *Bonding*. This relation does not involve time, cause and effect or the matching of propositions in terms of comparison, contrast or choice. For a definition of this relation and the other relations included in the model proposed here, see *Table 4.2* following.

Membership of the *Temporal* relational category seems to be unproblematic in that the analysis of the models proposed in *Chapter 3* indicates that there are two fundamental ways of linking propositions in time. I shall refer to these two relations as *Temporal Sequence* and *Temporal Overlap*. As in the case of the other relations, there appears to be a prototypical type of each of these relations (one event occurring after another in time; one event overlapping with another in time) although there are variations involving, for example, partial overlap in time.

The causal relations are slightly more problematic although, as I argued earlier (see pp. 175-176), there appear to be good reasons for including relations based on those labelled *Logical* by Hollenbach (referred to here as *Grounds-Conclusion*, *Condition-Consequence* and *Concession-Contraexpectation*). There is, however, an issue relating to whether *Means-Purpose* and *Means-Result* are varieties of *Reason-Result* or separate relations. On balance, I believe that they should be treated as separate relations. Both *Reason-Result* and *Means-Result* present the effect proposition as an outcome, whereas *Means-Purpose* presents the effect proposition as an intended (rather than actual) outcome. The focus in the first two (*Reason-Result* and *Means-Result*) is, therefore, achievement; the focus in the third (*Means-Purpose*) is intention. This appears to indicate a clear relational distinction between the first two and the third in terms of propositional membership. The distinction between *Reason-Result* and *Means-Result* is not so

clear-cut although the causal member of the relation focuses on *why* a particular outcome is/was/will be achieved in the case of *Reason-Result*, whereas the causal member of the relation focuses on *how* a particular outcome is/was/will be achieved in the case of *Means-Result*. I believe, therefore, that the difference between the propositional members is sufficient to justify the establishment of different discourse relations in each case. For similar reasons, I have after much deliberation, also decided to treat *Grounds-Conclusion* as a relation in its own right.

The associative relations include all of those involving comparison in terms of similarity or difference. This includes the relation referred to as *Paraphrase*, a relation involving the matching of two propositions in terms of propositional content. The relation I refer to as *Alternation* is also included in this category because the propositions over which choice operates are treated as being similar or different in terms of content in relation to the context in which they occur. The *General-Particular* relation is also assigned to this category because the propositions that make up its membership can be compared in respect of similarity in that one generally involves a generic semantic predicator (e.g., *say*; *tell*), the other a content specification (particulars) relating to that generic semantic predicator. This category (associative) also includes further relations involving compatible or contrasted propositional content. The resulting model (including definitions and examples drawn from English) is outlined in *Table 4.2* following.

Table 4.2: **Discourse relational model (*inter*-propositional)**[154]

Relational Types	Further categorisation of relational type	Relational varieties	Definitions	Examples
Temporal	Temporal	*Temporal Sequence*	Involves chronologically sequenced event propositions.	He tidied up and then left the building site.
		Temporal Overlap	Involves temporarily overlapping event propositions.	As he was measuring the site, he slipped on the wet grass.
Additive	Bonding	*Bonding* (including *Rhetorical Coupling*)[155]	Involves non-comparative, non-contrastive, non-elective, non-causative propositional addition.	He was wearing a rain cape and carrying a torch.
Associative	Matching Compatibility	*Paraphrase*	Involves equivalence of propositional content.	He began combat; he started to fight.
		Statement-Affirmation	Involves affirmation of the truth or validity of the content of a proposition.	He said that the explosion caused the collapse and I agree.
		Simple Comparison	Involves comparison in respect of similarity.	The leaders were afraid and so were their followers.
		Exemplification	Involves an example of a general statement.	Economic superiority does not guarantee victory. The defeat of the USA in the Vietnam war is just one example.
	Matching Contrast	*Simple Contrast*	Involves comparison in respect of difference.	One structure was weak; the other was strong.
		Statement-Denial	Involves denial of the truth or validity of a proposition.	He said that the explosion caused the collapse but I disagree.
		Denial-Correction	Involves the correction of some aspect of propositional content.	It wasn't the heat that caused the cracks; it was the constant pressure of water.
		Exception	Involves a general statement and an exception.	All of the buildings leak except the one built by my company.
		General-Particular	Involves content specification of a generic semantic predicator.	Someone was responsible. It was the project manager.
	Alternation	*Supplementary Alternation*	Involves a choice among non-contrasting alternatives.	Nobody ordered the bricks or bought the roofing felt.
		Contrastive Alternation	Involves a choice between/among contrasting alternatives.	It will either survive the storm or it won't.

[154] These examples should be treated with caution as there are occasions when further context will be required for relational interpretation.
[155] *Rhetorical Coupling* appears to be simply a marked form of *Coupling*, often appearing, for example, in English as *not only . . . but also . . .*

Table 4.2 (continued): **Discourse relational model (*inter*-propositional)**

Relational Types	Further categorisation of relational type	Relational varieties	Definitions	Examples
Causal	Causality	*Reason-Result*	Involves the reason for a particular outcome.	She built a new fence because the old one was damaged.
		Grounds-Conclusion	Involves an outcome based on inference rather than observation.	He was in charge of the project so he must have been the one who made the final decision.
		Means-Result	Involves the means of achieving a particular outcome.	By nailing the letter box to the fence, she was able to make it more secure.
		Means-Purpose	Involves an action and its intended outcome.	He added concrete to the mix in order to make it stronger.
	Conditionality	*Realisable Condition*	Involves an outcome that is contingent on a realisable condition.	If he leaves now, he'll get there in time for the meeting.
		Unrealisable Condition	Involves an outcome that is contingent on an unrealisable condition.	If it had been built differently, it wouldn't have collapsed.
	Concession	*Concession-Contraexpectation*	Involves an actual effect which is contingent on the blockage or denial of a usually anticipated effect.	Although both the design and the building were excellent, the client complained.

4.4 Applying the model: The relevance of prototype theory

Prototype theory arose out of a body of evidence that seriously undermined the foundations of what has come to be known as the 'classical, Aristotelian theory' of categorisation (Taylor, 1995, p. 38). The 'classical theory' of categorisation included each of the following:

- categories are defined in terms of a conjunction of necessary and sufficient features;
- features are binary;
- categories have clear boundaries;
- all members of a category have equal status (pp. 23-24).

In *Philosophical Investigations*, Wittgenstein (1968) questions the fundamental tenets of 'classical theory', developing the concept of 'family resemblance' as "a complicated network of similarities overlapping and criss-crossing". Thus, for example, "'games' form a family" (pp. 31-32), and "the concept of 'game' is a concept with blurred edges" (p. 34).

Acknowledging that open-endedness is a characteristic of the meaning of a word (such as 'Spiel' (game)), involves a challenge to the fundamental principles of the 'classical approach' to categorisation. Thus, a category such as 'game' "[cannot be] learnt as a conjunction of those critical features which uniquely distinguish games from non-games, but has to be learnt on the basis of exemplars" (Taylor, 1995, p. 39).

Wittgenstein's insights in relation to 'family resemblance' were the basis for the empirical work conducted by Eleanor Rosch (formerly Heider), and her associates in the late 1960s and 1970s. They found that there appeared, in relation to colour, to be 'focal points' (best examples) that were visually salient across cultures (Heider, 1971, 1972; Heider & Oliver, 1972). Thus, for example, in experimental contexts, children chose focal colours more frequently than non-focal ones and were able to match focal colours better than non-focal ones, indicating that "focal colour areas as a whole [are] more salient to young children and more likely to be used to represent the basic colour name than [are] other areas of the colour space"

(Heider, 1971, p. 455).[156] There appeared, therefore, to be 'natural prototypes' to which subjects responded irrespective of whether their own languages made direct use of them in categorising and naming colour.

Rosch also investigated the possibility that other domains were also organised in terms of more and less prototypical examples. She conducted two experiments relating to other semantic categories (Rosch, 1973b). In the first of these, subjects selected the 'best example' of one of the following categories: *fruit, science, sport, bird, vehicle, crime, disease,* and *vegetable.* The second experiment involved reaction time and judgement in relation to pairs of words (one a 'good example' of a category, the other not) in relation to the following categories: *toy, bird, fruit, sickness, relative, metal, crime, sport, vehicle, science, vegetable,* and *part of the body.* The conclusion was that a 'best example' or 'natural prototype' may be "processed in terms of . . . internal structure rather than in terms of attributes of . . . formal meaning" (p. 142). On the basis of these and other experiments, Rosch and her colleagues concluded that human beings learn and use language in a way that reflects classification of the world in terms of 'family resemblance', in terms of examples (more prototypical examples and less prototypical ones) rather than in terms of binary values (Rosch & Mervis, 1975). Although the central members of a category (prototypical examples) share a large number of common attributes, entities that share only a few attributes with the more central members may also be assigned to the category. Rosch (1973b) argues that the 'core meaning' of a category is not arbitrary "but is given by the human perceptual system" (p. 112) and is therefore likely to be universal across languages, the principle of 'cognitive economy' being the means by which humans reduce the "infinite differences among stimuli to behaviourally and cognitively usable portions" (Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976, p. 384).

The principle of cognitive economy which Rosch and her colleagues demonstrate is unlikely to be limited to lexical meaning. There are likely also to be more and less prototypical examples of relational meanings. We should therefore not be

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[156] Focal colours were given the shortest names, were identified by name more rapidly across languages, were the most accurately recognised by both English and Dani speakers, and could be paired with names with the fewest errors (Heider, 1972).

surprised to discover that there are cases where categorical assignment will be more or less straightforward, something that is acknowledged in much of the literature on *intra-* and *inter*-propositional relations (see *Chapters 2* and *3*).[157]

4.5 The corpus

In a recent analysis of written texts in Māori in terms of genre and text-type, Houia-Roberts (2004b) analysed a corpus made up of twelve full texts, six written by Sir Apirana Ngata in the first half of the twentieth century, six written by Tīmoti Kāretu at the end of the twentieth century. In examining written Māori from the perspective of rhetorical organisation, she analysed all twelve texts in relation to overall discourse structuring. In examining written Māori from the perspective of genre, she analysed eighteen text segments (again drawn from the writings of Sir Apirana Ngata and Tīmoti Kāretu) in terms of discourse relations. In doing so, she made direct reference to the discourse relational models provided by Crombie (1985a & b, 1987). Although she identified discourse relations in these texts, she did not include any analysis or discussion of discourse relational signalling.

In selecting a corpus for analysis according to the case relational and discourse relational models I propose here, I decided to use six of the full texts selected for analysis by Houia-Roberts. This decision was motivated by a number of considerations. First, I felt that it was necessary to analyse texts that were written by native speakers in order to minimise the possibility, particularly in the case of contemporary texts, of being misled by the presence of errors. This seemed particularly important in view of the extent of the errors (as opposed to possible effects of language change) detected by Houia (2002) in the writing of young learners. The two writers whose works were analysed by Houia-Roberts were both highly proficient users of the language, accustomed to writing for a wide audience.[158] Furthermore, these texts have been translated by Houia-Roberts

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[157] Thus, for example, the most prototypical realisation of the *inter*-propositional relation of the *Reason-Result* relation in English appears to be one in which the result member is realised as a main clause in initial position and the reason member as a subordinate clause introduced by the subordinator 'because'. In the case of the preposition 'because of', one of the propositions may be embedded as a nominalisation (e.g., *He was angry because of her intervention*: *He was angry because she intervened*).

[158] Sir Apirana Ngata (Ngāti Porou) was a prominent Māori scholar and statesman. The texts selected for analysis here are all included in Apirana Turupa Ngata (1996), edited by Wiremu and

(herself a highly educated native speaker of Māori). The translations are "intentionally designed to be as close as possible to the originals" (Houia-Roberts, 2004b, p. 135). The fact that these texts have been translated makes the research more readily available to readers who are not themselves highly proficient in Māori language. In addition, it provides me, as someone for whom Māori is a second language, with an important source of native speaker intuition in relation to meaning and interpretation. My decision to analyse only six of the twelve texts used by Houia-Roberts was motivated by practical considerations. Analysing texts from the perspective of discourse relations and discourse relational signalling is itself time-consuming. Analysing texts also from the perspective of case roles/ relations and case role/ relational signalling is even more time-consuming. I felt, therefore that the analysis of six complete texts was all that could be realistically achieved in the time available to me. Furthermore, earlier discussions of case relational signalling in Māori (Bauer, 1981) and discourse relational signalling in Māori (Houia, 2001a) were not based on the analysis of complete texts but, instead, provided examples in the form of isolated sentences. I felt that the analysis of whole texts would provide a better test for the proposed models.[159] However, corpus-based analysis is problematic in that it does not necessarily include the wide variety of example types that may be necessary to provide adequate coverage. For this reason, I have re-examined the work of Bauer (1981) and Houia (2001a) in relation to the models introduced here (see *Chapter 5*), my primary aim being to supplement the findings in this chapter. Inevitably, however, that re-examination includes aspects of critical review which might, under different circumstances, have been more appropriately located in *Chapters 2* and *3*.

Te Ohorere Kaa. Tīmoti Kāretu (Tūhoe and Ngāti Kahungunu) is a former professor of Māori language at the University of Waikato and a former Commissioner of *Te Taura Whiri i te Reo Māori* (The Māori Language Commission). The works selected for analysis here were published in *He Muka*, a quarterly journal in Māori.

[159] The study of case roles/ relations is often conducted with reference to decontextualised sentences. Although this is not necessarily a problem all of the time, there are occasions when it may be problematic, particularly where informants are asked to make judgments about the acceptability of certain sentences, sentences which may be acceptable in some contexts and unacceptable in others. Furthermore, contextualising sentences that appear to be problematic in terms of case/ role relation assignment may sometimes prove useful in directing attention to the possibility that other factors are coming into play.

My decision to analyse a written rather than a spoken corpus was motivated by practical considerations. Obtaining a reliable contemporary spoken corpus (one that could be guaranteed not to include errors) would have meant recording native speakers and then asking them to be informants in relation to any issues of interpretation arising out of these recordings. I felt that I could not justify a request that would inevitably involve a commitment on their part of a considerable amount of time, particularly as the majority of potential informants are kaumātua who are already fully occupied with professional and/or community responsibilities. Finally, I made a decision not to attempt to take account of possible regional/ dialectal variations. This is because I believe that that this is an issue which can be addressed only when a reasonably substantial body of analysed material is available.

4.6 The analysis

In initially analysing the six texts included below,[160] I integrated analysis conducted in terms of the case/role relational model outlined above and the discourse relational model outlined above (see *sections 4.3.1* and *4.3.2*). I did this in order to ensure that the advantages of analysing complete texts, as opposed to isolated examples, could be maximised. Looking at case/role relations and discourse relations simultaneously enabled me to track the probable signalling of each in relation to the other, reducing the potential for confusion. I have, however, in order to make the analyses more readily comprehensible to readers, recorded the results of analyses separately below, providing, for each analysed text, one Table that relates to case/role relations and another that relates to discourse relations. In these Tables, I indicate whether I believe there are any special circumstances governing the selection of particular signals (see *Notes*). In *Tables 4.8* and *4.9* following I have combined the recorded results of each of the analyses for the three Ngata texts and in *Tables 4.17* and *4.18* I have recorded the results for the three Kāretu texts. These indications are cumulative, each additional text analysis providing the source of further comments. However, they are intended to be indicative only; a more extensive study would be required to validate them (or otherwise). In *Appendix 3*, I have provided the raw data in the form in which it was analysed.

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[160] Houia-Roberts' (2004b) translations are also included.

Where one member of a relation is in bold in the following Tables, it is that member that is signalled. Because a relational signal that has the same surface form will not necessary always have the same grammatical function, the same signal (e.g., *hei*) may, in the following *Tables*, have more than one classification (e.g., preposition; determiner). In some cases, the labelling may differ from that which is commonly found in other descriptions of Māori.[161]

4.6.1 Text 1: *Te nūpepa o Te Aute: nā Apirana Ngata* – The *Te Aute Newspaper*: Apirana Ngata (Houia-Roberts, 2004b, p. 211)

Kua tonoa taku hoa ētita, a Reweti Kohere e ōna hoa Pākehā kia whakapiri i tētahi o ngā ingoa o tōna tipuna ki tōna ingoa, arā i a 'Mokena'. E hiahia ana rātou kia pēnei te roanga o tōna ingoa Reweti T. Mōkena Kohere. E mea ana rātou hei tohu whakamaharatanga tēnei māna ki tōna tipuna. Kāti kei pōhēhē ōna hoa he tangata kē a Reweti Kohere, me Reweti Mōkena Kohere.

He nui tō mātou pouri i tō mātou kitenga i ētahi kupu kāore e tika kia perehitia i roto i tētahi o ā tātou pepa Māori. Ko āna kōrero kino, i roto i tētahi reta tuku mai, engari kāore pea i kitea e te ētita.

E hoa mā, e kōrerotia ana ō tātou pepa e te wāhine, e te tamariki, kāti kāore e tika ngā kōrero weriweri kia perehitia. He mea tēnei e taea te hāmene e te Kāwanatanga, ā, e mau ai te tangata ki te whareherehere.

Kia tūpato. Nō ngā kaitā te tino hē ki te perehi tonu i ērā kōrero tino kino atu.

My associate editor, Reweti Kohere, has been asked by his Pakeha friends to add the name of one of his grandfathers, that is, 'Mokena', to his name. They want his full name to be Reweti T. Mokena Kohere. They are suggesting that this be a symbol of remembrance to his grandparent. So then, his friends should not mistakenly believe that Reweti Kohere is a different person than Reweti Mokena Kohere.

We were very disappointed when we saw a type of language, that should not be printed, appeared in one of our Māori papers. This offensive language appeared in a letter sent to the paper, but was evidently not seen by the editor.

Friends, our papers are being read by women and by children, so it is not right that offensive language, such as this, should be printed. This is something that could incur a Government summons and could result in the imprisonment of those concerned.

Be cautious. The fault lies with the printers who continue to print this distasteful language.

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[161] Māori, the indigenous language of New Zealand, is a member of the Eastern Polynesian subgroup of the Austronesian language family. Its closest relation is the language of the Cook Islands (sometimes referred to as Cook Island Māori, and sometimes as Rarotongan). Other close sister languages include Tahitian, Tuamotuan, Marquesan, Hawaiian, Mangarevan and the Easter Island language (Krupa, 1982). The Māori language has a typical Polynesian word order of Verb Subject Object (VSO) (Gordon, 2005; Randriamasimanana, 2000) and it is generally described as an ergative language (Gibson & Starosta, 1990; Sinclair, 1976) although this position has been disputed (Clark, 1973, 1976; Chung, 1977; Hohepa, 1969; Bauer, 1997). There is some dialectal variation, "in part phonological and phonetic in nature, but largely lexical" (Harlow, 1996, p. 6).

***Table 4.3*: Text 1: case/role relations (*intra*-propositional)**

Intra-propositional relation	Signal	Classification	Notes
Source (Non-Transitional) S(NT)	*e*	preposition	marker of *S(NT)* in passive construction
	nō	preposition	emphatic
Directional Focus (DF)	*ki*	preposition	
Predicate Range (PRG)	*i*	preposition	
Event/Entity Location (Static) (EL(S))[162]	*i roto i*	preposition + (locative) + preposition	
Experiencer (E)	*i*	preposition	preceding nominalisation
Identified State (IS)	*ko*	preposition	emphatic[163]
	kia	particle	preceding nominal substitute (*pēnei*)

***Table 4.4:* Text 1: discourse relations (*inter*-propositional)**

Inter-propositional relation	Signal	Classification	Notes
General-Particular	(*tonoa*) + content specification	verb (speech/ thought etc.) + content specification	
Bonding	*ā*	co-ordinating conjunction	
Means-Purpose	*hei*	determiner	
*Grounds-**Conclusion***	*kāti*	sentence conjunct	signalling the *Conclusion* member
Concession-Contraexpectation	*engari*	subordinating conjunction	general contrastive signal

4.6.2 Text 2: *Me karo tēnei taunu 'He māngere te Māori': nā Apirana Ngata* – Counter the insult 'Māori are lazy': Apirana Ngata (Houia-Roberts, 2004b, pp. 213-214)

I te mea kua eke nui ki runga i te iwi Māori tēnei kupu taunu, 'he māngere te Māori' ko te mahi tuatahi tonu mō tō koutou rōpū, me ērā atu rōpū e whakatūria ana i roto i te rohe pōti o te Tairāwhiti ā muri ake nei i runga i te kaupapa pēnei i tā koutou, he karo i tēnei kupu taunu.

Ko ētahi huarahi e taea ai te karo ki taku whakaaro koia ēnei:

(a) me whakamārama e koutou te āhua o te Māori i mua atu i ngā wā hoko whenua, he iwi ahuwhenua, me ngā mahi i taea e te Māori i ērā rā, ngā mahi wīti, whakatupu poaka, hoko kaipuke me ērā atu mahi;

(b) me whakamārama ngā huarahi taka ai te Māori ki te hē i runga i ngā mahi hoko whenua, i ngā rīhi whenua, ka waiho ko ngā hua o ēnā mahi hei oranga mō te tangata Māori, ka whakamanawa ki tēnā oranga, he oranga ngāwari hoki, ka ngoikore ki ngā mahi tinana;

(c) me whakamārama ngā āraitanga, ngā whakararurarutanga a ngā ture maha a te

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[162] I have recorded *Event Location* and *Entity Location (Spatial)* together in the *Tables* because it was very difficult to distinguish between them in the corpus.

[163] Any change from the most frequent pattern is generally described as marked or emphatic.

Pāremata, i hēmanawa ai te iwi Māori, i kore ai e taea e ngā mea e hiahia ana te whakapai ō rātou whenua;

(d) me whakawhāiti ngā māramatanga katoa e takoto nei o ngā mahi ahuwhenua o tō koutou rohe:

(i) te tīmatanga me te whakahaerenga, ā, tae mai ki tēnei wā o ngā mahi o Ngāti Porou, te kaute o ngā hipi, me ērā atu kararehe a te Māori i tēnei wā, te wāriu o ngā whakapainga kei runga i aua whenua, ngā eka kua pai;

(ii) ngā mahi a te uaua o te Māori ki ngā whenua e nōhia mai nei e ngā Pākehā.

(e) hei muri i tēnā ka whakatakoto mārō ai i te kupu e hiahia ana koutou kia tahuri nui ki ngā mahi whenua, ki ngā mahi ā ringa; e tono ana koutou kia āwhinatia tēnei whakaaro ō koutou e te Kāwanatanga, e te iwi Pākehā, e te iwi Māori;

(f) ko ngā kaupapa e takoto i a koutou he mea tika kia tukua ki ngā nūpepa Pākehā o te Koroni kia whakarongo tauhou mai te iwi Pākehā ki tēnei taha hoki o ngā kōrero whenua Māori, kia manaakitia e ngā nūpepa, ā, kia riro ko rātou tonu hei āwhina i ō koutou whakaaro whakatipu hou;

(g) ko te whakaupoko tonu tēnei mō tētahi pitihana nui ki te Pāremata ā tēnei tau ko ngā whakamārama e taea ai te karo tēnei kupu te 'māngere' ki raro i te iwi Māori.

Because this insulting phrase 'Māori are lazy' is very frequently used in reference to Māori, the very first thing that needs to be done by your group, in fact by all similar groups likely to be established in the future within the electoral boundaries of Te Tairawhiti, is to refute it.

In my opinion, some courses of action which could be used to counter these claims could be to:

(a) explain the way the Māori people were prior to the time of land sales: they were an industrious people, and the work they were able to do during those times was wheat growing, rearing pigs, buying ships among other things;

(b) explain the ways in which the Māori people have fallen on troubled times because of land sales, land leases, and people were left to exist on the financial gains, and soon they became accustomed to this way of life, and because it was an easy life, the people lost the motivation to work;

(c) explain the obstacles, the difficulties caused by the many parliamentary laws which resulted in the frustration of the Māori people, and resulted in those who wished to improve their land being unable to do so;

(d) collate all this information about the work being carried out in your areas:

(i) the beginnings, the administration and also include the work of sheep rearing in Ngati Porou, the numbers of sheep and other animals being reared by Māori people at this time, the values of improvements on those lands, the total acreage which has been improved.

(ii) the vigorous work that Māori people are carrying out on the land owned by Pakeha.

(e) following that, be resolute with the messages you convey with the main focus being on the working of the land, the labouring for your aim is that the Government support your ideas;

(f) the ideas you put forward should in fact be circulated to Pakeha newspapers throughout the colony so that Pakeha will hear a fresh perspective about Māori land, so that the ideas will be supported by the newspapers and so that they will in actual fact be the ones to support your new suggestions.

(g) this collection of new explanations could constitute an important part of a petition this year, and could be useful in the removal of the use of this word 'lazy' in reference to the Māori people.

***Table 4.5*: Text 2: case/role relations (*intra*-propositional)**

***Intra*-propositional relation**	**Signal**	**Classification**	**Notes**
Source (Non-Transitional) S(NT)	*e*	preposition	marker of *S(NT)* in passive construction
	mō	preposition	emphatic
	ki taku whakaaro	preposition + possessive + noun	phrasal idiom (i.e., in my opinion)
	a	preposition	possessive *(S(NT))*
	ko	preposition	emphatic
Appertainant (A)	*ki*	preposition	
Transitor (T)	*i*	preposition	
Predicate Range (PRG)	*ko*	preposition	emphatic
	o	preposition	(of/ about); possessive *(PRG)*
	i	preposition	
Directional Focus (DF)	*ko*	preposition	emphatic
	ki	preposition	
Event/Entity Location (Static) (EL(S))	*i roto i*	preposition + (locative) + preposition	
	kei runga	preposition + locative	
	o	preposition	possessive *(EL(S))*
Temporal Location(TL)	*a muri ake nei*	TAM + locative + postposed particles	phrasal idiom (future time)
	i	preposition	
Relational Target (RT)	*i*	preposition	
Possessor (Pr)	*mō*	preposition	in the context of a nominalised predicator
Transitor (T)	*i*	preposition	
End Point (EP)	*ki*	preposition	
Identified State (IS)	*ko*	preposition	emphatic

***Table 4.6*: Text 2: discourse relations (*inter*-propositional)**

***Inter*-propositional relation**	**Signal**	**Classification**	**Notes**
General-Particular	(*mahi*) + content specification	general noun (e.g., *mahi*) + content specification	
Reason-Result	*whaka-*	causative prefix	with nominalisation
	i runga	complex preposition	
Bonding	*me*	co-ordinating conjunction	
	i . . . ai; i . . . ai	structural repetition with replacement	
	ko . . . ko	structural repetition with replacement	
*Means-**Purpose***	*kia*	subjunctive TAM marker	signalling the *Purpose* relation
	hei	preposition	
***Grounds**-Conclusion*	*i te mea*	subordinating conjunction	general causative (signal) introducing the *Grounds* member
Temporal Sequence	*hei muri + i tēnā*	time reference + substitution	

4.6.3 Text 3: *Te marae o te Māori - Māoritanga: nā Apirana Ngata* – The marae of the Māori people: *Māoritanga*: Apirana Ngata (Houia-Roberts, 2004b, pp. 232-235)

Kei roto i ngā whakapuatanga kōrero o ia iwi o tēnei ao, tērā e kitea ā rātou tini mano pūtake o te tangata. Kimi tonu āna tāngata i tōna putanga mai ki te whai ao. I tutuki tā te nuinga o ngā iwi ki tēnei whakapono he mea hanga te tangata tētahi mana nui, tētahi mana kaha, whakaharahara, ka kīia e rātou he Atua. Kua whakaakona tātou ko te whakapono Karaitiana te whakatakotoranga tuatahi.

Kei roto i te pukapuka tuatahi a Mohi o Kēnehi e mau ana, i hangaia mai te tangata i te puehu, ā, nā te Atua i whakahā i ngā ponga o tōna ihu ka whiwhi i te wairua, ka kīia tēnei ko te Orokohanga. Ko te tāne i hangaia i te tuatahi, nō muri ko te wahine, i runga i ngā kupu a te Atua, kāore e tika kia noho mokemoke te tāne engari kia whakawhiwhia he hoa hei atawhai i a ia.

Tērā atu ngā kaupapa kōrero a ētahi atu iwi, engari ko te whakapono tēnei i mauria mai e te Pākehā ki waenganui i ngā Māori o Aotearoa nei, āpiti atu ki ngā moutere a te Moana Nui a Kiwa.

Ahakoa rā he maha ngā hāhi nā rātou i mau mai tēnei whakapono, he reo kotahi tonu tā rātou, he ririki nei ngā rerekētanga, ko te mea i tāia ko te Paipera, ka whakamāoritia ki ngā reo katoa o ngā iwi Māori.

I pērā anō hoki te Māori onamata, i tōna hangainga ki ōna putake, i tōna tipunga mai rānei i a neherā. Ko ngā kōrero mō ngā whakatakotoranga me ngā tikanga a te Māori, e rua ōna āhua: Ko ngā kōrero i ahu mai waho o te whare wānanga, ko ngā kōrero hoki i takea mai i roto tonu i aua whare.

Ahakoa ko ngā kōrero rā anō i haere mai anō i ngā whare nei i tukua ēnei kia kohia e te mutu tangata. Ka marea he mea noa, ehara i te tapu. Ko ngā whakaona tapu i taiepatia atu ki roto i ngā Whare Wānanga. I hunaia i reira mai i te tini o te tangata ko ngā korero mō Io.

Otirā nā te Pākehā i hopu haere ngā kōrero a ngā kaumātua, ka pā te kaupapa o Io, ka whakatūria ko ia te Atua tino tapu o te iwi Māori i onamata. Mā te tino tohunga anake e whakahua i tēnei ingoa i ngā wāhanga noa, i ngā wā e rite ana. Ahakoa rā he kaupapa ngaro, tērā tonu te takoto whānui i roto ngā whare wānanga, i te Taitokerau, i te Tairāwhiti, ā, i ētahi wāhi o te Taihauāuru.

Nā ngā tohunga, nā ngā morehu o ngā pakanga i hoatu ki a rātou e mōhio ana ki ngā tauira whakatipuranga hou kua mōhio ki te tā kōrero pukapuka, nā reira ka heke mai ngā kōrero o Io ki a tātou.

Ko Io Nui, te Atua o ngā Atua katoa
Ko Io Roa, te tuturu,
Ko Io Matua, te Matua o te Rangi o te Ao,
O ngā tāngata me ā rātou mea katoa,
Ko Io Matua te Kore, kāore he matua,
Ko Io Matua te Taketake, te taunga motuhake,
Ko Io te Wānanga, te tīmatanga o ngā mea katoa,
Ko Io te Toi o ngā Rangi, te Taumata o ngā Rangi,
Ko Io te Matanui, o ngā mea e kitea ana,
Ko Io te Matangaro, o ngā mea kāore e kitea,
Ko Io te Matakakao. Te rā, te mahana, te muri ahi,
Ko Io te Whiwhia, te hanga tangata,
Ko te Matatapu, te mutunga ake o te tapu.

E kīia ana nāna i hanga i te ao, mai i te kore, kāore i whānau, he matua kore, kāore i mau ki te wahine, he uri kore, engari nāna ka hanga i ngā mea katoa tae noa ki te tangata.

Throughout the world, different peoples have different interpretations on the origin of man. Man is still seeking knowledge of his creation. Many believe that man was created by a great power, by some powerful authority, with an extraordinary power that they claim to be a God. We have been taught that Christianity is the superior teaching.

It has been written in the first book of Moses and of Genesis that Man was created from dust and it was God who breathed life through his nostrils and instilled within him a spirit and this was the Orokohanga, the creation. The male species was created first and then the female for according to the word of God man should not be alone, but he should have a companion to nurture him.

There are many other explanations held by other peoples but this is the faith brought by the Pakeha to the Māori people of New Zealand and to the Islands of the Pacific.

Although there were many denominations, their messages were similar with a few slight variations, the Bible was the printed word and this was translated into the languages of all the indigenous peoples.

Ancient Māori had a similar belief about their creation, their origins, their development in ancient times. These beliefs and the customs of the Māori came from two sources. There was the knowledge that came from outside the Whare Wananga (Māori Schools of Learning) and the knowledge that originated from inside the Whare Wananga.

Although the teachings from the various Whare Wananga were similar this was made available to anyone. It became common knowledge and was not regarded as sacred. The sacred teachings were kept secret within the school of learning. The teachings of Io were concealed there from the majority of people.

Indeed, it was the Pakeha who acquired the stories of the Māori elders that related to the teachings of Io, the most sacred of gods to the Māori of old. Only a tohunga (priest) could refer to him and only in the right places and at the right times. Although the teachings were suppressed, it is possible that these were more widely taught in the Whare Wananga in Te Taitokerau (Northern tribes) and Te Taihauauru (Western Tribes).

The tohunga, the survivors of the battles handed on what they knew to the students of the new generation, who by this time had learned to record the written word and that is why the story of Io has been passed on down to us.

Io Nui represents the most important god
Io Roa represents uprightness and permanence
Io Matua represents the father of the heavens, of all people and their existence
Io Matua Kore of no parentage
Io Matua te Taketake, the permanent resting place
Io te Wananga, the beginning of all things
Io te Toi o nga Rangi, the highest level of the heavens
Io te Matanui, those things visible to the naked eye
Io te Matangaro, those things not visible to the naked eye
Io te Matakakao te ra, the warmth, the flames of the fire
Io te Whiwhia, the stature of mankind
Io te Matatapu, the most sacred of all

The belief is that Io created the world from nothing, was not born, had no parentage, had no union with women, was childless, but nevertheless all things, including man, were created by Io.

***Table 4.7*: Text 3: case/role relations (*intra*-propositional)**

Intra-propositional relation	Signal	Classification	Notes
Source (Non-Transitional) S(NT)	*nā*	preposition	emphatic
	e	preposition	marker of *S(NT)* in passive construction
	a	preposition	possessive *(S(NT))*
Material (M)	*i*	preposition	
Identified State(IS)	*ko*	preposition	emphatic
Transitor (T)	*ko*	preposition	emphatic
Predicate Range (PRG)	*o*	preposition	possessive *(PRG)*
	i	preposition	
	ko	preposition	emphatic
Result (R)	*i*	preposition	
	ko	preposition	emphatic
Directional Focus (DF)	*ki*	preposition	
Event/Entity Location (Static) (EL(S))	*i*	preposition	
	kei roto	preposition + locative	*kei roto* more likely with *EL(S)* rather than *EL*
Temporal Location(TL)	*i*	preposition	
Possessor (Pr)	*o*	preposition	possessive
End Point (EP)	*ki*	preposition	
Starting Point (SP)	*i*	preposition	

***Table 4.8:* Text 3: discourse relations (*inter*-propositional)**

Inter-propositional relation	Signal	Classification	Notes
General-Particular	(*whakapono*) + content specification	verb (speech/ thought) + content specification	
	(*kiia*) + content specification		
	ko ngā kōrero . . . ko ngā kōrero . . .	structural repetition with replacement	
Reason-Result	*nā reira*	subordinating conjunction	
Bonding	*ā*	co-ordinating conjunction	
Bonding	*otirā*	sentence conjunct	*Rhetorical Coupling*
*Means-**Purpose***	*hei*	determiner	
Temporal Sequence	*nō muri*	preposition + locative	operating as subordinating conjunction (here in the context of verbal ellipsis)
Denial-Correction	*kāore . . . engari*	negator + co-ordinating conjunction	i.e., not . . . but
Concession-Contraexpectation	*ahakoa*	subordinating conjunction	signalling *Concession* member
	engari	co-ordinating conjunction	general causative signal introducing *Contraexpectation* member
Simple Comparison	*pērā anō*	verbal substitute + (adverb)	

Table 4.9: **Case/ role relational signalling (*intra*-propositional): *Ngata texts*[164]**

Categories	*Intra*-propositional relations	Signal	Classification	Notes
With non-transitional activity predicator	*Source (Non-Transitional) S(NT)*	*e*	preposition	marker of *S(NT)* in passive construction
		nō	preposition	emphatic
		mō	preposition	emphatic
		ki taku whakaaro	preposition + possessive + noun	*ki taku whakaaro* (i.e., in my opinion) – phrasal idiom
		a	preposition	possessive *(S(NT))*
		ko	preposition	emphatic
		nā	preposition	emphatic
	Instrument (I)			
	Directional Focus (DF)	*ki*	preposition	
		ko	preposition	emphatic
	Predicate Range (PRG)	*i*	preposition	
		ko	preposition	emphatic
		o	preposition	(of/about); possessive *(PRG)*
	Material (M)	*i*	preposition	
	Result (R)	*i*	preposition	
		ko	preposition	emphatic
With material process predicator	*Mutant (Mu)*			
With material state predicator	*Identified State(IS)*	*ko*	preposition	emphatic
		kia	particle	preceding nominal substitute (i.e., *pēnei*)
With spatial state predicator	*Event/Entity Location (Static) (EL(S))*	*i roto i*	preposition + locative + preposition	
		kei runga	preposition + locative	
		o	preposition	possessive *(EL(S))*
		kei roto	preposition + locative	*kei roto* more likely with *EL(S)* rather than *EL*
		i	preposition	

[164] The fact that a particular relation is not signalled may be due simply to the size of the corpus.

Table 4.9 (continued): **Case/ role relational signalling (*intra*-propositional):** ***Ngata texts***

Categories	*Intra*-propositional relations	Signals	Classification	Notes
With experiential state or process predicator	*Experiencer (E)*	*i*	preposition	preceding nominalisation
	Appertainant (A)	*ki*	preposition	
With transitional event predicator	*Source (Transitional) (ST)*			
	Starting Point (SP)	*i*	preposition	
	End Point (EP)	*ki*	preposition	
	Transitional Range(TR)			
	Transitor (T)	*i*	preposition	
		ko	preposition	emphatic
		o	preposition	possessive
With relational predicator	*Possessor (Pr)*	*mō*	preposition	in the context of a nominalised predicator
		o	preposition	possessive
	Possessed (Pd)			
	Quantified (Qd)			
	Quantifier (Qr)			
	Affector (Afr)			
	Affected (Afd)			
	Relational Specifier (RS)			
	Relational Target (RT)	*i*	preposition	
With activity, experiential and material process, material state, transitional event and locational state	*Temporal Location(TL)*	*a muri ake nei*	TAM + locative + postposed particles	phrasal idiom (future time)
		i	preposition	
With activity, material process and material state, experiential process and transitional event	*Temporal Transition (TT)*			

Table 4.10: **Discourse relational signalling (*inter*-propositional): *Ngata texts***

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Temporal	Temporal	*Temporal Sequence*	*hei muri + i tēnā*	time reference + substitution	
			nō muri	preposition + locative	subordinating conjunction in the context of verbal ellipsis
		Temporal Overlap			
Additive	Bonding	*Bonding* (including *Rhetorical Coupling*)	*ā*	co-ordinating conjunction	
			me	co-ordinating conjunction	
			i . . . ai; i . . . ai	structural repetition with replacement	
			ko . . . ko	structural repetition with replacement	
			otirā	sentence conjunct	*Rhetorical Coupling*
Associative	Matching Compatibility	*Paraphrase*			
		Statement-Affirmation			
		Simple Comparison	*pērā anō*	verbal substitute + (adverb)	
		Exemplification			
	Matching Contrast	*Simple Contrast*			
		Statement-Denial			
		Denial-Correction	*kāore . . . engari*	negator + co-ordinating conjunction	i.e., not . . . but
		Exception			
		General-Particular	*tonoa . . .* + content specification	verb (speech/ thought etc.) + content specification	
			mahi . . . + content specification		
			kiia . . . + content specification		
			whakapono . . . + content specification		
			ko ngā kōrero . . . ko ngā kōrero . . .	structural repetition with replacement	
	Alternation	*Supplementary Alternation*			
		Contrastive Alternation			

Table 4.10 (continued): **Discourse relational signalling (*inter*-propositional): *Ngata texts***

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Causal	Causality	*Reason-Result*	*whaka-*	causative prefix	with nominalisation
			i runga	complex preposition	
			nā reira	subordinating conjunction	
		Grounds-Conclusion	*kāti*	sentence conjunct	
			i te mea	subordinating conjunction	general causative introducing the *Grounds* member
		Means-Result			
		Means-Purpose	*hei*	determiner	
			hei	preposition	
			kia	subjunctive TAM marker	signalling the *Purpose* member
	Conditionality	*Realisable Condition*			
		Unrealisable Condition			
	Concession	*Concession-Contraexpectation*	*engari*	subordinating conjunction	general causative signal introducing *Contraexpectation* member
			ahakoa	subordinating conjunction	signalling *Concession* member

4.6.4 Text 4: *Te tau o ngā kaumātua: nā Tīmoti Kāretu* – The year of the elderly: Tīmoti Kāretu (Houia-Roberts, 2004b, pp. 219-221)

Kua puta te karanga a Te Whakakotahitanga o Ngā Iwi o Te Ao kia kīia te tau e tū mai nei ko Te Tau o te Kaumātua Puta Noa i te Ao. Otirā koirā tāku nā whakamāoritanga i tērā whakaaro. Ko tāku e whakapae ana e kōrero kē ana rātou mō te hunga pēperekōu kaua i tā te Māori titiro ki tēnei mea, ki te kaumātua. Kuà puta kē i a au te kōrero ki tētahi atu pepa i a au e tamariki ana ki ngā marae o Tūhoe ki Waikaremoana me Ruatāhuna ko ngā kaumātua te hunga whakatauira mai i te tika, i te pono; ko ngā kaumātua te hunga pupuri i te tikanga; ko ngā kaumātua te hunga tauōhito; ko ngā kaumātua te hunga kī tahi; ko ngā kaumātua te hunga pupuri i ngā kōrero e pā ana ki te iwi; āe, ko rātou ngā puna o te kī.

I te āhua tonu o ēnei rā nei kua rere te pātai he aha kē ia oti tēnei mea te kaumātua, ā, ko te take i rere ai tērā pātai nā te mea kua kitea i roto i ētahi iwi kua kore kē tēnei momo tangata e kōrerotia ake nei e au. Kua eke tātou ki te reanga pakeke kāore nei e mōhio ki te reo, ki ngā tikanga tae atu hoki ki ngā kōrero? E kaumātua noa ana nā te mea kua eke ki te karangatanga ahungarua nā te aha kē ia rānei? Kua kaha te whiua o te pātai he aha tēnei mea te kaumātua me aha rawa rānei te tangata e kaumātua ai ki te titiro a te tangata? Mēnā kua ahungarua te tangata engari e tino kūare ana ki ngā tikanga me ngā kōrero a te iwi, ka kaumātua tonu? Ko tēnei pātai me waiho anō mā ngā iwi tonu e whakautu, e whakatau engari he pātai e kaha ana te pātaitia e te rangatahi. Ko au kei te kī ko te momo kaumātua o te wā i a au e taiohi ana kua tino kore haere, me uaua kē rānei ka kitea engari ko te hunga kaumātua, kua noho makorea, pūtoetoe rānei, e tika ana kia kauanuanutia.

Ko tētahi take nui e aroha nei au ki te hunga pakeke nei kua kore te ao Māori o ēnei rā nei i mōhio me pēhea te kōrero ki te pakeke, me pēhea rānei te manaaki ki te pakeke. I tua atu i tērā kua kore te ao Māori e mōhio ki te whakarongo ki te pakeke engari ka pātai tonu, ka pākiki tonu tē whakaoko noa ai. He āhuatanga tērā kua uru kaha mai ki te ao Māori, ā, nā konei anō nei te ao Māori i āhua kotiti ai he kore i whakapono he mātauranga anō tō ngā kaumātua.

Kāti, ko tāku noa iho ki a tātou he kī atu kia tino manaakitia te hunga pakeke ahakoa pēhea te mōhio, te kore rānei i mōhio, ki ngā āhuatanga o te ao Māori nā te mea he wā tōna ka noho atu ko koutou, ko tātou ki taua nohonga e whakaparanga nei tātou i roto i te rā nei.

E ai ki ō tātou koroua, kuia 'he huri tēnei mea te mate', nō reira āta whakaarotia ake te kōrero nei.

Me pēnei noa ake pea te whakatau ake 'E te mātātahi kia aro nui mai ki te mātāpuputu; e te mātāpuputu whāngaia mai te mā tātahi e hiakai nei ki ngā taonga kei a koutou'

Tēnā tātou katoa kia tahuri ki te whakanui, ki te whakarangatira i ō tātou kaumātua i roto i tēnei tau kua whakaarotia ake hei tau aro nui atu ki a rātou.

The United Nations has recommended that in this coming year, The Year of the Elderly will be observed worldwide, that at least is my interpretation of the notice. What concerns me is that they are looking at older people in general and not at the Māori interpretation of an elder. I have already written in another paper that in my youth, on the marae of Tuhoe, Waikaremoana and Ruatahuna, the elders were a group who modeled what was right and effective, they retained the customs, they were a skilful group, they spoke with one voice, they retained tribal knowledge, it is true that they were the fountains of knowledge.

With things the way they are these days, the question as to what defines a kaumatua (Māori elder) is being asked, and the reason for the question is that it has been seen that within some tribes there are no kaumatua left. We have reached the stage when some elders have no knowledge of the language, the customs, or even the stories. Is one a kaumatua because one has reached another generation, or is there some other criteria? The questions that are asked regularly by people concern the criteria for a kaumatua or what must a person do to be recognized as a kaumatua? If one has reached old age but has no knowledge about the customs, tribal stories, is one still regarded as a kaumatua?

The question should be left for the Māori people to answer, to examine, but it is a question frequently asked by the younger generation. The type of kaumatua who were around when I was a teenager, in my opinion, are no longer around, or are difficult to find, but the kaumatua we have now, are the survivors, it is only right that they are respected and are looked on with fondness by the younger generations.

The main reason I feel sympathy for the kaumatua is that, the Māori world of today no longer know how to speak to them or how to show them respect. Furthermore, the Māori world does not know how to listen to the elderly but instead insist on continually asking questions and not listening at all. That is a common feature which has entered the Māori world, and this is why the Māori world is not united, there is not the belief that kaumatua do indeed possess a special knowledge.

That aside, my message is that the elderly should be really supported whether or not they know the ways of the Māori world because the time will come when you, when all of us will be part of the group we are discussing today.

According to our elders, 'Death moves around', so therefore, this really needs to be considered.

Perhaps this could be a concluding suggestion, 'Youth, respect your elders; Elders, feed the youth who hunger for the knowledge you possess.'

Thank you all, you who will take part in honouring and respecting our kaumatua during the year which has been designated as the year which will have a special focus for them.

***Table 4.11*: Text 4: case/role relations (*intra*-propositional)**

***Intra*-propositional relations**	**Signal**	**Classification**	**Notes**
Source (Non-Transitional) S(NT)	*a*	preposition	possessive *(S(NT))*
	ko	preposition	emphatic
	mā	preposition	emphatic
	e	preposition	marker of *S(NT)* in passive construction
	e	preposition	vocative
	e ai ki	preposition + archaic verb + preposition	phrasal idiom (i.e., according to)
Directional Focus (DF)	*ki*	preposition	
Predicate Range (PRG)	*mō*	preposition	(about/ concerning)
	i	preposition	
	ko	preposition	emphatic
Event/Entity Location (Static) (EL(S))	*i*	preposition	
	ki	preposition	with *EL(S)* rather than *EL*
	i roto i	preposition + locative + preposition	
	o	preposition	possessive *(EL(S))*
Appertainant (A)	*ki*	preposition	
Starting Point (SP)	*i*	preposition	
End Point (EP)	*ki*	preposition	
Possessor (Pr)	*tō*	possessive determiner	intrinsic possession
	kei	preposition	possession (preceding a pronoun. lit. in the possession of X)

Table 4.12: **Text 4: discourse relations (*inter*-propositional)**

***Inter*-propositional relation**	**Signal**	**Classification**	**Notes**
Bonding	*tae atu hoki*	verb + directional particle + adverb	*Rhetorical Coupling*
	i tua atu	sentence conjunct	*Rhetorical Coupling*
Denial-Correction	*engari . . . tē*	*co-ordinating conjunction . . .* + negator	i.e., but . . . not
General-Particular	*te hunga* + content specification	noun (general) + content specification	
	mōhio + content specification	verb (speech/thought) etc. + how	
	pātai . . . he aha kē ia	noun (question) + interrogative form with referential pronoun (*ia*)	e.g., *pātai he aha kē ia*
Supplementary Alternation	*rānei*	co-ordinating conjunction	
Reason-Result	*take*	noun (reason)	
	nā te mea	subordinating conjunction	
Means-Purpose	*hei*	determiner	
Grounds-Conclusion	*nō reira*	sentence conjunct	
Realisable Condition	*mēnā*	subordinating conjunction	
Concession-Contraexpectation	*otirā*	co-ordinating conjunction	
	engari	co-ordinating conjunction	general causative signal introducing *Contraexpectation* member
	ahakoa	subordinating conjunction	

4.6.5 Text 5: *Te Kākāpō* (Strigops habroptilus): *nā Tīmoti Kāretu* – The Kakapo: Tīmoti Kāretu (Houia-Roberts, 2004b, pp. 246-249)

Ahakoa huri koe ki hea i te ao nei, kāore e kitea he kākā nui ake i te kākāpō o Aotearoa. He kaha tonu ōna ngutu, ā, he pewa te āhua, pērā tonu i te katoa o ngā momo kākā. Engari ko te kanohi, he āhua rite ki tō te ruru - ko te 'kākā-ruru' tonu tētahi o ōna ingoa ki te reo Pākehā. Waihoki, ko te tikanga o tōna ingoa pūtaiao, arā, o te Strigops habroptilus, ko te 'kanohi-ruru whai hune'. Ko te tae o ngā hune, e rite ana ki te pūkohu, ā, he kōrangorango te āhua. Nā konei i pai ai te noho huna o te kākāpō i te ao, i te pō.

Kāore i mōhio ngā tohunga huaota o te ao Pākehā ki tēnei manu kia eke rawa ki te tau 1852. I taua tau ka tūpono atu ētahi tāngata o te kaipuke Acheron ki tētahi, engarì nā ā rātou kurī kē i whakamataku te kākāpō, me te aha, puta ohorere mai ana i tōna rua, ā, koirā te kitenga tuatahitanga o te Pākehā i tēnei manu. He manu haere takitahi te kākāpō, kāore e haere takitini pērā i te nuinga o ngā momo kākā. Ko tētahi atu āhuatanga ōna, ko tana rere-kore. Otirā, he āwhina tonu kei ōna parirau poto i a ia e oma ana, e piki ana rānei i tētahi mea. Tērā ka eke ki te 2.5 kirokaramu tōna taumaha, ā, he pōturi tana haere, ka mutu, he waewae mātotoru. He manu nguengue, engari he kaha tonu tōna kakara, ā, i te mea ko te mata tonu o Papatūānuku tana kāinga, he māmā noa iho ki te kurī te whaiwhai haere i tōna kakara, waihoki, kāore he tahuringa ake mō te kākāpō. Arā anō ētahi o ōna tino hoariri, ko te ngeru, me te toriura.

He kaiota te manu nei. Ko ētahi o āna tino kai, ko ngā kākano, ngā rau, ngā tātā me ngā pakiaka o ētahi tipu. Ka kaikainga ngā mea kākoa, me te ngongo i te pia o roto. Hei tango mai i ngā kākano i ngā pātītī, ka puritia ngā rau ki ngā waewae, me te whakamahi i ō rātou ngutu hei unu mai i ngā kākano.

Mō te wāhi ki te whakaputa uri, kāore te kākāpō e mahi poka noa. He mōhio ia he pai ake te tau humi hei whakapakeke uri, nō reira ka tatari kia matomato rā anō te tupu o te kai, ā, hei reira tahuri ai ki te whakaipoipo. He mahi rerekē tonu tā ngā toa i tēnei wā. Ka taki whakamenomeno rātou me te whakataetae tahi hei whakawai i ngā uha. Mai i te marama o Hakihea ki te marama o Poutū-te-rangi, rangona ai ō rātou reo karanga i ngā uha, engari he rerekē te āhua o te tangi, me kī he momo nguru, ko te hāona kaipuke tōna rite. Ka roa tonu rātou e pēnei ana, me te mātaki a ngā uha i tā rātou mahi. Nā wai, nā wai, ka whiriwhiri tēnā me tēnā o ngā uha i tāna i pai ai, ā, he nui tonu ngā toa ka ngere. Hanga kōwhanga ai ngā uha i ngā tumu rākau kua wharemoa, i raro rānei i te pātītī taranui, ā, e toru ngā hua ka whānau mai ki te nuinga. Kotahi marama te uha e awhi ana i ōna hua, kātahi ka pao mai ngā pīpī. Ka āhua whitu marama ngā pīpī e piri tahi ana ki tō rātou whāereere, ā, he mahi nui tonu te karo i te mate; he maha rātou ka riro hei kai mā te hoariri. Ko te whakataukī pea hāngai ana ki te toa i tēnei wā, ko tēnei, 'Hoa piri ngahuru, taha kē raumati'. Arā, i noho tata mai i te wā i pai ki a ia, engari kia uaua nei, kei hea rā e ngaro ana?

Heoi anō, me huri pea tēnei kōrero kia hāngai ake ki ngā kaupeka whakaputa uri o te kākā, arā 'Hoa piri raumati, taha kē takurua'. Ka āhua 6-8 tau te kākāpō e tipu haere ana, ā, ki te waiho kia mate hirinaki, tērā pea ka eke ki te 30 tau, te 40 tau rānei te pakeke.

Ko Aotearoa anake te kāinga tūturu o te kākāpō. I ngā rā o mua, nohoia ai ngā wāhi ngāherehere katoa o te motu e te kākāpō. Kei te mōhiotia tēnei i te mea kua kitea ngā whaipara o tēnei manu i ngā ruapara Māori o mua, huri i te motu. Mahia anō ai e ngā Māori o neherā ngā huruhuru o te kākāpō hei hanga kahu.

Nō te taenga mai o Tauiwi ki Aotearoa, he maha tonu ngā kākāpō ka mate i ā rātou kurī,

ā, ka kainga anō hoki e te Pākehā. Arā anō ētahi i tukuna atu ki ngā whare taonga o konei me tāwāhi. I te wā i a Kuini Wikitōria, tukuna atu ai ētahi kākāpō e 80 nei ki tētahi whare taonga kotahi nei i Vienna. I ngā tau o ngā 1890, i muri tonu i te taenga mai o ngā toriura ki Aotearoa, ka matemate haere ngā kākāpō. Nā wai, nā wai, ka āhua pai ake. Engari i ngā tau o ngā 1930 me ngā 1940, ka paheke anō. E whakapaetia ana nā te tere ngaro o ngā ngahere i tīmata anō ai te paheke o te kākāpō i tēnei wā. Ka ngaro atu tēnei waewae mātotoru i Te Ika a Māui, ā, i paku muri mai ka pērā anō i Te Waipounamu. Ko ngā mōrehu i kitea i Te Waipounamu, arā, i Piopiotahi, ka haria ake ki te Punanga Manu i Mount Bruce, engari ka mate mai ērā i te tahumaero. Kua kore i kitea he kākāpō i Te Ika me Te Waka a Māui i ngā tau o ngā 1990.

Mokori anō i rokohanga atu ētahi āhua kotahi rau nei i Rakiura i te tau 1977. Engari kāore i tino pai tā rātou noho i reira, i te mea e noho tahi ana ki tērā o ngā hoariri, ki te ngeru. I roto i te wā poto kua heke tō rātou nui ki te 61 noa iho. I konei ka whakatauria me hari ēnei tino mōrehu ki tētahi moutere karekau he ngeru, he toriura i reira.

Ko Hauturu, ko Codfish me Maud ngā moutere i whiriwhiritia. Hei āwhina i ngā kākāpō, ka tahuri Te Papa Atawhai ki te hora kai papai mā rātou, pēnei i te hua rākau, i te natinati me ngā 'pōhā patahua', i runga i te tūmanako ka whakaae ngā manu nei kua eke anō te tau humi, ā, ka tahuri ki te whakaputa uri!

I ēnei rā, ko tōna 50 noa iho ngā kākāpō e ora tonu ana i ēnei moutere.
Ko wai kāore e tautoko i te whakaaro me āta tiaki tēnei puipuiaki kei ngaro i tēnei, tōna whenua ake, pērā tonu i te moa, i te hōkioi, me te tōtōrori?

Nowhere else in the world is there a parrot larger than the New Zealand Kakapo.
It has a strong hooked beak like other parrots. But the eyes are more like those of an owl. Another Pakeha name for this parrot is kaka-ruru (parrot-owl). However, its scientific name is Strigops habroptilus, 'the downy eyes of the owl'. The down is the colour of the mist, and is mottled in appearance. Because of this, the kaka can stay concealed at night.

Pakeha scientists did not know about this bird until 1852. In was in that year that a group of sailors from the sailing vessel Acheron happened on one but it was their dog that startled the kakapo and caused it to emerge from its nest and that was the first sighting by Pakeha of this bird. The kakapo is a lone bird, it does not move in groups like most other types of kaka. Another feature is that it is flightless, but its short wings are useful when it is running or when it is climbing trees. The Kaka can reach a weight of 2.5 kgs, it walks slowly and has thick legs. The kaka is placid, it exudes a strong smell and because this bird lives on Papatuanuku (Mother Earth), it becomes easy prey for dogs. Indeed, there is nowhere else that the kakapo can turn. Its other enemies include cats and stoats.

This bird eats fresh fruit. Other favourite foods include vegetables, seeds, leaves, stalks and roots of some plants. It eats fibrous plants and it sucks at the sap. In order to pull out the seeds and the grasses, the leaves are held by the feet and the beak is used to suck out the seeds.

With respect to mating, the kakapo is quite systematic. It considers the seasons when there is an abundance of food, so important for the rearing of the chicks. The kakapo, therefore, waits until the food sources are plentiful and that is the time that its attention turns to mating. The male behaves quite differently at this time. They have tendency to show off and to compete for the attention of the females. From December through to March, their calls to the females are heard, a different sort of call, like a groan, similar to

a ship's horn. This continues for some time while the females watch the performances. After some time, each female decides which male she prefers and many of the males are passed over. The females construct their nests around tree stumps and hollows or perhaps under the tussock grass. Most produce three eggs. The female sits on her eggs for a month and then the chicks hatch. The chicks remain with their mothers for about seven months during which time the will face many dangers; many are lost to predators. The expression best applied to the dominant males at this time is 'A constant companion in the autumn, absent in the summer' which suggests that the male stays close by at his convenience but is not available in times of trouble.

However, this discussion should return to reproduction of the kaka and the expression 'A constant companion in the summer, absent in the winter'. The kakapo continues to grow for about 6-8 years and if it does survive to old age, it could live for 30-40 years.

New Zealand is the native home of the kakapo. They once existed in all the forests of the land. This has been proven through the discovery of the remains of this bird on the sites of early Māori all over the land. Early Māori used the feathers of the kakapo for the making of cloaks.

With the arrival of the Pakeha in New Zealand, many of the kakapo were killed by their dogs and eaten by Pakeha. Some were sent to the museums here and overseas. During the reign of Queen Victoria, 80 birds were sent to the museum of Vienna. During the 1890's, shortly after the introduction of the stoat to New Zealand, the kakapo rapidly died out. A slight improvement followed. But between 1930-40, there was another rapid decline. It was argued that this was because of the loss of the forests. This thick-legged creature was soon lost to the Wellington region and shortly after to the South Island. The survivors, found in the South Island, at Piopiotahi (Milford Sound) were moved to a bird reserve in Mount Bruce. No kakapo were found in the lower North Island regions in the 1990's.

Fortunately, approximately 100 were found in Rakiura (Stewart Island) in 1977 but they were not considered safe there as one of its enemies, the cat, also inhabited the island. In a very short time their numbers were reduced to only 61. It was decided then that these survivors must be taken to a place without cats and stoats.

Hauturu, Codfish and Maud Islands were selected. In order to help the kakapo, the Department of Conservation began to distribution of their favourite foods such as fruits, nuts and muesli bars in the hope that the kakapo would be deceived into thinking that this was a season of abundance of food and would hopefully begin to breed.

Only about 50 kakapo have survived. Who then would not support the idea that this rare and precious bird must be protected lest it is lost forever to this, its native home, like the moa, the hokioi and the totorori.

***Table 4.13*: Text 5: case/role relations (*intra*-propositional)**

***Intra*-propositional relations**	**Signal**	**Classification**	**Notes**
Source (Non-Transitional) S(NT)	*nā*	preposition	emphatic
	ki	preposition	in the context of timeless/ universal truth
	i	preposition	only with *mate* which implicitly involves a second proposition (i.e., X died because Y did Z)
	a	preposition	possessive *(S(NT))*
	e	preposition	marker of *S(NT)* in passive construction
	ko	preposition	emphatic
Instrument (I)	*ki*	preposition	
	i	preposition	where the *Instrument* is possessive
Directional Focus (DF)	*ki*	preposition	
	i	preposition	only in context of the signal *hei* in *Means-Purpose*; preceding a possessive
	ko	preposition	emphatic
Predicate Range (PRG)	*ko*	preposition	emphatic
	i	preposition	
Result (R)	*i*	preposition	
Identified State(IS)	*ko*	preposition	emphatic
	o	preposition	possessive *(IS)*
	i	preposition	
Event/Entity Location (Spatial) (EL(S))	*i*	preposition	
	ko	preposition	emphatic
Experiencer (E)	*o*	preposition	context of nominalisation of the predicator
Appertainant (A)	*ki*	preposition	
	i	preposition	in the context of nominalisation of the predicator
Starting Point (SP)	*i*	preposition	
End Point (EP)	*ki*	preposition	
Transitor (T)	*i*	preposition	
	ko	preposition	emphatic
Possessor (Pr)	*kei*	preposition	possession (preceding a pronoun. lit. in the possession of X)
	mō	preposition	emphatic
Quantifier (Qr)	*ki*	preposition	
Relational Target (RT)	*ki*	preposition	
Temporal Location (TL)	*i*	preposition	

Table 4.14: **Text 5: discourse relations (*inter*-propositional)**

***Inter*-propositional relation**	**Signal**	**Classification**	**Notes**
Temporal Sequence	*nā wai . . . (nā wai)*	subordinating conjunction	
	kātahi . . . ka	subordinating conjunction	lit. 'and then'
	i paku muri mai	preposition + noun + locative + particle	
	i muri tonu	preposition + locative + particle	
	anō	adverb	
Bonding	*ā*	co-ordinating conjunction	
	me	co-ordinating conjunction	
	waihoki	sentence conjunct	*Rhetorical Coupling*. lit. 'furthermore'
Simple Comparison	*pērā tonu*	verbal substitute + manner particle	
Exemplification	*pēnei*	nominal substitute	
Simple Contrast	*kāore . . . pērā*	negator + verbal substitute	
	rite	verb	lit. 'like/resembles'
	piri ngahuru . . . taha raumati . . .	repetition and replacement (contrastive replacement of the two terms)	
General-Particular	*heoi anō*	sentence conjunct	introducing *General* member of *General-Particular* (inverted)
Supplementary Alternation	*rānei*	co-ordinating conjunction	
Reason-Result	*i te mea*	subordinating conjunction	lit. 'because'
	nō reira	subordinating conjunction	
	i runga	complex preposition	
Means-Result	*me te aha*	subordinating conjunction	signals the *Result* member (metaphoric use of *aha* (what)).
Means-Purpose	*hei*	determiner	
	hei	preposition	
	kia	subjunctive TAM marker	
Realisable Condition	*ki te*	subordinating conjunction	
Unrealisable Condition	*kei*	preposition	negative condition
Concession-Contraexpectation	*ahakoa*	subordinating conjunction	
	engari	co-ordinating conjunction	general causative signal introducing *Contraexpectation* member
	otirā	co-ordinating conjunction	

4.6.6 *Text 6: He hē anō te hē: nā Tīmoti Kāretu* – Wrong is wrong: Tīmoti Kāretu (Houia-Roberts, 2004b, pp. 223-225)

Tēnei māua ko taringa te rongo ake nei kua kaha te whiua o te kōrero, 'E, e takahi ana koe i tōku mana', inā whakatikahia te hē o te rere mai o te kōrero a te tangata. Ko ōna kore mōhio nei ki te whakatakoto i te reo i runga i takahia nei.

Ko tā te hunga e ako ana he whakarongo ki tā te hunga matatau whakatakoto i te kupu, mā te whai hoki i tā te matatau ka mōhio ko te kūare, ko te pōhēhē, ko te kore mōhio.

Ko wai o tātou kāore i whakatikaina mai e tētahi e matatau kē noa atu ana i a tātou ahakoa he aha te kaupapa? Ko wai nei?

Mā te mamae hoki te whakatika mai a te tangata matatau kē noa ake i a koe ka aha? Ka matatau ake te mea i whakatikaina rā?

Engari mō tēnā, ka noho tonu ko kūare tōna hoa haere he kore i areare mai nō taringa ka tahi, he waiho mā wheke kurī noa iho e kawe ka rua, ka noho ko whakamau, ko mauāhara tonu atu rānei hei hoa ka toru, engari kia tino kī noa ake au ki te pērā mai te tangata e kore ia e matatau ki te reo ahakoa pēhea.

Ko tāku nā whakautu hoki ki tēnā whiu mai i te kupu, arā, mō te takahi mana, he kī noa atu, 'E, kei te tūkino, kei te kōhuru koe i tōku reo.' Ki te pīrangi koe koinei hei reo mōu, tēnā kia tika mai i a koe, ka whakarongo ki te hunga matatau me tā rātou kī mai, 'me pēnei kē, me pērā kē' rānei engari kaua e amowheke, e hūneinei noa!

Kia hoki ake nei ki te kōrero 'He hē anō te he'. Kāore i tua atu, kāore i tua mai i tērā! Koutou e ako nei, e whai nei i tō tātou reo kia mau tonu ai, kia ora tonu ai, ka nui te mihi engari kia mārama anō tātou ki tō tātou matatau mehemea kāore te eke, ā, ka whāia kia eke, arā, whakarongo ngā taringa, kopi te waha atu i te whiu pātai kia mārama ai he aha kē i pēnei ai, he aha kē i pērā ai. He wā anō hoki e kōrero ai te waha, he wā anō hoki e noho puku ai taihoa e kōrero.

Kia mōhio tātou katoa āhea, tēhea whāia ai. Ki te taea tērā kua tīmata tā tātou takahi i te ara o te tika, i te ara o te mārama.

Ki te tohe te tangata mō te tohe noa te take he aha te hua ka puta? He tino kore nei! Engari ki te tohe te tangata kia puta ai ia ki te whai ao, kia whiwhi rānei i tāna i pai ai, kātahi te hua ka puta.

Kāti, kia hoki noa ake ki te kōrero a ngā kaumātua, arā, 'He hē anō te hē, he tika anō te tika.

Waiho i konei, kia kitea ai ka pēheatia te reo e te hunga ako, engari ki te rongo au e hē mai ana ko tāku he kī noa atu, 'E me pēnei kē', ā, ki te kī mai tērā, 'E, kei te takahi koe i tōku mana', ko tāku atu 'E, kei te kōhuru, kei te tūkino koe i tōku reo.'

Me mutu i konei. Whakatika rānei, kōrero Pākehā kē rānei engari me mutu te kōhuru, te tūkino!

My ears and I have heard the claim "You are trampling on my self-esteem" being heard more often when the grammatical errors in the language of communication are corrected. It is those who have little knowledge of the correct and appropriate structures of the language who are making the claim that their esteem is being 'trampled on'.

Those who are learning need to listen to the way in which fluent speakers structure their language because it is by following fluent speakers that those who are less fluent, those who are unsure, those who do not know, will learn.

Who among us was not corrected by someone more fluent, no matter what the topic? Who?

What purpose is served by being offended at being corrected by someone more fluent than you? Will the person who was corrected become more competent?

That is not likely, ignorance will continue to be his companion, because the ears did not pay attention in the first instance, because 'wheke kuri' will still be the guide in the second instance, grievance or ill-feeling will be a companion in the third instance but I must make it clear that if a person behaves in this way, he /she will never become fluent no matter what.

My own response to the claim regarding the undermining of self-esteem, is to say, "You are treating my language badly, you are killing my language. If you wish to have this as your language, make sure it is correct, listen to those who are fluent and their reminders 'it is said like this, or it is said like that' but don't become fretful, don't become angry". To return to the statement, 'A mistake is still a mistake'. There is no question about this.

Those of you who are learning, you who are aiming at pursuing our language so that it will not die, so that it may remain a living language, you must be congratulated but we must be aware of levels of proficiency, if these are not being attained, then make this attainment an objective, that is, listen carefully, say nothing except to seek clarification as to why it is like this, or like that. There is a time for talking, a time for silence, for holding back from talking.

We all need to know when or what to aim at. Once that is achieved, we are on the right path, on an enlightened path.

What is the benefit if one argues for the sake of argument? There is none. But if one argues for the purpose of gaining more knowledge, or to acquire what one desires, then there is a benefit.

So that aside, to return to what our elders say 'Wrong is wrong. Right is right'.

Leave that matter here for the present so that the progress of language learners can be observed but should I hear the use of incorrect language, my reaction will be to say, 'This is the correct way to say that', and if the reaction is 'You are trampling my esteem', my response will be, 'You are mistreating, you are violating my language'.

Let us finish here. Correct your language or speak English but stop the abuse, stop the violation.

***Table 4.15*: Text 6: case/role relations (*intra*-propositional)**

***Intra*-propositional relations**	**Signal**	**Classification**	**Notes**
Source (Non-Transitional) S(NT)	*e*	preposition	marker of *S(NT)* in passive construction
	ko	preposition	emphatic
Directional Focus (DF)	*ki*	preposition	
	ko	preposition	emphatic
	i	preposition	preceding a possessive pronoun
Result (R)	*i*	preposition	
Identified State(IS)	*ko*	preposition	emphatic
	i	preposition	
	mā	preposition	emphatic
Event/Entity Location (Spatial) (EL(S))	*i*	preposition	
Experiencer (E)	*ko*	preposition	emphatic
Appertainant (A)	*ki*	preposition	

***Table 4.16*: Text 6: discourse relations (*inter*-propositional)**

***Inter*-propositional relation**	**Signal**	**Classification**	**Notes**
Bonding	*ā*	co-ordinating conjunction	
Exemplification	*pēnei*	nominal substitute	
	pērā	nominal substitute	
Statement-Denial	*engari mō tēnā*	idiomatic denial	
Supplementary Alternation	*rānei*	co-ordinating conjunction	
Reason-Result	*he . . . nō*	*he* fronted phrase + possessive *nō*	
Means-Purpose	*kia . . . ai*	correlative co-ordinating conjunction	
Realisable Condition	*ki te*	subordinating conjunction	
Concession-Contraexpectation	*engari*	co-ordinating conjunction	general causative signal introducing *Contraexpectation* member

Table 4.17: **Case/ role relational signalling (*intra*-propositional): *Kāretu texts***

Categories	*Intra*-propositional relations	Signal	Classification	Notes
With non-transitional activity predicator	*Source (Non-Transitional) S(NT)*	*e*	preposition	marker of *S(NT)* in passive construction
		e	preposition	vocative
		e ai ki	preposition + archaic verb + preposition	phrasal idiom (i.e., according to)
		a	preposition	possessive *(S(NT))*
		ko	preposition	emphatic
		nā	preposition	emphatic
		mā	preposition	emphatic
		ki	preposition	in the context of timeless/ universal truth
		i	preposition	only with *mate* which implicitly involves a second proposition (i.e., X died because Y did Z)
	Instrument (I)	*ki*	preposition	
		i	preposition	where the *Instrument* is possessive
	Directional Focus (DF)	*ki*	preposition	
		i	preposition	only in context of the signal *hei* in *Means-Purpose*; preceding a possessive
		ko	preposition	emphatic
	Predicate Range (PRG)	*i*	preposition	
		ko	preposition	emphatic
		mō	preposition	(about/ concerning)
	Material (M)			
	Result (R)	*i*	preposition	
	Event Location (EL)			
With material process predicator	*Mutant (Mu)*			

Table 4.17 (continued): **Case/ role relational signalling (*intra*-propositional): *Kāretu texts***

Categories	*Intra*-propositional relations	Signal	Classification	Notes
With material state predicator	*Identified State(IS)*	*ko*	preposition	emphatic
		o	preposition	possessive *(IS)*
		i	preposition	
		mā	preposition	emphatic
With spatial state predicator	*Entity Location (Spatial) (ELS)*	*i roto i*	preposition + locative + preposition	
		ki	preposition	with *EL(S)* rather than *EL*
		o	preposition	possessive *(EL(S))*
		ko	preposition	emphatic
		i	preposition	
With experiential state or process predicator	*Experiencer (E)*	*o*	preposition	context of nominalisation of the predicator
		ko	preposition	emphatic
	Appertainant (A)	*ki*	preposition	
		i	preposition	in the context of nominalisation of the predicator
With transitional event predicator	*Source (Transitional) (ST)*			
	Starting Point (SP)	*i*	preposition	
	End Point (EP)	*ki*	preposition	
	Transitional Range(TR)			
	Transitor (T)	*i*	preposition	
		ko	preposition	emphatic
With relational predicator	*Possessor (Pr)*	*tō*	possessive determiner	intrinsic possession
		kei	preposition	possession (preceding a pronoun. lit. in the possession of X)
		mō	preposition	emphatic
	Possessed (Pd)			
	Quantified (Qd)			
	Quantifier (Qr)	*ki*	preposition	
	Affector (Afr)			
	Affected (Afd)			
	Relational Specifier (RS)			
	Relational Target (RT)	*ki*	preposition	

Table 4.17 (continued): **Case/ role relational signalling (*intra*-propositional): *Kāretu texts***

Categories	*Intra*-propositional relations	Signals	Classification	Notes
With activity, experiential and material process, material state, transitional event and locational state	*Temporal Location(TL)*	*i*	preposition	
With activity, material process and material state, experiential process and transitional event	*Temporal Transition (TT)*			

Table 4.18: **Discourse relational signalling (*inter*-propositional): *Kāretu texts***

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Temporal	Temporal	*Temporal Sequence*	*nā wai . . . (nā wai)*	subordinating conjunction	
			kātahi . . . ka	subordinating conjunction	lit. 'and then'
			i paku muri mai	preposition + noun + locative + particle	
			i muri tonu	preposition + locative + particle	
			anō	adverb	
		Temporal Overlap			
Additive	Bonding	*Bonding* (including *Rhetorical Coupling*)	*ā*	co-ordinating conjunction	
			me	co-ordinating conjunction	
			tae atu hoki	verb + directional particle + adverb	*Rhetorical Coupling*
			i tua atu	sentence conjunct	*Rhetorical Coupling*
			waihoki	sentence conjunct	*Rhetorical Coupling*. lit. 'furthermore'
Associative	Matching Compatibility	*Paraphrase*			
		Statement-Affirmation			
		Simple Comparison	*pērā tonu*	verbal substitute + manner particle	
		Exemplification	*pēnei/ pērā*	nominal substitute	

Table 4.18 (continued): **Discourse relational signalling (*inter*-propositional): *Kāretu texts***

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Associative	Matching Contrast	*Simple Contrast*	*kāore . . . pērā*	negator + verbal substitute	
			rite	verb	lit. 'like/resembles'
			piri ngahuru . . . taha raumati . . .	repetition and replacement (contrastive replacement of the two terms)	
		Statement-Denial	*engari mō tēnā*	idiomatic denial	
		Denial-Correction	*engari . . . tē*	*co-ordinating conjunction . . .* + negator	i.e., but . . . not
		Exception			
		General-Particular	*heoi anō*	sentence conjunct	introducing *General* member of *General-Particular* (inverted)
			te hunga + content specification	noun (general) + content specification	
			mōhio + content specification	verb (speech/thought) etc. + how	
			pātai . . . he aha kē ia	noun (question) + interrogative form with referential pronoun (*ia*)	
	Alternation	*Supplementary Alternation*	*rānei*	co-ordinating conjunction	
		Contrastive Alternation			

Table 4.18 (continued): **Discourse relational signalling (*inter*-propositional): *Kāretu texts***

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Causal	Causality	*Reason-Result*	*take*	*take* = noun (reason)	
			nā te mea	subordinating conjunction	
			i te mea	subordinating conjunction	
			nō reira	subordinating conjunction	
			i runga	complex preposition	
			he . . . nō	*he* fronted phrase + possessive *nō*	
		Grounds-Conclusion	*nō reira*	sentence conjunct	
		Means-Result	*me te aha*	subordinating conjunction	signals the *Result* member (metaphoric use of *aha* (what))
		Means-Purpose	*hei*	determiner	
			hei	preposition	
			kia	subjunctive TAM marker	
			kia . . . ai	correlative co-ordinating conjunction	signalling the *Purpose* member
	Conditionality	*Realisable Condition*	*mēnā*	subordinating conjunction	
			ki te	subordinating conjunction	
		Unrealisable Condition	*kei*	preposition	negative condition
	Concession	*Concession-Contraexpectation*	*engari*	subordinating conjunction	general causative signal introducing *Contraexpectation* member
			otirā	co-ordinating conjunction	
			ahakoa	subordinating conjunction	

4.7 *Ngata* and *Kāretu* text comparisons

In order to compare the relational signalling for the Ngata and Kāretu texts (outlined in the previous *section*), I have combined the recorded results of each of the analyses into the following two Tables – a Table that relates to case/role relational signalling and another that relates to discourse relational signalling. In these Tables, I have separated the examples derived from Ngata and Kāretu by double vertical lines. A summary of the overall relational signalling from these texts is provided in *section 4.8*.

Table 4.19: **Comparison of *Ngata* and *Kāretu* texts in terms of case/ role relational signalling (*intra*-propositional)** [165]

Intra-propositional relations	Ngata texts	Classification	Comment	Kāretu texts	Classification	Comment
Source (Non-Transitional) S(NT)	*e*	preposition	marker of *S(NT)* in passive construction	*e*	preposition	marker of *S(NT)* in passive construction
				e	preposition	vocative
	nō	preposition	emphatic			
	mō	preposition	emphatic			
	nā	preposition	emphatic	*nā*	preposition	emphatic
				mā	preposition	emphatic
	a	preposition	possessive *(S(NT))*	*a*	preposition	possessive *(S(NT))*
	ko	preposition	emphatic	*ko*	preposition	emphatic
	ki	preposition		*ki*	preposition	in the context of timeless/ universal truth
				i	preposition	only with *mate* which implicitly involves a second proposition (i.e., X died because Y did Z)
	ki taku whakaaro	preposition + possessive + noun	*ki taku whakaaro* (i.e., in my opinion) – phrasal idiom			
				e ai ki	preposition + archaic verb + preposition	phrasal idiom (i.e., according to)

[165] The fact that a particular relation is not signalled may be due simply to the size of the corpus.

Table 4.19 (continued): **Comparison of *Ngata* and *Kāretu* texts in terms of case/ role relational signalling (*intra*-propositional)**

Intra-propositional relations	Ngata texts	Classification	Comment	Kāretu texts	Classification	Comment
Instrument (I)				*ki*	preposition	
				i	preposition	where the *Instrument* is possessive
Directional Focus (DF)	*ki*	preposition		*ki*	preposition	
				i	preposition	only in context of the signal *hei* in *Means-Purpose*; preceding a possessive
	ko	preposition	emphatic	*ko*	preposition	emphatic
Predicate Range (PRG)	*i*	preposition		*i*	preposition	
	ko	preposition	emphatic	*ko*	preposition	emphatic
	o	preposition	(of/about); possessive *(PRG)*			
				mō	preposition	(about/ concerning)
Material (M)	*i*	preposition				
Result (R)	*i*	preposition		*i*	preposition	
	ko	preposition	emphatic			
Event Location (EL)						
Mutant (Mu)						
Identified State(IS)	*ko*	preposition	emphatic	*ko*	preposition	emphatic
	kia	particle	preceding nominal substitute (i.e., *pēnei*)			
				o	preposition	possessive *(IS)*
				i	preposition	
				mā	preposition	emphatic

Table 4.19 (continued): **Comparison of *Ngata* and *Kāretu* texts in terms of case/ role relational signalling (*intra*-propositional)**

Intra-propositional relations	Ngata texts	Classification	Comment	Kāretu texts	Classification	Comment
Entity Location (Spatial) (ELS)	*i*	preposition		*i*	preposition	
	i roto i	preposition + locative + preposition		*i roto i*	preposition + locative + preposition	
				ko	preposition	emphatic
	o	preposition	possessive *(EL(S))*	*o*	preposition	possessive *(EL(S))*
	kei roto	preposition + locative				
	kei runga	preposition + locative				
				ki	preposition	only when followed by an embedded proposition in possessive form
Experiencer (E)	*i*	preposition				
				o	preposition	context of nominalisation of the predicator
				ko	preposition	emphatic
Appertainant (A)	*ki*	preposition		*ki*	preposition	
				i	preposition	in the context of nominalisation of the predicator
Source (Transitional) (ST)						
Starting Point (SP)	*i*	preposition		*i*	preposition	
End Point (EP)	*ki*	preposition		*ki*	preposition	

Table 4.19 (continued): **Comparison of *Ngata* and *Kāretu* texts in terms of case/ role relational signalling (*intra*-propositional)**

Intra-propositional relations	Ngata texts	Classification	Comment	Kāretu texts	Classification	Comment
Transitional Range(TR)						
Transitor (T)	*i*	preposition		*i*	preposition	
	ko	preposition	emphatic	*ko*	preposition	emphatic
	o	preposition	possessive *(T)*			
Possessor (Pr)	*o*	preposition	possessive			
	mō	preposition	in the context of a nominalised predicator			
				mō	preposition	emphatic
				tō	possessive determiner	intrinsic possession
				kei	preposition	possession (preceding a pronoun. lit. in the possession of X)
Possessed (Pd)						
Quantified (Qd)						
Quantifier (Qr)				*ki*	preposition	
Affector (Afr)						
Affected (Afd)						
Relational Specifier (RS)						
Relational Target (RT)	*i*	preposition				
				ki	preposition	
Temporal Location(TL)	*i*	preposition		*i*	preposition	
	a muri ake nei	TAM + locative + postposed particles	phrasal idiom (future time)			
Temporal Transition (TT)						

Table 4.20: **Comparison of *Ngata* and *Kāretu* texts in terms of discourse relational signalling (*inter*-propositional)**

Inter-propositional relations	Ngata texts	Classification	Comment	Kāretu texts	Classification	Comment
Temporal Sequence	*hei muri + i tēnā*	time reference + substitution				
	nō muri	preposition + locative	subordinating conjunction in the context of verbal ellipsis			
				nā wai . . . (nā wai)	subordinating conjunction	
				kātahi . . . ka	subordinating conjunction	lit. 'and then'
				i paku muri mai	preposition + noun + locative + particle	
				i muri tonu	preposition + locative + particle	
				anō	adverb	
Temporal Overlap						
Bonding (including *Rhetorical Coupling*)	*ā*	co-ordinating conjunction		*ā*	co-ordinating conjunction	
	me	co-ordinating conjunction		*me*	co-ordinating conjunction	
	i . . . ai; i . . . ai	structural repetition with replacement				
	ko . . . ko	structural repetition with replacement				
	otirā	sentence conjunct	*Rhetorical Coupling*			
				tae atu hoki	verb + directional particle + adverb	*Rhetorical Coupling*
				i tua atu	sentence conjunct	*Rhetorical Coupling*
				waihoki	sentence conjunct	*Rhetorical Coupling*. lit. 'furthermore'
Paraphrase						
Statement-Affirmation						

Table 4.20 (continued): **Comparison of *Ngata* and *Kāretu* texts in terms of discourse relational signalling (*inter*-propositional)**

Inter-propositional relations	Ngata texts	Classification	Comment	Kāretu texts	Classification	Comment
Simple Comparison	*pērā anō*	verbal substitute + (adverb)				
				pērā tonu	verbal substitute + manner particle	
Exemplification				*pēnei/ pērā*	nominal substitute	
Simple Contrast				*kāore . . . pērā*	negator + verbal substitute	
				rite	verb	lit. 'like/resembles'
				piri ngahuru . . . taha raumati . . .	repetition and replacement (contrastive replacement of the two terms)	
Statement-Denial				*engari mō tēnā*	idiomatic denial	
Denial-Correction	*kāore . . . engari*	negator + co-ordinating conjunction	i.e., not . . . but			
				engari . . . tē	*co-ordinating conjunction . . .* + negator	i.e., but . . . not
Exception						
General-Particular				*heoi anō*	sentence conjunct	introducing *General* member of *General-Particular* (inverted)
	tonoa . . . + content specification	verb (speech/ thought etc.) + content specification		*mōhio* + content specification	verb (speech/thought) + content specification	
	mahi . . . + content specification					
	kiia . . . + content specification					
	whakapono . . . + content specification					
	ko ngā kōrero . . . ko ngā kōrero . . .	structural repetition with replacement				
				pātai . . . he aha kē ia	noun (question) + interrogative form with referential pronoun (*ia*)	
				te hunga + content specification	noun (general) + content specification	

Table 4.20 (continued): **Comparison of *Ngata* and *Kāretu* texts in terms of discourse relational signalling (*inter*-propositional)**

Inter-propositional relations	Ngata texts	Classification	Comment	Kāretu texts	Classification	Comment
Supplementary Alternation				*rānei*	co-ordinating conjunction	
Contrastive Alternation						
Reason-Result				*nā te mea*	subordinating conjunction	
				i te mea	subordinating conjunction	
	nā reira[166]	subordinating conjunction				
				nō reira	subordinating conjunction	
				take	noun (reason)	
	i runga	complex preposition		*i runga*	complex preposition	
	whaka-	causative prefix	with nominalisation			
				he . . . nō	*he* fronted phrase + possessive *nō*	
Grounds-Conclusion	*kāti*	sentence conjunct	signalling the *Conclusion* member			
	i te mea	subordinating conjunction	general causative introducing the *Grounds* member			
				nō reira[146]	sentence conjunct	
Means-Result				*me te aha*	subordinating conjunction	signals the *Result* member (metaphoric use of *aha* (what))
Means-Purpose	*hei*	determiner		*hei*	determiner	
	hei	preposition		*hei*	preposition	
	kia	subjunctive TAM marker	signalling the *Purpose* member	*kia*	subjunctive TAM marker	
				kia . . . ai	correlative co-ordinating conjunction	signalling the *Purpose* member

[166] *Nō reira* and *nā reira* appear to operate either as subordinating conjunctions or as sentence conjuncts.

Table 4.20 (continued): **Comparison of *Ngata* and *Kāretu* texts in terms of discourse relational signalling (*inter*-propositional)**

***Intra*-propositional relations**	**Ngata texts**	**Classification**	**Comment**	**Kāretu texts**	**Classification**	**Comment**
Realisable Condition				*mēnā*	subordinating conjunction	
				ki te	subordinating conjunction	
Unrealisable Condition				*kei*	preposition	negative condition
Concession-Contraexpectation	*engari*	subordinating conjunction	general causative signal introducing *Contraexpectation* member	*engari*	subordinating conjunction	general causative signal introducing *Contraexpectation* member
	ahakoa	subordinating conjunction	signalling *Concession* member	*ahakoa*	subordinating conjunction	
				otirā	co-ordinating conjunction	

4.8 Discussion and conclusions

4.8.1. Summary of relational signalling in *Ngata* and *Kāretu* texts

I indicated in *section 4.4* that "the principle of cognitive economy . . . is unlikely to be limited to lexical meaning" and that "[we] should . . . not be surprised to discover that there are cases where categorical assignment will be more or less straightforward". During the analyses, a number of pressure points emerged. These are discussed, firstly, in terms of *intra*-propositional relations, and secondly, in terms of *inter*-propositional relations.

4.8.1.1 *Intra*-propositional relations

The preposition ***ko*** does not act as a signal of any particular *intra*-propositional relation. Rather, it may occur with any relation that can be fronted for the purposes of emphasis.

The primary signal of *Source (Non-Transitional)* is ***e***, which appears not to occur in the context of other *intra*-propositional relations. All of the other prepositions which may occur in the context of *Source* (*Non-Transitional*) are specific to certain contexts. Thus, for example, ***a*** is restricted to contexts in which it follows predicator nominalisation (e.g., *tērā atu ngā kaupapa kōrero a ētahi iwi* 'there are many other explanations held by other people'). The prepositions ***nā***, ***nō***, ***mā*** and ***mō*** occur with *Source* (*Non-Transitional*) only in the case of actor emphatic constructions, the selection of *a*/*o* and *n*/*m* being determined by (a) the nature of the possession, and (b) time reference, respectively.[167] Although both ***i*** and ***ki*** may occur with *Source* (*Non-Transitional*), this appears to happen only in very specific contexts. Thus, ***ki*** appears to occur with *Source* (*Non-Transitional*) only in the context of timeless/universal truths, and ***i*** appears to occur with *Source* (*Non-Transitional*) only in the context of the verb *mate*. There are two other signals of *Source* (*Non-Transitional*) that occur in the corpus. Both of these involve phrasal idioms; *ki taku whakaaro* ('in my opinion') and *e ai ki* ('according to . . . ').

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[167] The selection of *a*/*o* is reminiscent of an alienable/inalienable distinction, but contingent upon dominance of possessor over possessee (Bauer, 1993, pp. 209-216) whereas '*n*' is selected with reference to past tense and '*m*' is selected with reference to non-past.

Whereas both ***i*** and ***ki*** can occur with *Instrument*, ***i*** occurs where the *Instrument* is possessive. Therefore, in the view of the very specific circumstances under which ***i*** occurs in the case of *Instrument*, and ***i*** and ***ki*** occurs in the case of *Source* (*Non-Transitional*), the preposition ***ki*** can be seen to operate as a marker of the distinction between *Instrument* (***ki***) and *Source* (*Non-Transitional*) (***e***).

The preposition ***ki*** also operates as a marker of the distinction between *Directional Focus* (where it is the usual signal) and *Predicate Range* (where it does not occur) and *Source* (*Non-Transitional*) (where it occurs only in very specific context). Although the preposition ***i*** can also occur in the case of *Directional Focus*, it does so only (a) where it precedes a possessive, or (b) in the context of *hei* as a signal of *Means-Purpose*.

In the case of both *Material* and *Result*, the preposition ***i*** occurs except where there is emphatic fronting (in which case ***ko*** occurs). No distinction can therefore be made, on the basis of prepositional occurrence, between *Material* and *Result*. Similarly, both *Entity Location* and *Event Location* co-occur with the same range of signals, the most commonly occurring of which is ***i***. The only two occasions where ***ki*** occurs in this context involve a situation in which there is a following embedded proposition in possessive form (e.g., *ki ngā marae o Tūhoe* 'the marae of Tuhoe').

Except in cases where ***ko*** indicates emphatic fronting and ***o*** indicates predicator nominalisation, the preposition ***i*** occurs with *Experiencer*. On the other hand, the preposition ***ki*** occurs with *Appertainant* except where there is predicator nominalisation (in which case ***i*** occurs). The prepositions ***i*** and ***ki*** also act as discriminators between *Starting Point* and *End Point*, ***i*** occurring with *Starting Point* and ***ki*** occurring with *End Point*. Similarly, ***i*** and ***e*** appear to act as discriminators between *Experiencer* (***i***) and *Source* (*Non-Transitional*) (***e***).

Except in case of emphatic fronting (where ***ko*** occurs) and in possessive contexts (where ***o*** occurs) *Transitor* is accompanied by the preposition ***i*** (which

distinguishes it from *Source* (*Non-Transitional*) which typically occurs with the preposition ***e***).

The prepositions ***i***, ***ki***, and ***e*** perform important discriminating functions. Thus, *Source* (*Non-Transitional*) and *Experiencer* are distinguished in terms of their primary prepositional selection, *Source* (*Non-Transitional*) selecting ***e*** and *Experiencer* selecting ***i***. Similarly, *Directional Focus* (***ki***) and *Predicate Range* (***i***) can be differentiated in terms of their primary prepositional selection, as can *End Point* (***ki***) and *Starting Point* (***i***). *Instrument* co-occurs with ***ki***, something that provides a point of distinction between *Instrument* (***ki***) and *Source* (*Non-Transitional*) (***e***) and between *Instrument* (***ki***) and *Predicate Range* (***i***).

It should be noted that the observations included here are based on a specific limited corpus. They should, therefore, be regarded as provisional until such times as a much larger corpus has been analysed. Even so, there are no major differences between the findings based on the analysis of the Ngata texts and those based on the analysis of the Kāretu texts except to the extent that one (Kāretu) is more extensive in terms of coverage than the other (Ngata). This suggests, but by no means confirms, that neither difference in the time at which the texts were recorded (first half of the twentieth century; end of the twentieth century) nor the difference in dialect (Ngāti Porou verses Tūhoe and Ngāti Kahungunu) has any substantial effect on the interaction between prepositional selection and *intra*-propositional relationships. Furthermore, an examination of the data from Bauer (1981) appears to support the central findings (see *Chapter 5*).

There has been considerable debate about the use of the prepositions ***i*** and ***ki*** in Māori, especially in cases where the direct object of the same verb will sometimes occur with ***i***, and sometimes with ***ki*** (Bauer, 1981, 1993; Harlow, 2001; Mark, 1970). The model that underpins this corpus-based analysis appears to go some way towards explaining the distribution of ***i*** and ***ki***. Thus, for example, a stative verb such as *mōhio* (know) will select ***ki*** in the direct object position (as a marker of *Appertainant*). However, since *mōhio* (e.g., *Kei te mōhio au i te whakautu* 'I know the answer') can occur with *Predicate Range* rather than *Appertainant* (e.g.,

Kei te mōhio au ki a Raukura 'I know Raukura'), it is not surprising that the direct object will sometimes occur with ***i***. Similarly, a verb such as *rapu* (search for/seek) may occur with an ***i***-marked direct object (*Directional Focus*) where it is static. Furthermore, it is often observed (see Biggs, 1998, p. 115) that "after a universal connoting motion a comment in *i* will usually translate as 'from', there being in such cases a clear contrast between *ki* 'towards' and *i* 'away from'". This supports the corpus-based finding that ***ki*** occurs with *End Point* and ***i*** with *Starting Point.*

4.8.1.2 *Inter*-propositional relations

Two of the most interesting things that emerge from the analysis of the corpus in *inter*-propositional relational terms are:

(1) The fact that certain items are multi-functional, that is, they occur in the context of more than one relationship;
(2) The fact that the function of the signalling relationships extend throughout the lexical grammar of the language.

In relation to (1) above it is interesting to note that certain items (such as, for example, *engari*) tend to be indicative of a type of relationship (e.g., a contrastive relationship) rather than a specific relationship. Thus, for example, both *engari* and *ahakoa* may occur in the context of *Concession-Contraexpectation.* Whereas *ahakoa* appears to operate as a specific signal of concession, *engari* operates more generally as a 'signpost', an indication of the general type of relationship involved. In relation to (2) above, it is interesting to note that the reason member of a *Reason-Result* relation may be signalled by a subordinating conjunction (e.g., *nā te mea* 'because'), a noun (e.g., *take* 'reason'), a complex preposition (e.g., *i runga* 'because') or a causative prefix (e.g., *whaka-*).

There are no examples of *Temporal Overlap* in the corpus. However, there are several examples of *Temporal Sequence*, a relationship that can be signalled in a variety of ways, including subordinating conjunctions (e.g., *nā wai*), prepositions with associated nominals (e.g., *nō muri*), and the adverb *anō* ('another') with substitution (e.g., *i ngā tau o ngā 1930 me ngā 1940, ka paheke anō* 'between

1930-40, there was another rapid decline'). The members of the *Bonding* relation – in many ways the most fundamental of all the relations – may be linked by a co-ordinating conjunction (*ā* or *me*). However, these co-ordinating conjunctions may be used in other contexts and cannot therefore be considered to be specific signals of *Bonding*. This is also true of structural repetition with replacement (e.g., *ko . . . ko*; *i . . .ai . . . i . . .ai*). Where the sentence conjunct *otirā* occurs, the relation may be said to be 'marked' (*Rhetorical Coupling*), although *otirā* also occurs in other contexts, in particular, in the context of *Concession-Contraexpectation* (see Houia, 2001a, pp. 99-100). Other examples of marked *Bonding* in the corpus occur with sentence conjuncts (e.g., *waihoki* 'furthermore'; *i tua atu* 'furthermore') and a combination of verb plus direction particle plus adverb (e.g., *tae atu hoki* 'and even') which operates in a way that is similar to the present participle in English.

There are no examples of *Paraphrase*, *Statement-Affirmation* or *Exception* in the corpus. However, there are several examples of comparative and contrastive relations. The *Simple Comparison* relation is signalled by *pērā anō* and *pērā tonu* (that is, by a combination of verbal substitution plus adverb or manner particle). *Exemplification*, on the other hand, occurs in the context of a nominal substitute (*pēnei* 'like this' or *pērā* 'like that') without modification by an adverb or particle. *Simple Contrast* may be signalled verbally (i.e., *rite* 'similar'), by a negator plus verbal substitute (*kāore . . . pērā*) or by repetition plus contrastive replacement of two terms (e.g., *piri ngahuru . . . taha raumati* 'keep close in autumn . . . absent in the summer'). The only example of *Statement-Denial* in the corpus is signalled idiomatically (i.e., *engari mō tēnā* 'that is not likely'). The *Denial-Correction* relation is signalled by a negator plus a co-ordinating conjunction, or a co-ordinating conjunction plus a negator (i.e., *kāore . . . engari*; *engari . . . tē*). In this corpus, the sentence conjunct *heoi anō* ('however') introduces the general member of a *General-Particular* relation although it is associated with *Denial-Correction* (by Houia, 2001a, p. 94). There is a variety of other ways in which the *General-Particular* relation is signalled in the corpus. It may, for example, be signalled by a verb of speech or thought (e.g., *mōhio* 'know'/ *whakapono* 'believe'/ *tono* 'ask') followed by content specification, a general noun (e.g., *te hunga* 'the group') followed by content specification, or a noun (*pātai* 'question')

plus interrogative. Finally, the *General-Particular* relation may be signalled by structural repetition with replacement (e.g., *ko ngā kōrero . . . ko ngā kōrero . . .*). There are no examples of *Contrastive Alternation* in the corpus. *Supplementary Alternation* is signalled by the co-ordinating conjunction *rānei*.

The causative relations are also signalled in a variety of different ways. The *Reason-Result* relation may be signalled by a subordinating conjunction (e.g., *nā te mea* 'because'; *i te mea* 'because'; *nā reira* 'therefore'; *nō reira* 'therefore'). It may be also be signalled by a noun (e.g., *take* 'reason'), by a complex preposition (e.g., *i runga* 'because'), or by a causative prefix (e.g., *whaka-*) in the context of a nomialisation. Finally, it may be signalled by a possessive (e.g., *nō*) in the context of *he*-fronting. The *Grounds-Conclusion* relation differs from the *Reason-Result* relation only in the sense that one of its members is deduced or inferred rather than observed. It is not surprising, therefore, that it may occur in the context the subordinating conjunction *i te mea* or a sentence conjunct *nō reira* (in this context). *Grounds-Conclusion* also appears in the corpus in the context of the sentence conjunct *kāti*. The result member of the *Means-Result* relation is signalled by the subordinating conjunction *me te aha* 'and caused it'. The *Means-Purpose* relation occurs in the context of *hei* (determiner/ preposition), *kia* (subjunctive TAM marker) and *kia . . . ai* (which operates as a correlative co-ordinating conjunction). Whereas the *Unrealisable Condition* relation is signalled by the preposition *kei* (i.e., negative condition), the *Realisable Condition* relation is signalled by the subordinating conjunctions *ki te* and *mēnā*. Finally, *Concession-Contraexpectation* may be signalled by the subordinating conjunction *ahakoa*, or signalled by the subordinating conjunction *engari* or the co-ordinating conjunction *otirā* (which also occurs in the context of *Rhetorical Coupling*).

Chapter 5

Extending and refining the data on *intra*-propositional and *inter*-propositional relations in Māori: A model-based re-examination of two existing studies

5.1 Introduction

In this chapter, I re-examine, in the light of the relational models introduced in *Chapter 4*, two existing relational studies of Māori – a study of the interaction between prepositional selection and case roles/ relations (*intra*-propositional relations) by Bauer (1981), and a more recent study of the signalling of semantico-pragmatic relations (*inter*-propositional relations) in Māori by Houia (Houia, 2001a). My primary aim here is to check the corpus-based data in *Chapter 4* against data emerging from the re-examination of these the two works, extending and refining the results of the corpus-based study wherever possible.

5.2 A re-examination of the findings of Bauer (1981) in relation to the interaction between case roles/ relations (*intra*-propositional relations) and the occurrence of prepositions in Māori

In her doctoral thesis, Bauer (1981) explores the possibility that research on case grammar can provide, in the area of prepositional selection and function, "a possible model for the description of Māori" (p. 134). Bauer's study was conducted over twenty years ago and with reference largely to relational models, the most recent of which dates back almost thirty years (i.e., Anderson, 1971; Dik, 1989; Fillmore, 1968, 1971, 1977b). In re-examining this study from the perspective of the critical review of the literature in *Chapter 2* and, in particular, the *intra*-propositional relational model introduced in *Chapter 4*, particular attention is paid to issues and problems to which Bauer herself refers.

5.2.1 Bauer (1981) on Fillmore (1968, 1971, 1977b)

In the introduction to her consideration of the work of Fillmore, Bauer notes that "the problem of making principled and defensible judgements of case assignment in the non-obvious instances . . . [provides] the biggest stumbling block to an acceptance of Fillmorean theory" (pp. 139-140). In connection with this, it is

important to bear in mind that prototype theory alerts us to the ubiquity of fuzzy-edged categories. Furthermore, the difficulties that Bauer experienced in relation to assignment to categories may have related to the nature of the relational model with which she was operating rather than to relational theory itself.

Bauer begins by observing that "case grammar developed, at least in large part, in an attempt to deal more adequately" with "handling of prepositional phrases" (1981, p. 134). Her research focuses on preposition selection in Māori, as does this re-examination of her findings.

5.2.1.1 *Source*

With reference to a definition of *Source* (i.e., *the origin or starting point of a motion, state, or time*) provided by Fillmore (1971, p. 250), Bauer (1981, p. 140) observes that "in the case of directional sentences", *Source* takes the prepositional marker *i* in Māori:

(73) *Kua hoki mai rāua i te whare miraka.*
TAM V DIR PRO PR DET N ADJ
PRF return hither they (2) from the house milk
(They returned from the milking shed)[168]

(74) *Kāore anō ngā whanau-nga o Tamahae i tae . . .*
NEG PP DET-PL N-Canga PR N TAM V
not again the relative of Tamahae PAST arrive
. . . mai i Rotorua.
DIR PR N
hither from Rotorua
(Tamahae's relatives haven't yet arrived from Rotorua)

(75) *Ka mau-ria mai te waka i reira.*
TAM V-PASS DIR DET N PR N
Unspec take hither the canoe from there
(The canoe was brought from there)

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[168] Bauer's (1981) translations are included with examples taken from her work.

(76) *E toru tekau māero pea te tawhiti atu o Rotorua*
NUM N N N PP DET N DIR PR N
three ten miles perhaps the distance away of Rotorua
. . . i Taupo.
PR N
from Taupo
(Rotorua is perhaps thirty miles from Taupo)

In the *intra*-propositional model I propose in *Chapter 4*, a distinction is made between *Source (Transitional)* and *Source (Non-Transitional). Source (Transitional)* occurs with transitional event predicators, predicators that involve physical movement through space, and is defined as "entity (entities) involved in the initiation of a movement". *Source (Transitional)* is also distinguished from *Starting Point* and *End Point* which identify location at the beginning and end of a transitional event.

Bauer's reference to the fact that *i* occurs specifically with *directional sentences* suggests that its distribution in Māori is not consistent with the definition of *Source* provided by Fillmore (which includes the origin or starting point of a state or time as well as the origin or starting point of a motion). It does, however, appear to be consistent with *Starting Point* in the model outlined in *Chapter 4*.

Bauer observes that there are also situations in which the selection of the preposition *i* appears to indicate what she refers to as a "far more abstract use [of *Source*] which is equivalent to 'because' in English" (p. 141). The example she provides at this point (see (77) following) appears to be dual propositional, involving an embedded *inter*-propositional relation of *Reason-Result* (see the discussion of Fillmore (1968) in *Chapter 2, section 3*) as do the other three examples she provides (see (78)-(80) following):

(77) *I te whakatakariri o Tamahae, ka tangi ia.*
PR DET N PR T TAM V PRO
from the anger of Tamahae Unspec cry he
(Because he was angry, Tamahae cried)
I te whakatakariri o Tamahae, ka tangi ia.
Reason *Result*

(78) *Kua hoha au i te kanikani.*
TAM V PRO PR DET N
PRF weary I from the dance
(I am tired of dancing)
(I feel tired [bored] because of the duration of the dancing)

(79) *Mā tonu te whenua i te hukapapa.*
ADJ MAN DET N PR DET N
white indeed the ground from the frost
(The ground is really white from frost)
(The ground is white because it is frosty)

(80) *Kei kāpō ngā tāngata i tō neketai.*
TAM V DET-PL N PR POSS N
might be blind the people from your tie
(The people might be blinded by your tie)
(The people might be blinded because of the tie you are wearing)

What we appear to have in each case are two underlying propositions in a *Reason-Result* relationship (inverted in examples (78), (79) and (80)), *i* being associated with the reason member of the relation. This suggests that both *Starting Point* (occurring with a transitional event predicator) and the reason member of an embedded *inter*-propositional relationship of *Reason-Result* may be marked by the preposition *i* in Māori.[169] In connection with this interpretation, it is interesting to note Bauer's observation that "Māori has no co-ordinating conjunction for prepositional phrases", conjunction "being achieved by juxtapositions, and [therefore being] formally indistinguishable from adding another, different type of argument" (Bauer 1981, p. 149). It is also interesting to note that Houia (2001a, p. 74), on the basis of his corpus study, lists *i* as a signal of reason (*Reason-Result* relation).

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[169] Reasons can be treated as the source/origin (metaphorically) of results and, as such, can be related to *Starting Point* in perceptual terms.

Bauer goes on to consider sentences involving *mā* and *nā*, noting that it could be argued that they also involve *Source*:

(81) *Nā te makariri rāua i hoki mai ai.*
PR DET N PRO TAM V DIR PP
by the cold they (2) PAST return hither
(Because of the cold, they returned)

(82) *Mā te waimarie rātou e whiwhi karahipi ai.*
PR DET N PRO TAM V N PP
by the luck they (3+) NPAST win scholarship
(With luck, they will win a scholarship)

She concludes that one reason for arguing that these examples involve *Source* is the fact that this would "[leave] *i* as the sole marker for this case [*Source*]" (p. 144). In fact, there is, I believe, a much more compelling reason for *not* assigning these to *Source*. The first example ((81) above), involves the *inter*-propositional relation of *Reason-Result*; the second example ((82) above), involves the *inter*-propositional relation of *Condition-Consequence* (supported by Bauer's translations). Thus, it appears that, in some contexts, *nā* co-occurs with the reason member of an embedded *inter*-propositional *Reason-Result* relation and *mā* co-occurs with the condition member of an embedded *inter*-propositional *Condition-Consequence* relation. Houia (2001a, p. 73) indicates, on the basis of his corpus, that *nā* occurs in the context of the reason member of a *Reason-Result* relation. He provides an example (not from his corpus) of *mā* occurring in the context of the condition member of a *Condition-Consequence* relation.

5.2.1.2 *Instrument*

Bauer notes that the preposition *ki* typically occurs with *Instrument*, as in the following example:

(83) *I patu-a te kau e ia ki te rino.*
TAM V-PASS DET N PR PRO PR DET N
PAST beat the cow by he with the iron
(The cow was beaten by him with the iron)

She also notes, however, that there *are* cases where what might be regarded as an *Instrument* is accompanied by *e* (which typically occurs with *Agent*), observing that such instances may provide a reason for arguing that *Agent* need not be animate:

(84) *E horoi-a ana ngā kākahu e te mīhini horoi kākahu.*
TAM V-PASS TAM DET-PL N PR DET Ncomp (N + V + N)
PROG wash PROG the clothes by the machine wash clothes
(The clothes are being washed by the washing machine)

This would be consistent with observations made in *Chapter 2* about the scalar nature of concepts such as animacy. In an attempt to reflect that scalar nature, *Agent* is replaced in the model proposed here (see *Chapter 4*) by *Source (Non-Transitional),* which is defined as the "entity (entities) from which a non-transitional activity is identified as emanating". Thus, *e* appears to mark *Source (Non-Transitional)* rather than *Instrument* in this example. In fact, however, depending on perspective, it is likely that 'washing machine' can be treated, depending on context, either as *Agent* (or *Source (Non-Transitional)*) or as *Instrument*. Given the fact that *e* so frequently marks agency in Māori, Bauer's argument that it likely that it also does so here is a convincing one.

According to Bauer, both *mā* and *nā* may occur in some regions, notably Whakatāne, in the context of *Instrument*. She observes, however, that this usage was rejected by some of her older informants and may, in any case, generally be attributable to the association of *mā* and *nā* in Māori with *by* in English. In view of discontinuity in the transmission of Māori, rejection of these examples by older speakers seems adequate grounds *in itself* for their rejection in the context of this type of research. Even so, it is interesting to consider the two examples that Bauer does not consider to be explicable in terms of interlingual interference. The first of these includes a negator:

(85) *Ka whaka-aro-tia kia kaua e whaka-mate-a mā te patu.*
TAM CAUS-V-PASS TAM NEG TAM CAUS-V-PASS PR DET N
Unspec plan should not NPAST kill with the club

In this case, Bauer's translation (i.e., *It was decided not to kill him with a club*) associates *not* with *kill*. However, it is equally possible to associate *not* with *club*, yielding a translation which involves the *inter*-propositional relation of *Means-Purpose* (inverted): *It was decided not to use a club to kill him.*

The second example ((86) below) is translated by Bauer as *This (man) was very expert at killing people with black magic.* An alternative translation, involves the *inter*-propositional relation of *Means-Purpose – (This (man) was very expert at using black magic/ sorcery to kill people*):

(86) *He tino tohunga tēnei ki te patu i te tāngata mā te mākutu*
DET MAN N DEM PR DET N PR DET N PR DET N
IND very expert this to the kill the people by the magic

It appears, therefore, that *mā* may co-occur with the means member of an embedded *inter*-propositional relation of *Means-Purpose*.[170] Even if this interpretation is rejected, Bauer's observation that "inconclusive discussion of *Instrument* points up some of the major problems of making a case grammar description of Māori" (p. 149) seems not to be fully supported by the evidence.

5.2.1.3 *Agent*

In discussing *Agent* as defined by Fillmore, Bauer observes that in the following examples *Agent* is unmarked by a preposition, concluding that although "the unmarked noun phrases of both transitive and intransitive sentences in Māori [are] typically *Agents* . . . there is the same sort of difficulty of assessing the agentivity or otherwise of the animate subject as there is in English" (p. 152).

Bauer also notes that assignment of *Agent* to *ia* (he/she) in an example such as (89) below "seems doubtful, because the natural assumption is that the event is an accident, and accidental action never seems agent-instigated by the victim" (p. 152). In fact, however, *ia* (he/she) would be treated as *Transitor* (entity/ entities

[170] There are no examples of this in my corpus or that of Houia (2001a) and I have therefore not included it in *Table 5.2*.

in locational transition) in the model outlined here: it could co-occur with *Starting Point* and *End Point* (see the model outlined in *Chapter 4*):

(87) *Ka horoi a Tamahae i te kēne.*
TAM V PERS N PR DET N
Unspec clean Tamahae the can
(Tamahae cleaned the can)

(88) *Kua pupuhi a Rewi i te manu.*
TAM V PERS N PR DET N
PRF shoot Rewi the bird
(Rewi has shot the bird)

(89) *Ka taka ia ki raro.*
TAM V PRO PR LOC
Unspec fall he to below
(He fell down)

Bauer goes on to consider a sentence involving the stative verb *riro* (be taken) – which she translates as 'was fetched' – in which the causer (*ia*) is accompanied by the preposition *i*. She argues that *riro* is one of a small number of stative verbs that marks *Agent* with *i*. In connection with this, Bauer raises questions about (a) whether the preposition marker *i* does, in fact, represent *Source,* and (b) the claim that a case role/ relation may appear once only in a sentence.

(90) *Ko te ahi i riro mai i a ia . . .*
FM DET N TAM V DIR PR PERS PRO
the fire PAST be taken hither by he
. . . i tōna tipuna, i a Mahuika.
PR POSS N PR PERS N
from his ancestor from Mahuika
(Fire was fetched by him from his ancestress, Mahuika)

So far as the first point is concerned, there is, in fact, no reason to suppose that a single preposition will be exclusively associated with one, and only one, case/ role relation. Thus, for example, the preposition *with* in English is clearly associated with at least two different case/ role relations:

(91) He arrived with an umbrella.

(92) He smashed the window with an umbrella.

In the example cited by Bauer that contains the stative verb *riro*, however, *riro* appears to involve a transitional event and so, in terms of the model I propose in *Chapter 4*, *i* could be said to occur not only with *Starting Point* (*i tōna tipuna* and *i a Mahuika*), but also with *Source (Transitional)* (*i a ia*) (rather than Fillmore's *Agent*). However, there *are* contexts, almost certainly the majority, in which *riro* (generally translated as 'be seized') *need not* involve a transitional event (that is, in which seizing may not involve transition from one location to another). The other verbs in this category are *ea* (be avenged), *hinga* (be defeated), *mahue* (be left behind), *mau* (be caught), *mutu* (be ended), *oti* (be finished), *pakaru* (be broken), *pau* (be consumed) and *whati* (be broken). In each case, the implication is generally that the actor (the one who does the defeating etc.) has been involved in an activity which has culminated in/ brought about, so far as any other argument in the proposition is concerned, a fundamental change of state (e.g., *pakaru* 'be broken', *pau* 'be consumed', *whati* 'be broken') or of circumstance (e.g., *hinga* 'be defeated'). Thus, the occurrence of *i* with the instigators in the case of these stative verbs may be associated historically with a de-centring of the usual role of agency.

Bauer notes that the 'event' status of verbs such as *riri* (angry) may be doubtful (p. 153). This does not seem to be an issue in terms of the example she provides (see (93) below) in that agency (or *Source* (*Non-Transitional*) in the model provided in *Chapter 4*) relates not to *au* (I) but to *Rewi*. In other words, *Rewi* appears to be the *Source* (*Non-Transitional*) of an embedded proposition and *i* appears to co-occur with the reason member of an *inter*-propositional *Reason-Result* (inverted) relation:

(93) *Kua riri au i a Rewi.*
TAM V PRO PR PERS N
PRF angry I Rewi
(I am angry because of (something that) Rewi (did/said etc.))

Bauer argues that there are examples in which *i* occurs where attribution of agency may be no more than a reading of *Agent* from an English viewpoint (p. 153). She notes, for example, that a more plausible translation of the second example below (example (95)) might be *The fish is in the caught state because of Tamahae*, indicating that "the part played by Tamahae is less direct" (than in the case of example (94) below) (p. 154). A more natural translation might be one that includes a marked cleft construction (i.e., It was because of Tamahae that the fish was/were caught). Thus *i* may be an emphatic marker of reason. A similar argument might apply to example (96) below where a more literal translation than *The Te Kaha team was beaten by the Te Kao team* might be *The Te Kaha team was beaten because of the Te Kao team*, or, once again using the cleft construction, *It was because of the Te Kao team that the Te Kaha team was beaten*:

(94) *Kua hopu-kia te ika e Tamahae.*
TAM V-PASS DET N PR N
PRF catch the fish by Tamahae
(The fish was [has been/had been] caught by Tamahae)

(95) *Kua mau te ika i a Tamahae.*
TAM V DET N PR PERS N
PRF caught the fish Tamahae
(It was because of Tamahae that the fish were caught)

(96) *Kua pīti te tīma o Te Kaha i te tīma o Te Kao.*
TAM V DET N PR N PR DET T PR N
PRF beat the team of Te Kaha the team of Te Kao
(It was because of the Te Kao team that the Te Kaha team was beaten)

Bauer notes that the actor-emphatic in Māori appears to discriminate between *Agent* (*Source* (*Non-Transitional*) in the model outlined in *Chapter 4*) and non-*Agent* so that, for example, it cannot occur with 'experience' verb such as *mōhio* (know). Thus, Bauer argues that *nā Hata* and *mā Pani* appear to occupy the *Agent* role in the two examples below, as does, *mā te mīhini* in the third:

(97) *Nā Hata i whaka-haere te kanikani.*
ACT N TAM CAUS-V DET N
by Hata PAST organize the dance
(The dance was organized by Hata)

(98) *Mā Pani e horoi te whare.*
ACT N TAM V DET N
by Pani NPAST clean the house
(The house will be cleaned by Pani)

(99) *I ēnei rā, mā te mīhini e mahi te ...*
PR DEM-PL N PR DET N TAM V DET
at these day ACT the machine NPAST work the
... nui-nga o ngā mahi.
N-Canga PR DET-PL N
majority of the work
(These days, most of the work is done by machines)

In terms of the model provided in *Chapter 4*, *nā* and *mā* appear to occur with *Source (Non-Transitional)* in the case of actor-emphatic constructions.

The example below (provided by Biggs, 1969, p. 73) – which contains a verb of movement – is regarded by Bauer as doubtful (p. 156). This is consistent with the fact that 'Pita' would, in the model outlined in *Chapter 4*, have a different relationship – *Source (Transitional)* – to the predicator than is the case in examples (97) and (99):

(100)**Mā Pita e haere.*
ACT N TAM V
by Peter NPAST move
(Peter went)

5.2.1.4 *Goal*

In connection with the case/ role relation referred to by Fillmore as *Goal* – "the end point of a motion, state or time" (Fillmore, 1971, p. 250) – Bauer observes that "*where movement is involved,* the preposition 'ki' denotes the endpoint of an action" (emphasis mine) (Bauer, 1981, p. 157):

(101)*Ka hoe mai rāua ki Moremoretākīkī.*
TAM V DIR PRO PR N
Unspec row hither they (2) to Moremoretakiki
(They rowed to Moremoretakiki)

Interestingly, Bauer refers specifically here to movement, thus providing support for a case/ role relation-based distinction between transitional and non-transitional activities. Thus, *ki* appears to occur with *End Point* (see model outlined in *Chapter 4*). However, Bauer also notes that *ki* occurs in each of the following examples, arguing that it is possible to interpret each as involving *Goal*:

(102)*Kei te whaka-rongo rāua ki a Tamahae.*
TAM CAUS-V PRO PR PERS N
CONT hear they (2) to Tamahae
(They are listening to Tamahae)

(103)*Kei te whakahīhī ia ki a Rewi.*
TAM V PRO PR PERS N
CONT conceit he to Rewi
(He is showing off to Rewi)

(104)*I mihi ia ki te kōtiro.*
TAM V PRO PR DET N
PAST greet he to the girl
(He greeted the girl)

(105) *Kāore a Paki e aroha ki a Petera.*
NEG PERS N TAM V PR PERS N
not Paki NPAST feel sorry for Petera
(Paki does/will not feel sorry for Petera)

(106) *I tae atu ki ngā wāhine, ki ngā tamariki hoki . . .*
TAM V DIR PR DET-PL N PR DET-PL N PP
PAST reach away to the women to the children also
. . . te hihiri ki tēnei mahi.
DET N PR DEM N
the desire to this work
(The desire for this activity reached women and children, too)

(107) *He tino mōhio ia ki tana mahi.*
DET MAN N PRO PR POSS N
IND very know he to his work
(He really knows his job)

(108) *Kei te pātai ia ki a Tamahae.*
TAM V PRO PR PERS N
CONT ask he to Tamahae
(He is asking Tamahae)

(109) *Kei te tuhituhi ia ki tana tuahine.*
TAM V PRO PR POSS N
CONT write he to his sister
(He is writing to his sister)

(110) *Me hoko e koe te tāriana nei ki a Wiremu.*
TAM V PR PRO DET N PP PR PERS N
OBLIG sell by you the stallion here to William
(You should sell this stallion to William)

In the case of examples (109) and (110), Bauer's interpretation may be justified, particularly if eventual or intended location is taken into account.

Examples (103), (104) and (108) appear to involve what is referred to in the model outlined in *Chapter 4* as *Directional Focus* (target of a non-transitional activity). Examples (102), (105), (106) and (107), on the other hand, appear to involve *Appertainant* (entity/ entities identified as the source of an experiential state or process).

In suggesting that the *ki*-marked arguments in examples (102)-(110) above should be assigned to *Appertainant* and *Directional Focus* (rather than *Goal),* I am also taking into account the fact that *ki* can occur with predicators such as *noho* (stay/remain) and *takoto* (lie), predicators that cannot be conceived of in terms of transition or directional action. However, such assignment does not resolve the difficulty associated with the fact that, with the exception of *whakarongo*, these verbs may also occur with *i*-marked arguments. It is important, therefore, to give further consideration to the conditions under which, where the verbs involved permit a choice, that is, the conditions under with *Appertainant* and *Directional Focus* (see the model outlined in *Chapter 4*) may be *ki*-marked, and the conditions under which they may be *i*-marked. The conditions under which *Appertainant* and *Directional Focus* are *i*-marked are indicated (provisionally) in *Table 5.1*.

In considering, largely independently of any reference to case/ role relations, the use of *i* and *ki* in New Zealand Māori, Mark (1970) examined a number of groups of verbs. One of these groups includes the following verbs involving the senses: *titiro* (look); *mātaki* (look at/ inspect/ watch), *whakamono* (sniff) and *rongo* (apprehend with the senses). She found that each could occur with either a *ki*-marked or an *i*-marked nominal group. Her informant's judgments in relation to the difference between *ki*-marked and *i*-marked sample sentences varied to some extent. Thus, in the case of *titiro*, he observed that the *ki*-marked example involved looking directly at something, whereas the *i*-marked example involved looking in the general direction of something. In the case of *rongo*, he associated the *ki*-marked example with an active attempt to hear something, and the *i*-marked example with hearing that involved no particular effort. In the case of *mātaki*, he

associated the *ki*-marked example with a direct and specific concern with the sighted object, the *i*-marked example with a measure of detachment from the sighted object. Finally, in the case of *whakamono*, he associated the *ki*-marked example with active sniffing of something (the wind), the *i*-marked example with passive awareness of something. Although these judgments at first sight appear to be difficult to interpret, they are, in fact, all consistent with a distinction between *experiential state* (*i*-marked) and *experiential process* (*ki*-marked). In the model outlined in *Chapter 4*, a distinction is made between experiential states and experiential processes although that distinction is not reflected in the specification of case/ role relations (*intra*-propositional relations). Such a distinction could be reflected in a revised model. However, I believe that all that is really necessary is to observe that in the case of verbs relating to the senses, *Appertainant* is marked by *ki* in the case of experiential processes, and by *i* in the case of experiential states. This observation is consistent with the fact that *whakarongo*, which inherently concerns active involvement (i.e., experiential process as opposed to state) always selects *ki*.

Also cited by Bauer are examples involving *ki* in which there is a reciprocal relationship (e.g., X and Y played/collided). In each case, however, one person/ group appears to be prioritised, the other, occurring with *ki*, being treated as *Directional Focus* (see the model outlined in *Chapter 4*) in relation to the activity involved:

(111) *I pūrei te tīma o Te Kaha ki te tīma o Te Kao.*
TAM V DET N PR N PR DET N PR N
PAST play the team of Te Kaha to the team of Te Kao
(The Te Kaha team played the Te Kao team)

(112) *Kua tūtuki te pahi ki te kau rā.*
TAM V DET N PR DET N PP
PRF collide the bus to the cow there
(The bus has collided with that cow)

Once again, as in the case of examples (103), (104) and (108) above, it is difficult to make an informed judgment about prepositional selection without further context.

Bauer ends her discussion of Fillmore's *Goal* by noting that there are instances where *ki* is selected that would have a questionable status as *Goal* in English. She argues, however, that the fact that "Māori uses 'ki' . . . may suggest that in Māori . . . their status [as Goal] is clear" (p. 160). At this point, it is important to recall that Fillmore (1971, p. 250) defined *Goal* as "the end point of a motion, state or time". Given the inclusive nature of this definition, and given the fact that there appears to be a clear distinction between predicators that always select *ki* (transitional location and experiential processes relating to the senses) and those that *may* select *ki* (non-transitional activity), this argument does not appear to be one that has much explanatory power. In fact, the two examples that Bauer provides at this point both appear to be idiomatic in nature. Although the first is translated 'Hata thinks . . . ', the translation of the second 'according to . . .' seems appropriate in both cases:

(113) *Ki a Hata i haere a Tamahae inanahi.*
PR PERS N TAM V PERS N ADV
to Hata PAST move Tamahae yesterday
(Hata thinks that Tamahae went yesterday)

(114) *Ki ētahi kōrero . . .*
PR DET-PL N
to some story
(According to some stories, . . .)

5.2.1.5 *Experiencer*

Bauer claims that "*Experiencer* was set up in English largely to account for the differences in behaviour between the subjects of stative verbs and the subjects of non-stative verbs" (p. 161), but observes that in Māori "there are two classes of verb . . . which must be considered in connection with this case, the stative verbs and the experience verbs" (p. 161). In considering the latter, she comments on the

fact that not only can they occur with the progressive, but also, with a few exceptions, their second noun phrase – *Appertainant* in the model outlined in *Chapter 4* – is marked with *ki* (p. 163):

(115) *E aroha ana ahau ki a Hotu.*
TAM V TAM PRO PR PERS N
CONT respect CONT I to Hotu
(I have great respect for Hotu)

It is worth noting here that in English (with reference to which a specific case/ role relation associated with experiential predicators seems unavoidable), experiential predicators are sometimes related to experiential states, sometimes to experiential processes. In the case of their treatment as experiential processes, they can (though infrequently) co-occur with progressive aspect (e.g., *They are finally understanding her point of view*).

Bauer acknowledges that there are some exceptions to the co-occurrence of *ki* with the second argument of experience verbs. However, the fact that they do commonly occur with *ki*, and the fact that they also commonly occur with progressive aspect, suggests that the experience verbs in Māori are generally associated with experiential processes rather than experiential states.

So far as the subjects of zero marked stative verbs are concerned, Bauer notes that not all of them can be assigned to the *Experiencer* role (p. 162). Thus, she compares the following two examples in which the first includes a zero marked subject which could be classed as experiential and the second includes a zero marked noun phrase which cannot be classed as experiential. What this appears to indicate is simply that the category of verbs referred to as 'stative' in Māori includes both experientials and non-experientials:

(116) *Kei te mate wai au.*
TAM V N PRO
CONT lack water I
(I am thirsty)

(117)*He tino kaha a Tamahae.*
DET MAN ADJ PERS N
a very strong Tamahae
(Tamahae is very strong)

The subject of example (117) above would be classified as involving *Experiencer* in the model outlined in *Chapter 4*; the subject of example (116), on the other hand, would be classified as involving *Identified State* (entity/ entities identified as being in the state referred to in the predicator). However, it may be that this distinction is neutralised in the case of zero marking. Certainly, in all of the other examples Bauer provides (see, for example, (118) below), the zero marked noun phrase is clearly non-experiential:

(118)*Kei te marino tonu te moana.*
TAM ADJ MAN DET N
CONT calm still the sea
(The sea is still calm)

Bauer notes that *ki* can occur in intransitive adjectival constructions, arguing that although *Goal* is the most likely interpretation, "the animacy of the 'ki' noun phrase . . . [in the following example] suggests that *Experiencer* is possible" (p. 165). Selection of *ki* in this example would be consistent with a dual propositional interpretation in which *ki a au* is the *Source* (*Non-Transitional*), i.e., *According to me, kūmara are good*:

(119)*Ka pai te kūmara (ki a au.)*
TAM ADJ DET N PR PERS PRO
Unspec good the kumara to me

Bauer concludes that "considerable doubt . . . seems to hang over the usefulness or necessity of having an *Experiencer* case in the description of Māori" (p. 165). My own observations, particularly when my discussion of Bauer's account of *Goal* (5.2.1.4) is taken into account, would tend not to support this conclusion.

5.2.1.6 *Locative/ Location*

Fillmore (1968, p. 25) defines *Locative* as "the location or spatial orientation of the state or action identified by the verb". He later replaces the *Dative* and *Locative* roles, defining *Location* as "the place where an object or event is located" (1971, pp. 249-258). In the model outlined in *Chapter 4*, a distinction is made between *Entity Location (Spatial)* (entity/ entities identified as being in a static location) and *Event Location* (location of a non-transitional activity), in part because of the difference in the nature of the predicator, the first (*Entity Location (Spatial)*) occurring with spatial state predicators, the second (*Event Location*) occurring with non-transitional activity predicators.[171] In that model, a distinction is also made between spatial location and temporal location. In the case of transitional events involving spatial state predicators, distinctions are also made between an entity/ entities in transition (*Transitor*), location at the start (*Starting Point*) and end (*End Point*) of a transitional event, and the area covered during a transitional event (*Transitional Range*).

Bauer (1981, pp. 172-173) notes that there are three basic locative prepositions for nominal sentences in Māori – *i* (past location); *kei* (present position); and *hei* (future location) as indicated in the three examples below:

(120) *I te kura ia.*
PR DET N PRO
at the school he
(He was at school)

(121) *Kei te kura ia.*
PR DET N PRO
at the school he
(He is at school)

(122) *Hei te kura ia.*
PR DET N PRO
at the school he
(He will be at school)

[171] In fact, no clear distinction was found in the data analysed in *Chapter 4*.

These examples accord with the definition of *Entity Location.*

Bauer also notes (p. 173) that these three prepositions also appear (with, apparently, a very similar function) in the case of temporary possession, that is, temporary location with someone:

(123)*I a Hata taku koti.*
PR PERS N POSS N
at Hata my coat
(Hata had my coat)

(124)*Kei a Hata taku koti.*
PR PERS N POSS N
at Hata my coat
(Hata has my coat)

(125)*Hei a Hata taku koti.*
PR PERS N POSS N
at Hata my coat
(Hata will have my coat)

In the case of *i te ngāwhā* in the following two examples, *Entity Location* appears to be involved:

(126)*Kāore a Tamahae i roa ki roto i te ngāwhā.*
NEG PERS N TAM V PR LOC PR DET N
not Tamahae PAST long to inside at the hot pool
(Tamahae was not long in the hot pool)

(127)*Kāore a Tamahae i roa i roto i te ngāwhā.*
NEG PERS N TAM V PR LOC PR DET N
not Tamahae PAST long to inside at the hot pool
(Tamahae was not long in the hot pool)

Bauer notes that *i* can mark past temporal location (see examples (128) and (129) below) in phrases, and can be used to form adverbs such as *inanahi* (yesterday) and *i ēnei rā* (these days) (p. 176):

(128) *I ngā rā o mua . . .*
PR DET-PL N PR LOC
at the day of front
(In former times . . .)

(129) *I tērā wiki . . .*
PR DEM N
at that week
(Last week . . .)

All of the other examples she discusses in considering Fillmore's treatment of *Locative/Location* would be assigned to different roles in the model outlined in *Chapter 4*. Bauer notes, for example, that *a* is restricted to temporal noun phrases (see examples (130) to (131) below) and can be used to form adverbs such as *āpōpō* (tomorrow) and *ākuanei* (presently) (p. 177). As in the case of examples (130) and (131), this involves *Temporal Location* (the temporal point identified as being relevant to the activity, process or state identified by the predicator):

(130) *Kei te haere koe ki hea a te Āranga?*
TAM V PRO PR N PR DET N
CONT move you to where at the Easter
(Where are you going at Easter?)

(131) *A te waru karaka ka tae mai ia.*
PR DET N N TAM V DIR PRO
at the eight o'clock Unspec arrive hither he
(He will arrive at eight o'clock)

(132) *A tērā wiki . . .*
PR DEM N
at that week
(Next week . . .)

What some of these examples appear to demonstrate is that Māori distinguishes between *Entity Location* (Spatial) and *Temporal Location*. This is further reinforced by Bauer's observation that *kei* is "seldom used for temporal location" (p. 175), the only examples she found being, in fact, timeless (see examples (133) and (134) below). In example (133), we appear to have *Temporal Location* (universal truth); in example (134), we appear to have *Identified State* (definition):

(133) *Kei ngā pō mārama, kei ngā pō rākau-nui o . . .*
PR DET-PL N ADJ PR DET-PL N ADJ PR
at the night clear at the night stick-big of
. . . te marama, e kite-a atu ana . . .
DET N TAM V-PASS DIR TAM
the moon CONT see away CONT
(On clear nights, on nights when the moon is full, [ ] is seen . . .)

(134) *Kei raro iho te waha i te ihu.*
PR LOC DIR DET N PR DET N
at below down the mouth at the nose
(The mouth is below the nose)

Thus, *i* appears to mark past location, *hei* future location, and *kei* present or timeless location. In the absence of a time marker accompanying a verbal phrase (in which case *i* always occurs with *Temporal Location* (see Bauer, 1981, p. 139)), *i* and *nō* occur in the context of past temporal location, *a* in the context of future temporal location, and *hei* in the context of present and future temporal location:

(135) *I ngā rā o mua . . .*
PR DET-PL N PR LOC
at the day of before
(In former times . . .)

(136) *I tērā wiki . . .*
PR DEM N
at that week
(Last week . . .)

(137) *Nō taua pō . . .*
PR DEM N
at that week
(That night . . . (in the past))

(138) *Nō te waru karaka i te pō . . .*
PR DET N N PR DET N
at the eight o'clock at the night
(At eight o'clock . . . (past))

(139) *Hei te hoki-nga atu a Tāreha, ka haere mai ai koe.*
PR DET N-Canga DIR PR N TAM V DIR PP PRO
at the return away of Tareha Unspec move hither you
(When Tareha returns, you shall come)

(140) *Hei te rangi tonu nei.*
PR DET N MAN PP
at the day indeed here
(This very day)

(141) *Kei te haere koe ki hea a te Āranga?*
TAM V PRO DET N PR DET N
CONT move you to where at the Easter
(Where are you going at Easter?)

(142) *A te waru karaka ka tae mai ia.*
PR DET N N TAM V DIR PRO
at the eight o'clock Unspec arrive hither he
(He will arrive at eight o'clock)

(143) *A tērā wiki . . .*
PR DEM N
at that week
(Next week . . .)

(144) *Kei te tū te pounamu i runga i te tēpu.*
TAM V DET N PR LOC PR DET N
CONT stand the bottle at top at the table
(The bottle is standing on the table)

In the case of a non-transitional activity (where we have *Event Location*), Bauer's examples appear to demonstrate that *i* occurs whether the event is located as past, present or future, except where we have an implied transitional event, in which case *ki* occurs (Bauer, 1981, pp. 184-185). In such cases, *ki* appears to be a marker of *End Point.* The one exception to this in the examples below (see example (152)), does not, in fact, involve a propositional argument.

(145) *Kei te whaka-tū au i te pounamu i runga i te tēpu.*
TAM CAUS-V PRO PR DET N PR LOC PR DET N
CONT stand I the bottle at top at the table
(I am standing the bottle on the table)

(146) *Kei te whaka-tū au i te pounamu ki runga i te tēpu.*
TAM CAUS-V PRO PR DET N PR LOC PR DET N
CONT stand I the bottle to top at the table
(I am standing the bottle on the table)

(147) *Kei te tahu ia i te ahi i te marae.*
TAM V PRO PR DET N PR DET N
CONT light he the fire at the marae
(He is lighting the fire on the marae)

(148) *Ka waiho au i te tinana i roto i te kāwhena.*
TAM V PRO PR DET N PR LOC PR DET N
Unspec leave I the body to inside at the coffin
(I left the body in the coffin)

(149) *Kei te tahu ia i te ahi ki te marae.*
TAM V PRO PR DET N PR DET N
CONT light he the fire to the marae
(He is lighting the fire on the marae)

(150) *Kua tīmata-ria te mahi ki te hōhipera.*
TAM V-PASS DET N PR DET N
PRF start the work to the hospital
(The work at the hospital has been started)

(151) *I tohatoha ia i te pepa ki te marae.*
TAM V PRO PR DET N PR DET N
PAST distribute he the paper to the marae
(He distributed the paper to the marae)

(152) *I kura-ina a Pari ki whea?*
TAM V-PASS PERS N PR N
PAST school Pari to where
(Where did Pari go to school?)

(153) *Ka waiho au i te tinana i roto i te kāwhena.*
TAM V PRO PR DET N PR LOC PR DET N
Unspec leave I the body at inside at the coffin
(I left the body in the coffin)

(154) *Ka waiho au i te tinana ki roto i te kāwhena.*
TAM V PRO PR DET N PR LOC PR DET N
Unspec leave I the body to inside at the coffin
(I left the body in the coffin)

5.2.1.7 *Object*

Bauer refers to the *Object* role which Fillmore describes as "the entity which moves or undergoes change" (Fillmore, 1971, p. 252), as *Neutral*, observing that it has "the least specific semantic content" (p. 166). Following discussion of a number of examples, she concludes that the best evidence in support of the role in relation to Māori may be subject selection in that *Agent* is normally the only other role that can occur in subject position (p. 172). This *is* true in terms of the case/ role relation model that Bauer was working with. However, it is not true in terms of a number of more recent models, including the model outlined in *Chapter 4*. It

is, therefore, important to review the examples (with the exception of those that have already been discussed in this chapter), that Bauer includes in this section of her thesis.[172]

Bauer observes that what might be referred to as *Neutral* noun phrases are zero marked where the verb is passivised, but may be *ko*-fronted. The examples she provides would be assigned to *Directional Focus* in terms of the model outlined in *Chapter 4*:

(155) *Kua pū-hia te manu e Rewi.*
TAM V-PASS DET N PR N
PRF shoot the bird by Rewi
(The bird has been shot by Rewi)

(156) *Ko te manu i pū-hia e Rewi.*
FM DET N TAM V-PASS PR N
the bird PAST shoot by Rewi
(It was the bird that Rewi shot).

In the case of deictics (*ki/i reira* (there); *ki/i konei* (here)), either *ki* or *i* may be selected. This is also true in the case of *roto* (in) and *taha* (side). However, although Bauer provides many examples, they are not strictly relevant to the

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[172] Bauer includes discussion of desentential arguments following verbs like *whakahoki* ('cause-return') and *mōhio* ('know') in this section, arguing that these can be classified as involving *Object/Neutral* or possibly, in the case of *mōhio*, *Goal* (pp. 170-171). Since desentential sentences are dual propositional, they involve two sets of argument-predicator relationships and so, except to the extent that the entire clause following the predicator can be regarded as a propositional argument, are not directly relevant to the discussion here. The examples Bauer provides are:

I whaka-hoki ia, 'He pukapuka tēnei'
TAM CAUS-V PRO DET N DEM
PAST return he IND book this
'He replied, 'This is a book'

I mōhio tonu a Hata kua tae mai te tūpāpaku
TAM V MAN PERS N TAM V DIR DET N
PAST know indeed Hata PRF arrive hither the body
'Then Hata knew for certain that the body had arrived'

Ka kite ia kua mahue ia i tōna iwi
TAM V PRO TAM V PRO PR POSS N
Unspec see he PRF leave behind he by his (sg.) tribe
'He saw that he had been left behind by his tribe'

discussion here in that we are concerned not with the internal form of prepositions or adverbials, but with the association of particular prepositions with propositional arguments. Thus, what is directly relevant to the current analysis in the case of examples (157) and (158) below is not whether we have *ki roto* or *i roto*, but the fact that *i* occurs in both cases with *te pounamu* and *te tēpu*. Because we have a causative (***whakatū***), *i te pounamu* is an example of *Identified State* and *i te tēpu* is an example of *Entity Location*. This does not mean, of course, that the actual form of prepositions and adverbials is not worthy of investigation, merely that it is not the primary focus of our concern here. Prepositional selection with *Entity Location* (see the model outlined in *Chapter 4*) has already been discussed. It was noted there that *i* would normally be associated with past location. However, what we appear to have in examples (157), (158) and (159) below is *Event Location* rather than *Entity Location*. In fact, this appears also to be true of example (160). In the case of example (161), however, we appear to be dealing not with the location of a non-transitional activity (*Event Location*), but with the location of an entity/ entities at the end of a transitional event (*End Point*).

(157) *Kei te whaka-tū au i te pounamu i runga i te tēpu.*
TAM CAUS-V PRO PR DET N PR LOC PR DET N
CONT stand I the bottle at top at the table
(I am standing the bottle on the table)

(158) *Kei te whaka-tū au i te pounamu ki runga i te tēpu.*
TAM CAUS-V PRO PR DET N PR LOC PR DET N
CONT stand I the bottle to top at the table
(I am standing the bottle on the table)

(159) *Kei te tahu ia i te ahi i te marae.*
TAM V PRO PR DET N PR DET N
CONT light he the fire at the marae
(He is lighting the fire on the marae)

(160) *Ka waiho au i te tinana i roto i te kāwhena.*
TAM V PRO PR DET N PR LOC PR DET N
Unspec leave I the body at inside at the coffin

(I left the body in the coffin)

(161)*I tohatoha ia i te pepa ki te marae.*
TAM V PRO PR DET N PR DET N
PAST distribute he the paper to the marae
(He distributed the paper on the marae)
(He distributed the paper to the marae)

Also in her consideration of *Object/Neutral*, Bauer considers examples involving the preposition *mō*. In each case, the *mō*-marked noun phrases would, in terms of the model outlined in *Chapter 4*, be assigned to the role *Predicate Range*, that is, "entity/ entities/ abstraction over which a non-transitional predicate ranges".

(162)*Kei te kōrero a Tamahae mō tana ika.*
TAM V PERS N PR POSS N
CONT talk Tamahae about his fish
(Tamahae is talking about his fish)

(163)*Ka whaka-aro kē rātou mō te nui o te utu . . .*
TAM CAUS-V PP PRO PR DET ADJ PR DET N
Unspec think instead they (3+) about the big of the price
. . . o te mahi
PR DET N
of the work
(They think instead about how high the wages for the job are)

(164)*He waiata tēnei mōku.*
DET N DEM POSS
a song this for me
(The song is about me)

Bauer also includes one example that seems to involve *Identified State* (entity/ entities identified as being in the state referred to in the predicator) and another that seems to involve *Result* (entity/ entities resulting from a non-transitional activity) (see the model outlined in *Chapter 4*). In both cases, the preposition *i* is selected.

(165)*Kī tonu te puare i te haupapa.*
V MAN DET N PR DET N
full indeed the hole from the ice
(The hole is full of ice)

(166)*I hanga ngā ariki nei i ō rāua whare.*
TAM V DET-PL N PP PR POSS PR
PAST build the chief here their (2-pl.) house
(The chiefs built the house)

The remaining examples discussed under *Object/ Neutral* by Bauer that involve the preposition *ki* can be assigned to *Directional Focus* (see the model outlined in *Chapter 4*). These examples are listed below:

(167)*I mihi ia ki te kōtiro.*
TAM V PRO PR DET N
PAST greet he to the girl
(He greeted the girl)

(168)*Ka mau te marama ki a Rona.*
TAM V DET N PR PERS N
Unspec seize the moon to Rona
(The moon seized Rona)

(169) *Ka whaka-pā-ngia atu e Rewi tētahi rākau ki te . . .*
TAM CAUS-V-PASS DIR PR N DET N PR DET
Unspec touch away by Rewi a stick to the
. . . waewae o Tamahae.
N PR N
leg of Tamahae
(Rewi touched Tamahae's leg with a stick)

(170) *Haere atu ki te hongi ki te manuhiri.*
V DIR PR DET N PR DET N
go away to the press nose to the visitors
(Go and press noses with the visitors)

(171) *Kei te tahu ia i te ahi ki te marae.*
TAM V PRO PR DET N PR DET N
CONT light he the fire to the marae
(He is lighting the fire on the marae)

(172) *Kua tīmata-ria te mahi ki te hōhipera.*
TAM V-PASS DET N PR DET N
PRF start the work to the hospital
(The work at the hospital has been started)

5.2.1.8 Accounting for further prepositions

Bauer goes on to discuss prepositional phrases which were not accounted for in her discussion of Fillmore, noting that "it seems fair to say that any case grammar theory must ultimately be extended to cover them" (p. 187). She begins this part of her discussion by considering *mā* as the preposition for 'possession-to-be' and *nā* as the preposition for 'actual possession', noting that, in this context, *mā* is often translated as 'for' with subordinate possessed entities (pp. 187-188). She also notes here that "Fillmore has at various times considered a *Benefactive* case [with examples such as (175) and (176) below] [but that] . . . the arguments for and against have never been satisfactorily resolved", adding that "[these] might be candidates for *Benefactive* if such a case could be established on independent

grounds", although "they would not themselves constitute an argument for such a case" (p. 188).

(173) *Nāku ngā kura nā!*
POSS DET-PL N PP
my the feather there
(Those features are mine!)

(174) *He whāngai a Hukarere nā Hata.*
DET N PERS N POSS N
IND foster-child Hukarere of Hata
(Hukarere is Hata's foster-child)

(175) *He kurī tēnei mā Hone.*
DET N DEM PR N
IND dog this for John
(This dog is for John)

(176) *Ka hoko-na mai e rāua he wati hou mā Tamahae.*
TAM V-PASS DIR PR PRO DET N ADJ PR N
Unspec buy hither by them (2) IND watch new for Tamahae
(A new watch was bought by them for Tamahae)

In terms of the models (*intra-* and *inter*-propositional) outlined in *Chapter 4*, example (173) and (174) would involve *Possessed* and *Possessor*; examples (175) and (176) would involve an embedded *inter*-propositional relation of *Means-Purpose.*

This leads into a discussion of *mō* and *nō* prepositions which, according to Bauer, correspond to *mā* and *nā* possessive use, but with things possessed dominantly. In terms of the models provided in *Chapter 4*, example (177) below would involve an embedded *inter*-propositional relation of *Means-Purpose*, example (178) below would involve an *intra*-propositional relation of *Predicate Range*, example (179) below would involve the *intra*-propositional relation of *Possessor* and *Possessed*,

and example (180) below would involve the *intra*-propositional relation of *Identified State*:

(177) *He hōiho tēnei mō Pita.*
DET N DEM PR N
IND horse this for Peter
(This is a horse for Peter)

(178) *Ka pātai atu ia ki a Rehua mō tētahi o ōna tamariki.*
TAM V DIR PRO PR PERS N PR DET PR POSS N
Unspec ask away he to Rehua for a of his (pl.) children
(He asked Rehua for one of his children) [173]

(179) *Nō wai tēnei whare?*
PR N DEM N
to who this house
(Who does this house belong to?)

(180) *He whanau-nga katoa ngā toa Māori nōna.*
DET N-Canga N DET-PL N ADJ POSS
IND relative all the champion Māori his
(All the Māori champions are relatives of his)

The other examples including *mō* that Bauer provides do not appear to relate to possession. Rather, they all appear to relate more specifically to the purpose member of an embedded *inter*-propositional relation of *Means-Purpose*:

(181) . . . *he mīhini hou mō tana poti.*
DET N ADJ PR POSS N
IND machine new for his boat
(. . . a new engine for his boat)

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[173] Bauer notes that children are normally possessed subordinately, but these were special children (p. 189). She did not, however, elaborate on the reason why these children were special.

(182) *Ko tana mahi, he kuki mō te rōpū kuti hipi.*
FM POSS N DET N PR DET Ncomp (N + V + N)
her work IND cook for the gang cut sheep
(Her work is/was to cook for the shearing gang)

(183) *Hōmai he māti hei tahu i te ahi mō te hāngī.*
V DET N PR N PR DET N PR DET N
give IND match to light the fire for the hangi
(Bring some matches to light the fire for the hangi)

(184) *He awa tino pai tēnei mō te hopu tuna.*
DET N MAN ADJ DEM PR DET V N
IND river very good this for the catch eel
(This is a very good river for catching eels)

(185) *He pai noa iho te wai mō te tamariki.*
DET ADJ MAN DIR DET N PR DET N
IND good freely downward the water for the children
(The water is fine for children)

(186) *Kei te tereina ia mō te māero.*
TAM V PRO PR DET N
CONT train he for the mile
(He is training for the mile)

(187) . . . *ētahi tamariki e ruku ana mō ngā moni.*
DET-PL N TAM V TAM PR DET-PL N
some children CONT dive CONT for the money
(. . . some children diving for the money)

(188) *Kua pōuri ia mō tana kōrero-tanga.*
TAM ADJ PRO PR POSS N-Canga
PRF sad he for his say
(He is sorry for saying what he did)

(189) *He tino pai te pāreti mō ngā ata makariri.*
DET MAN ADJ DET N PR DET-PL N ADJ
IND very good the porridge for the morning cold
(Porridge is very good for cold mornings)

Bauer then considers what she refers to as "the comitative preposition 'me'", noting that, "me cannot be used to join sentences in Māori, nor to conjoin proper (personal) names or pronouns in traditional Māori" (p. 192). Her examples (provided below in (190) and (191)) appear to involve an embedded *inter*-propositional relation of *Bonding*:

(190) *Ka oma tika tonu ia me tana rākau.*
TAM V ADJ MAN PRO CONJ POSS N
Unspec run straight immediate he and his stick
(He ran straight over with his stick)

(191) *Ka tango-hia ake a Rona me te rākau ngaio . . .*
TAM V-PASS DIR PERS N CONJ DET N ADJ
Unspec pull upward Rona and the tree ngaio
. . . me te kete, me te tahā wai hoki.
CONJ DET N CONJ DET N ADJ PP
and the basket and the bottle water also
(Rona was pulled up with the ngaio tree, the basket and the water bottle too)

Similarly, the examples of the preposition *hei* that Bauer provides at this stage of her argument would be also be classified (in terms of the models outlined in *Chapter 4*) as involving an embedded *inter*-propositional relation – that of *Means-Purpose* (see (192) - (195)) (p. 191):

(192) *He pai te poaka hei kai.*
DET ADJ DET N PR N
IND good the pig for food
(Pigs are good for food/eating)

(193) *Ka tapatapa-hia hei pepa.*
TAM V-PASS PR N
Unspec cut for paper
([It] will be cut up for paper)

(194) *Ko taku teina hei kura māhita.*
FM POSS N PR N ADJ
my younger brother as school teacher
(My younger brother as school teacher)

(195) *Haere hei hoa mō ngā tamariki rā.*
V PR N PR DET-PL N PP
go as friend for the children there
(Go as friends of those children)

Bauer's examples of *ki te* appear, in these contexts, to mark something roughly equivalent to the infinitive in English and, as such, are not relevant to the discussion here except to the extent that it is important to observe that a semantic predicator may be a complex one that includes part of a grammatical predicate.

(196) *Kei te haere a Rewi ki te tiki i ngā kau.*
TAM V PERS N PR DET N PR DET-PL N
CONT move Rewi to the fetch to the cow
(Rewi is (going to fetch) the cows)

(197) *Kua haere a Mere ki te moe.*
TAM V PERS N PR DET N
PRF move Mere to the sleep
(Mere (has gone to sleep))

(198) *Kua tīmata a Tamahae ki te kai.*
TAM V PERS N PR DET N
PRF start Tamahae to the eat
(Tamahae (has started to eat))

(199) *Tino tere te poti ki te haere.*
MAN ADJ DET N PR DET V
very fast the boat to the move
(The boat (is very fast))

The final preposition discussed by Bauer is *whaka* (towards; in the direction of). Her examples (provided below as (200) and (201)) involve transitional movement and would therefore be classified as *Transitional Range* in the model outlined in *Chapter 4:*

(200) *I haere whaka te tāone.*
TAM V PR DET N
PAST move the town
([He] went towards the town)

(201) *I haere ia whaka te rangi.*
TAM V PRO PR DET N
PAST move he the sky
(He went by air)

A summary of the outcome of the discussion thus far as it relates to the models outlined in *Chapter 4* is provided in *Tables 5.1* and *5.2* following.

Table 5.1: **Case/ role relational signalling (*intra*-propositional): Bauer (1981)**

Categories	*Intra*-propositional relations	Signal	Classification	Notes
With non-transitional activity predicator	*Source (Non-Transitional) S(NT)*	*e*	preposition	
		i	preposition	with stative verbs
		mā	preposition	emphatic
		nā	preposition	emphatic
	Instrument (I)	*ki*	preposition	
	Directional Focus (DF)	*ki*	preposition	
		ko	preposition	emphatic
	Predicate Range (PRG)	*mō*	preposition	
	Material (M)			
	Result (R)	*i*	preposition	
	Event Location (EL)	*i*	preposition	past location including temporary possession (i.e., temporary location with someone)
		kei	preposition	present position including temporary possession (i.e., temporary location with someone)
		hei	preposition	future location including temporary possession (i.e., temporary location with someone)
With material process predicator	*Mutant (Mu)*			
With material state predicator	*Identified State(IS)*	*i*	preposition	provisional assignment
With spatial state predicator	*Entity Location (Spatial) (ELS)*			
With experiential state or process predicator	*Experiencer (E)*			
	Appertainant (A)	*ki*	preposition	in the case of verbs relating to the senses, with experiential processes
		i	preposition	in the case of verbs relating to the senses, with experiential states
With transitional event predicator	*Source (Transitional) (ST)*			
	Starting Point (SP)	*i*	preposition	
	End Point (EP)	*ki*	preposition	
	Transitional Range(TR)	*whaka*	preposition	
	Transitor (T)			

Table 5.1 (continued): **Case/ role relational signalling (*intra*-propositional): Bauer (1981)**

Categories	*Intra*-propositional relations	Signal	Classification	Notes
With relational predicator	*Possessor (Pr)*	*nā*	preposition	actual possession (subordinate)
		nō	preposition	actual possession (dominant)
		mā	preposition	intended possession (dominant)
		mō	preposition	actual possession (dominant)
	Possessed (Pd)			
	Quantified (Qd)			
	Quantifier (Qr)			
	Affector (Afr)			
	Affected (Afd)			
	Relational Specifier (RS)			
	Relational Target (RT)			
With activity, experiential and material process, material state, transitional event and locational state	*Temporal Location(TL)*	*i*		with all times where there is a time marker accompanying the verbal phrase
		i; nō	preposition	past temporal location (and with adverbials: - *inanahi* (yesterday); *i ēnei rā* (these days); *i tērā wiki* (last week))
		a	preposition	future temporal location (and with adverbials: - *āpōpō* (tomorrow) and *ākuanei* (presently))
		hei	preposition	present and future temporal location
With activity, material process and material state, experiential process and transitional event	*Temporal Transition (TT)*			

Table 5.2: **Prepositional selection in Māori in relation to *inter*-propositional relations: Bauer (1981)**

Relation	Member	Signal	Example
Reason-Result	*Reason*	preposition	***i*** (because) ***nā*** (because) ***i*** (emphatic marker)
Means-Purpose	*Purpose*	preposition	***mā*** (for) ***mō*** (with) ***hei*** (for)
Condition-Consequence	*Condition*	subordinating conjunction	***mā*** (with)
Bonding		co-ordinating conjunction	***me*** (and)

5.3 Bauer on Anderson (1971, 1977) and Dik (1978)

Bauer begins her examination of the approach to case roles/ relations proposed by Anderson (1971; 1977) by observing that his localistic theory is difficult to apply to an analysis of Māori for a number of reasons. First, "such tests as are suggested for ascertaining case membership are almost invariably specific to English" (Bauer, 1981, p. 198). Secondly, "much of the argumentation in Anderson (1971) centres around the notion of 'stative' which Anderson closely associates with be" (Bauer, 1981, p. 198). Thirdly, whereas "allative [destination of an object], might reasonably be expected to be included in a localistic theory, it is absent" (p. 199). Bauer's conclusion, that Anderson's work appears to relate more to the surface structure of English than to the identification of case roles/ relations themselves supports my own conclusions (see p. 33) about Anderson's approach. I have chosen, therefore, not to discuss Bauer's approach to Anderson's work in any detailed way here because I believe that to do so would not make any significant contribution to the findings. In summary, there seems no good reason to reject Bauer's conclusion that "there is no syntactic support for similar analyses in Māori, and at times such syntactic evidence as is available points in an opposing direction" (p. 239). Thus, "[despite] a superficial attractiveness in the localistic proposals, it seems that they do not provide a more insightful analysis than Fillmore's proposals" (p. 239).

Bauer's consideration of the model proposed by Dik (1978) is largely motivated by "the attractiveness of his theory as a whole" in terms of its potential for the treatment of information structuring (Bauer, 1981, p. 240). She observes, however, that neither the locus of 'control', nor that of 'dynamism', superficially attractive though they are, can reliably be applied to Māori (see pp. 242-244).

Interestingly, Bauer observes that Fillmore and Dik are in fundamental disagreement about the significance of economy in relation to the theory. Thus, Dik "takes the opposite point to that taken by Anderson" (p. 240), in that he seeks for as narrow a range of relational types as possible. My own view, one that is, I believe, supported by an analysis of Bauer's treatment of Fillmore, is that economy is of less importance than semantic discrimination.[174]

5.4 Re-examination of Bauer (1981): An overview

Following her consideration of the research of Fillmore (1968, 1971, 1977b), Anderson (1971, 1977) and Dik (1978), Bauer concludes that "remarkably similar kinds of problem arise, regardless of the individual approach taken" (p. 245). She attributes this, in part, to "the Indo-European breeding ground of such theories", an attribution that would have lost some of its force had she been in a position to examine the work of Longacre (1972a, 1972b, 1976) which relates primarily to Philippine and Papua New Guinea languages.

A central issue for Bauer is that "there is a disquieting lack of evidence available for handling borderline examples" (p. 245). This should not necessarily be surprising in view of the discussion of the relevance of prototype theory (see *Chapter 4*). Furthermore, a consideration of examples *in context* might have provided a firmer basis for resolving some of the issues associated with these examples.

It is interesting to note that in spite of the reservations she expresses, Bauer's overall conclusion is that "case concepts provide illuminating ways of describing at least some aspects of Māori" (p. 245). This reconsideration of Bauer's application of case/ role relational theory and modelling to Māori indicates that some of the problems she encountered appear to have been related more to the models available at the time than to the theory itself. It also, I believe, indicates

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[174] If we are looking to *establish* a set of basic processes (or relational processes), then the principle of economy applies, but that principle needs itself to be applied in a principled way. In the case of what I refer to as 'inter-propositional relations', the guiding principle is that the set of relations should list all the ways of linking propositions in such a way that further reduction is not achievable. In the case of what I refer to as 'intra-propositional relations', the guiding principle is that the set of relations should list all the ways of linking processes to participants in such a way that further reduction is impossible. In *applying* these relations/ processes in particular instances, however, the situation is different. If we are searching for varieties of these relations in particular languages, we need to be guided by the structure of these languages and its signalling or cueing system and we need to discriminate between types of a single relation in terms of that system. If we are *attempting to track* these relations and relational varieties *in a spoken or written text in a particular language*, we need to be guided by both the signalling/cueing system and user intuition.

the importance of analysing and discussing language *in context* wherever possible. Above all, it indicates the importance of taking account of the co-occurrence and of interaction of *intra-* and *inter*-propositional relations in the signalling system of Māori.

5.5 A re-examination of the findings of Houia (2001a) in relation to the encoding and signalling of semantico-pragmatic relations (*inter*-propositional relations) in Māori

Houia (2001a) conducted a study of semantico-pragmatic relations (*inter*-propositional relations) in Māori.[175] That study was based on a model outlined by Crombie (1985a). In that study, he examined the encodings of a number of *inter*-propositional relations, drawing on a written corpus of texts.[176] He did not, however, analyse these texts as a whole. Rather, he abstracted examples of each of the following relations: *Reason-Result*; *Means-Purpose*; *Condition-Consequence*; *Denial-Correction*; *Concession-Contraexpectation*; *Simple Comparison*; *Chronological Sequence* (referred to here as *Temporal Sequence*); *Temporal Overlap*; *Supplementary Alternation*; *Amplification* (referred to here as *General-Particular*); and *Bonding* (including *Rhetorical Coupling*). He introduced that corpus-based study (Houia, 2001a, pp. 64-118) by a discussion in which he made use of his own intuitions as a native speaker of Māori (from Ngāti Porou) to provide examples of the whole range of *inter*-propositional relationships outlined in the relational model he used. In the *Tables* that follow, the examples provided by Houia on the basis of native speaker intuition alone are indicated by a single reference (to Houia's thesis); where Houia provides one or more examples from the corpus, one of these is selected and a double reference is provided – a reference to page numbers in the corpus (in which AP = Apirana Ngata and RK = Reweti Kōhere) and a reference to page numbers in his thesis.

I have done this so that readers are aware of the cases in which no corpus-based examples were provided by Houia. This does not mean that there were no examples of the signals in Houia's corpus. Rather, where he was able to provide

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[175] A number of works dealing with discourse relations in written Māori have become available in the last few years: Crombie and Houia (2001), Houia (2001a, 2001b, 2002) and Houia-Roberts (2003, 2004a, 2004b).

[176] The corpus was drawn from Kaa and Kaa (1994, 1996).

examples on the basis of native-like intuition, he may not have sought similar examples in his corpus either (a) because he did not consider it necessary to do so, or (b) because the discourse relations with which they are associated were not included in the corpus-based section of his study. Even so, it may be useful for future researchers, particularly those who are interested in tracking language change, to be aware of cases where the examples provided have not yet been recorded in early twentieth century texts.

In discussing the encoding and signalling of *inter*-propositional relationships, Houia (2001a) considers the concept of 'cohesion' to be central, noting that "although the relationships between propositions expressed in texts may be inferred by readers and listeners from content and context, these relationships may also be encoded in languages in ways that signal the relational meanings involved". That is, aspects of the encoding of *inter*-propositional relations may act as "indicators of the type of relationship involved" (p. 19). These indicators may be "syntactic or lexical or they may involve both syntax and lexis", they may be "unambiguous (as in the case of certain types of subordination)" or they may, "as in the case of the contrastive co-ordinator 'engari' signal the presence of a certain general type of relationship (e.g., a relationship of contrast) rather than the specific relationship of that type that is involved". These signallers "may operate at clausal or sentential level (as in the case of subordinators), or they may operate at a higher level (as in the case of certain adjuncts such as 'otirā' which may, for example, link the content of an entire paragraph to the content of the preceding text" (p. 19).

***Table 5.3*: Summary of *Reason-Result* signalling (Houia, 2001a)**

Relation	Signal		Examples
Reason-Result[177]	**subordinating conjunction**	*inā* (now that)	***Inā*** *kua pāhi ia i te whakamātau, . . .* SUBJ TAM V PRO PR DET N now that PRF pass he the test *. . . ka āhei ia ki te taraiwa.* TAM V PRO PR DET N Unspec able he to the drive (**Now that** he's passed the test, he can drive.) (Houia, 2001a, p. 51).

[177] Bauer (1997, p. 380) observes that when *Reason* phrases are introduced by *mā* and *nā* and are fronted, *ai* is required if the TAM is *e* or *i* (Houia, 2001a, p. 74). However, Houia provides 13 examples in which the *Reason* clause occurs before the matrix clause although the main verb of the matrix is not followed by *ai* (pp. 71-74). Bauer (1997, p. 384) states that if result clauses have *i* or no TAM, then *ai* is required (Houia, 2001a, p. 74). This was the case in many of the examples

***Table 5.3 (continued)*: Summary of *Reason-Result* signalling (Houia, 2001a)**

Relation	Signal		Examples
Reason-Result	**subordinating conjunction**	*nō te mea; nā te mea; i te mea;* (because)	*E takahi ana i te tekiona 15 . . .* TAM V TAM PR DET N N CONT trample CONT the section 15 *. . . **nō te mea** torutoru o aua tangata i . . .* SUBJ N PR DET N PR because few of those people *. . . hokohoko e whiwhi ana i te . . .* V TAM V TAM PR DET sell CONT possess CONT the *. . . whenua i kō atu.* N PR LOC DIR land yonder away (Section 15 is unacceptable (result/ conclusion) **because** very few of those people who have sold, possess any lands beyond these (reason/ justification)). (Houia, 2001a, p. 66); (A.N. p.33, L.30) ***Nā te mea,** he mahana te wai, kāore . . .* CONJ DET ADJ DET N NEG because IND warm the water no *. . . au e inu.* PRO TAM V I NPAST drink (**As** the water is warm, I won't have a drink.) (Houia, 2001a, p. 50). ***I te mea** ka whānau a Raupare, . . .* CONJ TAM V PERS N because Unspec born Raupare *. . . ka mahara a Taraia ākuanei ka . . .* TAM V PERS N ADV TAM Unspec think Taraia presently Unspec *. . . tupu hei wahine ka riro te mana . . .* V PR N TAM V DET N grow woman Unspec acquire the authority *. . . o Heretaunga i te tangata kē.* PR N PR DET N MAN of Heretaunga by the person different (**Because** Raupare was born a girl (reason), Taraia thought that when she attained womanhood, the autonomy of Heretaunga would be inherited by an outsider (result)). (Houia, 2001a, pp. 72-73); (R.K. p.23, L.6)
	preposition	*i* (because of)	*I nui te kata **i** ō kōrero.* TAM ADJ DET N PR POSS N PAST great the laugh your(pl.) word (I was greatly amused **because of** your words.) (Houia, 2001a, p. 74); (R.K. p. 27, L.31).

in Houia's corpus but a number of examples did have *i* as a TAM without *ai* (active and passive and in the context of negation) (Houia, 2001a, p. 74).

***Table 5.3 (continued)*: Summary of *Reason-Result* signalling (Houia, 2001a)**

Relation	Signal		Examples
Reason-Result	**preposition**	*nā (runga)* (because of)	*Nā runga i tēnei mea a te hoko . . .* PR LOC PR DEM N PR DET N on this thing of the sell *. . . ka tae mai au ki konei.* TAM V DIR PRO PR LOC Unspec arrive hither I to here (**Because of** the matter pertaining to sales, I have come here.) (Houia, 2001a, p. 70); (A.N. p. 35, L.37). *Nā te whakapono i hiki te wahine . . .* PR DET N TAM V DET N the faith PAST raise the women *. . . kia tū rangatira.* TAM V N to stand noble (It was faith that raised women to establish themselves as leaders.) (Houia, 2001a, p. 73); (R.K. p. 22, L20).
	preposition	*mō* (implied reason)	*Ko te tino take o te kino a. . .* FM DET MAN N PR DET N PR the very reason of the bad of *. . . Ngāpuhi ki a Ngāti Porou **mō** te . . .* N PR PERS N N PR DET Ngāpuhi to Ngāti Porou for the *. . . patu-nga me te kai-nga a . . .* N-Canga CONJ DET N-Canga PR killing and the eating of *. . . Ngāti Porou i te tuahine o Te Morenga.* N N PR DET N PR N Ngāti Porou the sister of Te Morenga (The real reason for Ngāpuhi's anger with Ngāti Porou **was** the cannibalising of Te Morenga's sister by Ngāti Porou.) (Houia, 2001a, p. 80); (R.K. p. 15, L.12).
	preposition (complex)	*mō runga* (as a consequence)	*Ka whaka-puta ia i tōna pāmamae . . .* TAM CAUS-V PRO PR POSS N Unspec bring forth he his pain *. . . **mō runga** i ngā mahi āhuareka a . . .* (PRC LOC) PR DET-PL N ADJ PR for on the work entertaining of *. . . Ngāti Porou e rangirangi ana . . .* N N TAM V TAM Ngāti Porou CONT annoy CONT *. . . ā rātou waiata i ngā rangatira o waho.* POSS N PR DET-PL N PR LOC their(3+, pl.) song the chief of outside (He expressed his resentment (result), **as a consequence** of the entertainment in which Ngāti Porou songs denigrated the chiefs from outside the area (reason)). (Houia, 2001a, p. 66); (A.N. p. 2, L.2).

***Table 5.3 (continued)*: Summary of *Reason-Result* signalling (Houia, 2001a)**

Relation	Signal		Examples
Reason-Result	**preposition (complex)**	*i runga* (because of)	*I pā he mate ki a Ngāti . . .* TAM V DET N PR PERS N PAST touch IND disadvantage to Ngāti *. . . Porou i tēnei tau ka taha atu nei . . .* N ADV TAM V DIR PP Porou this year Unspec pass away here *. . . **i runga** i ngā hoko whenua . . .* (PRC LOC) PR DET-PL V N on the sell land *. . . a te kāwanatanga.* PR DET N of the government (Ngāti Porou was placed in an adverse situation last year **because of** government land sales.) (Houia, 2001a, p. 69); (A.N. p. 33, L. 14).
	noun	*take*[178] (reason)	*He **take** anō i hohoro tonu ai . . .* DET N PP TAM V MAN PP IND reason again PAST speedy indeed *. . . taku tuhituhi arā, he kupu mai . . .* POSS N DEM-DET DET N DIR my write that is IND word hither *. . . nā ngā tamariki mātau o . . .* PR DET-PL N ADJ PR from the children knowledgeable of *. . . Pōneke.* N Wellington (Another **reason** that I respond immediately in writing (result) is that the learned students [request it] from Wellington (reason)) (Houia, 2001a, p. 74); (R.K. p. 113, L.15).
	subordinator or sentence conjunct	*nā reira*[179] (hence; therefore)	*Ka whai kete kai, **nā reira** ka . . .* TAM V N N SCON TAM Unspec possess basket food hence Unspec *. . . tae mai ki ngā rohe o Ngāti Porou . . .* V DIR PR DET-PL N PR N N arrive hither to the area of Ngāti Porou *. . . kōrero ai i ngā mahi a te . . .* N PP PR DET-PL N PR DET discuss the work of the *. . . pāremata i Pōneke.* N PR N parliament in Wellington (I possess a basket of knowledge, **hence** I come to the area of Ngati Porou to discuss what the parliament has achieved in Wellington.) (Houia, 2001a, p. 77); (A.N. p. 26, L7).

[178] Occurs in initial result member where it prefigures following reason member. Frequently occurs as part of a phrase that includes a quantifier.

[179] Introduces a reason member which follows a result member.

***Table 5.4*: Summary of *Grounds-Conclusion* signalling (Houia, 2001a)**

Relation	Signal		Examples
Grounds-Conclusion	**subordinator or sentence conjunct**	*nā reira*[180] (so; therefore)	*Ko te tino mate o te āhua o . . .* FM DET MAN N PR DET N PR the very dead of the appearance of *. . . tērā kau, **nā reira** ka kī au . . .* DEM N SCON TAM V PRO that cow so Unspec conclude I *koirā pea te mea i kī rā . . .* DEM-DET ADV DET N TAM V PP that is perhaps the thing PAST say there *. . . a Mere i te mate pupuhi.* PERS N PR DET N ADJ Mary the sick flu (That cow looks so ill **so/therefore** I conclude that she must be the one that Mary said had flu.) (Houia, 2001a, p. 52).
	preposition	*hei*[181] (because (of)	*Moumou te whenua mō te Māori o . . .* N DET N PR DET N PR waste the land for the Māori of *. . . nāianei **hei** hoatu kē mō ētahi hei . . .* ADV PR N MAN PR DET-PL PR now because give instead for some for *. . . rīhi.* N lease (There is no gain for Maori of today in possessing land (result/ conclusion) **because** they will only lease it out to others (reason)) (Houia, 2001a, p. 79); (R.K. p. 32, L.11).

***Table 5.5*: Summary of *Means-Result* signalling (Houia, 2001a)**

Relation	Signal		Examples
Means-Result	**preposition**	*mā* (by)	*I whakapuare ia i te tatau **mā** te. . .* TAM CAUS-V PRO PR DET N PR DET PAST open he the door by the *. . . whakatakawiri.* N catch (He opened the door **by** twisting the catch.) (Houia, 2001a, p. 51).

[180] Introduces grounds member following conclusion member.
[181] Introduces grounds member following conclusion member.

***Table 5.6*: Summary of *Means-Purpose* signalling (Houia, 2001a)**

Relation	Signal		Examples
Means-Purpose	**subordinating conjunction**	*kia* (so that)	*Uta-in atu aku kōrero ki runga i ō . . .* V-PASS DIR POSS N PR LOC PR POSS carry away my (pl.) word to on your (pl.) *. . . parirau, **kia** kite mai ōku hoa . . .* N SUBJ V DIR POSS N wing so that see hither my (pl.) friend *. . . o te motu.* PR DET N of the land (Carry my words on your wings **so that** my friends of the land can see them.) (Houia, 2001a, p. 84); (R.K. p. 117, L.23).
	correlative co-ordinating conjunction	*kia . . .* *ai*[182] (so that)	*Tango-hia he kape o Te Toa Takitini o . . .* V-PASS DET N PR N N N PR acquire IND copy of Te Toa Takitini of *. . . Hānuere mā koutou, **kia** kite **ai** koutou . . .* N PR PRO CONJ V CONJ PRO January for you (3+) so that see you (3+) *. . . i ngā kōrero a te Poari whakahaere . . .* PR DET-PL N PR DET N CAUS-V the say of the board administer *. . . i ngā take tawhito a ngā . . .* PR DET-PL N ADJ PR DET-PL the report old of the *. . . iwi Māori o ngā moutere katoa* N ADJ PR DET-PL N N people Māori of the island all (Obtain an edition of the Te Toa Takitini for yourselves (means) **in order that** you may see the reports of the controlling Board administering long-standing issues of all Maori people everywhere (purpose)). (Houia, 2001a, p. 84); (A.N. p.124, L.34)
	preposition	*kei* (so as) to)	*. . . kei te ruku tonu a Te Ao, kia . . .* TAM V MAN PERS N CONJ CONT dive still Te Ao so that *. . . whiwhi koura ia **kei** hoki tahanga . . .* V N PRO PR V ADJ possess crayfish she to avoid return empty *. . . tana kete.*[183] POSS N her kit (Te Ao was still diving, so that she may find some crayfish **to** avoid returning with an empty kit.) (Houia, 2001a, p. 93); (R.K. p. 19, L.26).

[182] Bauer notes (1997, p. 379) that, with experience verbs, passives or intransitives, there may be no particle but that when clauses expressing purpose occur before the matrix clause, the matrix clause is followed by *ai* (p. 379). In particular, she observes that the particle never occurs where the verb is *kite* (Houia, 2001a, p. 83). Houia notes that *kite* does occur with *ai* in his corpus (p. 83). He also notes that *kia* may occur without *ai* in a sentence that does not contain an experience verb, or passive, and is not intransitive (p. 87).

[183] Classified by Houia as involving *Condition-Consequence* but appears to involve *Means-Purpose*.

***Table 5.7*: Summary of *Condition-Consequence* signalling (Houia, 2001a)**

Relation	Signal		Examples
Condition-Consequence	**subordinating conjunction**	*me mea; mehemea* (if)	***Mehemea*** *i whaka-haere-a i raro . . .* SUBCONJ TAM CAUS-V-PASS PR LOC if PAST administer under *. . . i te Ture Hoko Whakawhiwhi Whenua 1893,. . .* PR DET N V V N N at the Ture Hoko Whakawhiwhi Whenua 1893 *. . . e takahi ana aua hoko i . . .* TAM V TAM DEM-PL N PR CONT trample CONT that sale *. . . taua ture.* DEM N that legislation (**If** it was administered under the provisions of the Ture Hoko Whakawhiwhi Whenua of 1893 then those sales were contrary to that legislation.) (Houia, 2001a, p. 88); (A.N. p. 33, L. 29).
	subordinating conjunction	*mēnā* (if; so long as)	*Ko te kī a ēnei kupu,* ***mēnā*** *. . .* FM DET N PR DEM-PL N SUBCONJ the say of these word if *. . . kāre te pakanga o te Poa, e . . .* NEG DET N PR DET N TAM not the war of the Boar NPAST *. . . kore e kite-a te hōhonu-tanga o . . .* NEG TAM V-PASS DET N-Canga PR not NPAST see the depth of *. . . te āhua o te Ingarihi.* DET N PR DET N the appear of the English (These words are saying, **if** it were not for the outbreak of the Boer War (condition), we would not have seen the depth of quality of the English (consequence)). (Houia, 2001a, p. 92); (A.N. p. 273, L.14).
	subordinating conjunction	*inā* (if; provided (that))	***Inā*** *ka tae moata mai koe . . .* SUBCONJ TAM V ADV DIR PRO if Unspec arrive early hither you *. . . ka āhei koe ki te hianga.* TAM V PRO PR DET N Unspec able you to the play (**Provided (that)** you get in early, you can play.) (Houia, 2001a, p. 53).
	subordinating conjunction	*ki te* (if; assuming (that))	***Ki te*** *whaka-nanu-a e koe te . . .* SUBCONJ CAUS-V-PASS PR PRO DET if mix by you the *. . . whero me te kōwhai ka puta . . .* N CONJ DET N TAM V red and the yellow Unspec appear *. . . mai he tuhi paruparu, tā oneone . . .* DIR DET N ADJ N N hither IND draw dirty print soil *. . . noa iho.* MAN DIR freely downward (**If** you mix red with yellow (condition), a dirty colour is the result (consequence), only useful for marking soil) (Houia, 2001a, p. 93); (A.N. p. 56, L. 21).

Table 5.7 (continued): **Summary of *Condition-Consequence* signalling (Houia, 2001a)**

Relation	Signal		Examples
Condition-Consequence	**subordinating conjunction**	*mā* (unless; if . . . not)	*Mā tō wehe ināianei tonu, e . . .* SUBCONJ POSS N ADV MAN TAM unless your leave now indeed NPAST *. . . kore koe e tae ki te kāinga.* NEG PRO TAM V PR DET N not you NPAST arrive to the home (**Unless** you leave now, you won't get home.)[184] (Houia, 2001a, p. 54).

Table 5.8: **Summary of combined *Reason-Result* and *Condition-Consequence* signalling in Houia (2001a)**

Relation	Signal		Examples
Reason-Result and Condition-Consequence (negative condition)	**subordinating conjunction**	*me mea; mehemea* (if)	*Kua mahi-a e au **me mea** i . . .* TAM V-PASS PR PRO SUBCONJ TAM PRF do by I if PAST *. . . whai taima.* V N possess time (I'd have done it **if** there had been time.) (unrealisable condition).(Houia, 2001a, p. 53). ***Mehemea** i whaka-haere-a i raro . . .* SUBCONJ TAM CAUS-V-PASS PR LOC if PAST administer under *. . . i te Ture Hoko Whakawhiwhi Whenua 1893,. . .* PR DET N V V N N at the Ture Hoko Whakawhiwhi Whenua 1893 *. . . e takahi ana aua hoko i . . .* TAM V TAM DEM-PL N PR CONT trample CONT that sale *. . . taua ture.* DEM N that legislation (**If** it was administered under the provisions of the Ture Hoko Whakawhiwhi Whenua of 1893 (condition), then those sales were contrary to that legislation (consequence)). (Houia, 2001a, p. 85); (A.N. p. 3, L.29).
	subordinating conjunction	*kei*[185] (in case, i.e., if not . . . then)	*Kāore ngā tungāne i whaka-ae . . .* NEG DET-PL N TAM CAUS-V not the brother PAST consent ***. . . kei** kite-a mai hoki e te tāne.* SUBCONJ V-PASS DIR PP PR DET N lest see hither also by the husband (The brothers would not consent . . . **lest** she be seen by her husband.) (Houia, 2001a, p. 75); (R.K. p. 2, L.13).

[184] Classified by Houia as *Reason-Result* but appears to be a straightforward example of *Condition-Consequence* (negative condition).

[185] *Kei* also occurs in the context of *Means-Purpose*.

Table 5.9: **Summary of *Concession-Contraexpectation* signalling in Houia (2001a)**

Relation	Signal		Examples
Concession-Contraexpectation	**subordinating conjunction or sentence conjunct**	*ahakoa* (although)	***Ahakoa*** *he maha ngā wāwāhanga . . .* SUBCONJ DET N DET-PL N although IND many the division *. . . ririki o roto i runga i te āhua . . .* ADJ PR LOC PR LOC PR DET N small of inside on at the form *. . . o ngā karakia, he iwi tēnei . . .* PR DET-PL N DET N DEM of the prayer IND tribe this *. . . e kotahi rawa ana te whaka-aro . . .* TAM N MAN TAM DET CAUS-V CONT one quite CONT the think *. . . mō runga i ngā mate me . . .* PR LOC PR DET-PL N CONJ for on the defeat and *. . . ngā huarahi ora.* DET-PL N ADJ the road well (**Although** there are many small divisions within the forms of their church services (concession), these people are of one mind in their thinking in respect of their failures and positive progress (contraexpectation)). (Houia, 2001a, pp. 95-96); (A.N. p. 47, L.33).
	phrasal subordinator	*ahakoa ōku ake* (for all I care; for all it matters)	***Ahakoa ōku ake*** *whaka-aro, me noho . . .* (CONJ POSS DIR) CAUS-V TAM V although my upward think OBLIG stay *. . . ia ki te kāinga.* PRO PR DET N he at the home (**For all it matters** to me, he can stay at home.) (Houia, 2001a, p. 56).
	co-ordinating conjunction	*engari*[186] (but; however)	*I taku tau tuatahi kāore he . . .* PR POSS N ADJ NEG DET in this year first not IND *. . . mahi i oti.* ***Engari*** *i . . .* N TAM V CONJ PR work PAST complete however in *. . . tēnei tau.* DET N this year (During my first year no work was completed. However, this year [it has been completed]). (Houia, 2001a, p. 96); (A.N. p. 36, L.6).

[186] *Engari* is a general contrastive signal that frequently occurs in the context of *Concession-Contraexpectation.*

***Table 5.9 (continued)*: Summary of *Concession-Contraexpectation* signalling in Houia (2001a)**

Relation	Signal		Examples
Concession-Contraexpectation	**co-ordinating conjunction**	*otirā* (nevertheless; however)	*I āhua pakaru i reira te . . .* TAM N ADJ PR LOC DET PAST somewhat broken at there the *. . . āhua o te whaka-aro o te . . .* N PR DET CAUS-V PR DET appear of the think of the *. . . tangata. **Otirā** nō te hui ki . . .* N CONJ PR DET N PR people however in the meeting at *. . . Mataahu i te tau 1892, ka . . .* N PR DET N N TAM Mataahu of the year 1892 Unspec *. . .whaka-kotahi-tia anō te whaka-aro . . .* CAUS-V-PASS PP DET CAUS-V unite again the think *. . . o te tangata.* PR DET N of the people (Although the opinions at this point became somewhat divided, **however** it was not till the meeting of 1892 that they were once again united.) (Houia, 2001a, p. 102); (A.N. p. 35, L.3).

***Table 5.10:* Summary of *Simple Contrast* signalling in Houia (2001a)**

Relation	Signal	Examples
Simple Contrast	**repetition and replacement (with substitution and/ or ellipsis)**	*He Ngāpuhi ia; he Ngāi Tahu ia.* DET N PRO DET N N PRO IND Ngāpuhi he IND Ngāi Tahu she (He was Ngāpuhi; she was Ngāi Tahu.) (Houia, 2001a, p. 54).

***Table 5.11:* Summary of *Simple Comparison* signalling in Houia (2001a)**

Relation	Signal		Examples
Simple Comparison	**co-ordinating conjunction + nominal/ verbal/ adverbial/ adjectival substitute + (adverb)**	*ā . . . pērā/ (anō)* [187] (and so)	*I te mataku ahau ā i te . . .* TAM V PRO CONJ TAM PAST-CONT afraid I and PAST-CONT *. . . **pērā anō** a Tame.* V PP PERS N like that again Tom (I was afraid **and so** was Tom.) (Houia, 2001a, p. 57).

[187] Bauer (1997, pp. 417 - 418) observes that equal degree sentences in Māori may include the state intransitive verb *rite* or the *pē* forms (*pēnei/ pena/ pērā*). With the *pē* forms, the equative preposition is often *me*, rather than *i* or *ki* (Houia, 2001a, p. 103).

Table 5.11 (continued): **Summary of *Simple Comparison* signalling in Houia (2001a)**

Relation	Signal		Examples
Simple Comparison	**nominal/ verbal/ adverbial/ adjectival substitute and/ or ellipsis**	*pēnei . . .* *(anō)* (this is like)	*"Tū noa ana ngā tū-ranga i Kaitu . . .* V MAN TAM DET-PL N-Canga PR N stand freely the place at Kaitu *. . . ka ngaro a Ririhape nui a tau." . . .* TAM V PERS N Unspec disappear *Ririhape nui a tau* *. . . **Pēnei anō** hoki me koe ka ngaro nei* N PP PP CONJ PRO TAM V PP like that again also and you Unspec lost here (When the confrontation occurs at Kaitu, then Ririhape disappears. **This is like** you who have departed). (Houia, 2001a, p. 103); (R.K. p. 12, L.19).

Table 5.12: **Summary of *Exception* signalling in Houia (2001a)**

Relation	Signal		Examples
Exception	**preposition (complex)**	*i tua mai* (exception)	*Ko te katoa **i tua mai** i a Hine . . .* FM DET N (PR N DIR) PR PERS N the all except Hine *. . . i wehe moata.* TAM V ADV PAST leave early (Everyone **except** Hine left early.) (Houia, 2001a, p. 55).
	subordinating conjunction	*hāunga*[188] (disregarding)	*Mā ia iwi, hapū rānei, e . . .* PR DET N N CONJ TAM for each tribe sub-tribe or NPAST *. . . whaka-rite ngā rāhui mō tōna . . .* CAUS-V DET-PL N PR POSS arrange the reserve for their *. . . takiwā, me uru mai ki roto ngā . . .* N TAM V DIR PR LOC DET-PL district OBLIG enter hither to in the *. . . whenua e rīhi ana **hāunga** . . .* N TAM V TAM SUBCONJ land CONT lease CONT disregarding *. . . ngā hea kua hoko-a.* DET-PL N TAM V-PASS the share PRF sell (Each tribe, or clan, can decide the reserves for their own interests including lands being leased out, **disregarding** [except for] the shares that have been sold.) (Houia, 2001a, p. 101); (A.N. p. 183, L.14).

[188] Houia claims that *hāunga* occurs in the context of a specific type of *Concession-Contraexpectation* in which the second member of the relation makes reference to a concession that is exclusive in nature. In fact, however, Houia's examples indicate exception rather than concession (p. 101).

Table 5.13: **Summary of *Exemplification* signalling in Houia (2001a)**

Relation	Signal		Examples
Exemplification	**preposition complex**	*inā koa* (for example)	*I whaka-pau moni te katoa.* ***Inā koa*** . . . TAM CAUS-V N DET N PRC PP PAST consume money the all for example . . . *a Kararaina i hoko mai i te* . . . PERS N TAM V DIR PR DET Kararaina PAST buy hither the . . . *tekau mā rima kaka.* N PR N N ten and five dress (Everyone spent up large. Kararaina, **for example**, bought fifteen dresses.) (Houia, 2001a, p. 59).

Table 5.14: **Summary of *Statement-Affirmation* signalling in Houia (2001a)**

Relation	Signal		Examples
Statement-Affirmation	**co-ordinating conjunction + verb**	*whakaae* (verb) (with replacement of subject)) (agree)	*I kī ia rā kē a Mere te* . . . TAM V PRO DIR PP PERS N DET PAST say he there instead Mary the . . . *noho i runga waireka, ā,* . . . N PR LOC N CONJ stay on soft drink and . . . *e* ***whaka-ae*** *ana au.* TAM CAUS-V TAM PRO CONT agree CONT I (He said that Mary should have stuck to soft drinks and I **agree**.) (Houia, 2001a, p. 59).

Table 5.15: **Summary of *Denial-Correction* signalling in Houia (2001a)**

Relation	Signal		Examples
Denial-Correction	**co-ordinating conjunction**	*heoi anō* (but)	. . . *kāhore e kōrero, kāhore e katakata,* . . . NEG TAM V NEG TAM V no NPAST say no NPAST laugh . . . ***heoi anō*** *ka whaka-poururu tonu.* CONJ TAM CAUS-V MAN but Unspec gloomy indeed (He did not speak, he did not laugh, **but** continued to be gloomy.) (Houia, 2001a, p. 94); (A.N. p. 19, L.13).
	quasi-coordinator	*i te* (rather than)	. . . *kia rāhui-tia ō rātou toe-nga whenua* . . . TAM V-PASS POSS N-Canga N reserve their (3+) remain land . . . ***i te*** *hoko kāwanatanga i ētahi* . . . (PR DET) Ncomp (V + N) PR DET-PL rather than buy government some (pl.) . . . *atu hoko rānei.* DIR N CONJ away buy or (. . . that their remaining lands be reserved (correction) **rather than** be purchased by government, or by any other forms of purchase (denial) (Houia, 2001a, p. 94); (A.N. p. 33, L.24).
	repetition/ replacement (with negator in one member)	*ehara* (not)	***Ehara*** *ia i te māhita; he minita pāremata ia.* NEG PRO PR DET N DET N ADJ PRO not he the teacher IND minister parliament he (He **isn't** a teacher; he's a politician.) (Houia, 2001a, p. 94).

Table 5.16: **Summary of *Contrastive Alternation* signalling in Houia (2001a)**

Relation	Signal		Examples
Contrastive Alternation	**co-ordinating conjunction**	*rānei . . . rānei* (either . . . or)	*E noho* ***rānei*** *e wehe atu* ***rānei.*** TAM V CONJ TAM V DIR CONJ NPAST stay or NPAST leave away or (**Either** stay **or** leave.) (Houia, 2001a, p. 57). *He pai* ***rānei*** *he kino* ***rānei.*** DET ADJ CONJ DET ADJ CONJ IND good either IND bad or (It's **either** good **or** bad.) (Houia, 2001a, p. 57).

Table 5.17: **Summary of *Supplementary Alternation* signalling in Houia (2001a)**

Relation	Signal		Examples
Supplementary Alternation	**co-ordinating conjunction**	*rānei* (or)	*Engari kaua ā rātou tika-nga me. . .* CONJ NEG POSS N-Canga CONJ but do not their (3+, pl.) rule and *. . . ngā whaka-haere, e takahi i. . .* DET-PL CAUS-V TAM V PR the conduct NPAST undermine *. . . ngā tika-nga o ngā ture o te . . .* DET-PL N-Canga PR DET-PL N PR DET the rule of the law of the *. . .Koroni, o ngā kaute kaunihera* ***rānei.*** N PR DET-PL N ADJ CONJ Colony of the account council or (However, do not let their rules and conduct undermine the laws of the colony **or** of the council accounts either.) (Houia, 2001a, p. 110); (A.N. p. 32, L.12).

Table 5.18: **Summary of *Temporal Sequence* signalling in Houia (2001a)**[189]

Relation	Signal		Examples
Temporal Sequence	**subordinating conjunction**	*tae noa atu* (till; until)	*Māku e mātaki te pēpi* ***tae noa atu . . .*** ACT TAM V DET N (V MAN DIR) I will NPAST watch the baby arrive freely away *. . . ki te mutu-nga o ō mahi.* PR DET N-Canga PR POSS N to the finish of your (pl.) work (I'll watch the baby **till** you finish your work.) (Houia, 2001a, p. 61).
	subordinating conjunction	*kia . . . rawa* (till; until)	*Ka tiaki au i a Hēmi* ***kia. . .*** TAM V PRO PR PERS N TAM Unspec take care I James *. . . mutu* ***rawa*** *i a koe ō mahi.* V MAN PR PERS PRO POSS N finish until you your (pl.) work (I'll mind James **until** you've finished your work.) (Houia, 2001a, p. 62).

[189] Classified by Houia as *Chronological Sequence.*

Table 5.18 (continued): **Summary of *Temporal Sequence* signalling in Houia (2001a)**

Relation	Signal		Examples
Temporal Sequence	**subordinating conjunction**	*nō muri i* (after)	*Nō **muri i** tana kai-tanga i te ika, . . .* (PR LOC PR) POSS N-Canga PR DET N behind his eat the fish *. . . ka inu ia i te wai.* TAM V PRO PR DET N Unspec drink he the water (**After** he had eaten the fish, he drank the water.) (Houia, 2001a, p. 61).
	subordinating conjunction	*i mua i* (before)	***I mua i** tō haere-nga, whāngai-a . . .* (PR LOC PR) POSS N-Canga V-PASS front your leave feed *. . . te kuri.* DET N the dog (**Before** you leave, feed the dog.) (Houia 2001a, p. 62).
	subordinating conjunction	*ana* (once; after)	*Wehe **ana** ia, ka pānui-tia e . . .* V SUBJ PRO TAM V-PASS PR leave he Unspec read by *. . . au te niupepa.* PRO DET N I the newspaper (**Once** he leaves, I'll read the newspaper.) (Houia 2001a, p. 62).
	subordinating conjunction	*i runga tonu* (as soon as)	*Hou atu ki te rūma **i runga tonu** . . .* V DIR PR DET N (PR LOC MAN) enter away to the room on indeed *. . . i tāu e tae-a ai.* PR POSS TAM V-PASS PP your NPAST able (Go into the room **as soon as** possible.) (Houia 2001a, p. 62).
	sentence conjunct	*i taua wā tonu* (whereupon)	*Ka aituā te motokā **i taua wā tonu** . . .* TAM V DET N (TAM DEM N MAN) Unspec crash the car (PAST that time indeed) *. . . ka umere a Hine.* TAM V PERS N Unspec scream Hine (The car crashed **whereupon** Hine screamed.) (Houia 2001a, p. 62).

Table 5.18 (continued): **Summary of *Temporal Sequence* signalling in Houia (2001a)**

Relation	Signal		Examples
Temporal Sequence	**verb**	*mutu*[190] (complete; over)	*Ka* ***mutu*** *ngā karanga ka . . .* TAM V DET-PL N TAM Unspec complete the call of welcome Unspec *. . . haere ngā kupu whaka-hoki.* V DET-PL Ncomp (N + CAUS-V) move the word reply (When the calls of welcome were over, the speeches of reply followed) (Houia, 2001a, p. 104); (A.N.p.25, L.39).

Table 5.18: **Summary of *Temporal Sequence* signalling in Houia (2001a)**

Relation	Signal		Examples
Temporal Sequence	**sentence conjunct**	*ā*[191] (and)	*Kāti ka tono-a ki te kāwanatanga kia . . .* SCON TAM V-PASS PR DET N TAM so Unspec request to the government *. . . rāhui-tia ō tātau whenua i roto i te . . .* V-PASS POSS N PR LOC PR DET reserve our (3+, pl.) land in at the *. . .rārangi i raro nei. Ā, ka tono-a . . .* N PR LOC PP SCON TAM V-PASS list below here and Unspec request *. . .kia whaka-kore-a ngā hoko.* TAM CAUS-V-PASS DET-PL N forbid the sale (In conclusion, it was forwarded to the government that our lands listed below be reserved. **And** then it was also requested that sales be forbidden.) (Houia, 2001a, p. 102); (A.N. p. 34, L.3).
	verb	*oti* (finish)	*Kia* ***oti*** *ēnei mā koutou e āpiti . . .* TAM V DEM-PL PR PRO TAM V finish these for you (3+) NPAST add *. . . mai ērā atu tino take mārama, . . .* DIR DEM-PL DIR MAN N ADJ hither that away very statement clear *. . . ā, hei muri ka whaka-takoto ai ki . . .* CONJ PR LOC TAM CAUS-V PP PR and behind Unspec lay down to *. . . te aroaro o te kāwanatanga.* DET N PR DET N the before of the government (When these are **finished**, you may add other clear statements, and following that, you may present it before government.) (Houia, 2001a, p. 102); (A.N. p. 32, L.25).

[190] Bauer (1997, p. 129) notes that *mutu* signals completion of one event or situation prior to another (Houia, 2001a, p. 104).

[191] The existence of chronological sequence seems to be signalled by the multi-functional *ā*, operating in this context as a marker of delayed time (p. 105).

Table 5.19: **Summary of *Temporal Overlap* signalling in Houia (2001a)**

Relation	Signal		Examples
Temporal Overlap	**subordinating conjunction**	*kei . . . ana* (while)	*Māku e tapahi ngā peka* ***kei*** . . . ACT TAM V DET-PL N TAM I will NPAST cut the branch . . . *maoa* ***ana*** *ngā kai.* V TAM DET-PL N cook the food (I'll cut the wood **while** the dinner is cooking.) (Houia, 2001a, p. 63).
	TAM + TAM	*e . . . ana . . . ka* (ongoing) + (inceptive)[192]	***E*** *ahu* ***ana*** *āna kōrero mō* . . . TAM V TAM POSS N PR CONT emanate CONT his (pl.) saying for . . . *runga i āna mahi i te Pāremata* . . . LOC PR POSS N PR DET N on his (pl.) work the parliament . . . ***ka*** *aruaru-tia* . . . TAM V-PASS Unspec interrupt (He was talking about his performance in parliament when he was interrupted . . .) (Houia, 2001a, pp. 108-109); (A.N. p. 26, L.8).
	Preposition + TAM	*i . . . ka* (as)	***I*** *a ia* ***ka*** *whaka-tata atu ki* . . . PR PERS PRO TAM CAUS-V DIR PR he Unspec approach away to . . . *te rua o te poutokomanawa, ka* . . . DET N PR DET N TAM the hole of the heartpole Unspec . . . *karanga atu a Hinepare ki a* . . . V DIR PERS N PR PERS call away Hinepare to . . . *Tuwhakawhiurangi, i kō tata atu* . . . N PR LOC ADJ DIR Tuwhakawhiurangi near close away . . . *e tū mai ana* . . . TAM V DIR TAM CONT stand hither CONT (**As** he was getting close to the hole of the heartpole, Hinepare called Tuwhakawhiurangi who was standing close by to her . . .) (Houia, 2001a, p. 109); (R.K. p. 23, L.18).
	phrasal co-ordinating conjunction + TAM	*i te . . . ka* (while; when)	***I*** *te tima* ***ka*** *rere* ***ka*** *mate* . . . (PR DET) N TAM V TAM V while steamer Unspec flow Unspec die . . . *tētahi o ngā heramana, ka ruke-a* . . . DET PR DET-PL N TAM V-PASS one of the sailor Unspec pour . . . *atu ki te moana.* DIR PR DET N away to the sea (**When** the steamer was at sea, one of the sailors died and he was cast into the sea.) (Houia, 2001a, p. 106); (R.K. p. 125, L.6).

[192] Signalled by the fact that the first event is marked as ongoing by the occurrence of the *e . . . ana* and the second event is marked by *ka* used as the inceptive marker (Houia, 2001a, p. 108).

***Table 5.20*: Summary of *Bonding* signalling in Houia (2001a)**

Relation	Signal		Examples
Bonding	**co-ordinating conjunction**	*me* (and)	*. . . kia piripono tonu, ki te mana . . .* TAM V MAN PR DET N embrace still to the authority *. . . o te kuini **me** ōna ture, me te . . .* PR DET N CONJ POSS N CONJ DET of the Queen and her (pl.) law and the *. . . Kāwanatanga o Niu Tīreni mō āianei, ā, . . .* N PR N N PR ADV CONJ Government of New Zealand for now and *. . . ake tonu atu.* N MAN DIR ever indeed away (Let us continue to embrace the authority of the Queen **and** her laws, including the Government of N.Z. from now on, and forever more.) (Houia, 2001a, p. 114) (A.N. p.33, L.16)
	co-ordinating conjunction	*ā*[193] (and)	*Kāti me tono e tātau kia . . .* SCON TAM V PR PRO TAM Now OBILG request by us (3+) *. . . aua whenua kia whaka-uru-a mai . . .* DEM-PL N TAM CAUS-V-PASS DIR that land include hither *. . . ngā whenua karauna i reira ki roto . . .* DET-PL N ADJ PR LOC PR LOC the land crown at there to inside *. . . i te rāhui, ā kia whaka-mutu-a . . .* PR DET N CONJ TAM CAUS-V-PASS the reserve and cease *. . . te mahi a te Pākehā e ngaki . . .* DET N PR DET N TAM V the work of the European NPAST clear *. . . nei i ngā ngahere i reira.* PP PR DET-PL N PR LOC here the forest at there (Now we must request that those lands and the lands of the crown be reserved, **and** that those Europeans who are felling the forests there be stopped.) (Houia, 2001a, p. 110); (A.N. p. 34, L.12).

[193] *Bonding* generally occurs with the most multi-functional of the connectives, that is, *ā* (Houia 2001, p. 113)

***Table 5.20 (continue)*: Summary of *Bonding* signalling in Houia (2001a)**

Relation	Signal		Examples
Bonding	**adverb**	*hoki*[194] (also)	*Ka ngaro koe i ngā marae o te . . .* TAM V PRO PR DET-PL N PR DET Unspec lost you in the courtyard of the *. . . Werengitana Hōtēra, e tū ai koe . . .* N N TAM V PP PRO Wellington Hotel NPAST stand you *. . . i roto i ō iwi maha, hautū ai, . . .* PR LOC PR POSS N ADJ V PP in at your (pl.) people many speak *. . . ka ngaro ana **hoki** koe i roto o . . .* TAM V PP ADV PRO PR LOC PR Unspec lost also you in of *. . . te whare wānanga.* DET N ADJ the house learning (You are now lost in the premises of the Wellington Hotel where you stood within your many tribes speaking eloquently, and you are **also** lost within the University.) (Houia, 2001a, p. 112); (R.K. p. 123, L.26).

In *Table 5.21* following a summary of the overall relational signalling from Houia (2001a) is provided.

[194] In the case of *Rhetorical Coupling*, the relationship between the related states or events is emphasised. In the two examples in the corpus, this emphasis appears to be communicated by the inclusion of *hoki* (Houia, 2001a, p. 114).

Table 5.21: **Discourse relational signalling (*inter*-propositional): Houia (2001a)**[195]

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Temporal	Temporal	*Temporal Sequence*	***tae noa atu***	subordinating conjunction	i.e., till/until
			kia . . . rawa	subordinating conjunction	i.e., till/until
			nō muri mai	subordinating conjunction	i.e., after
			i mua i	subordinating conjunction	i.e., before
			ana	subordinating conjunction	i.e., once/after
			i runga tonu	subordinating conjunction	i.e., as soon as
			i taua wā	sentence conjunct	i.e., whereupon
			mutu	verb	i.e., complete/over
			ka . . . ka	TAM + TAM	i.e., and . . . and
			ā	sentence conjunct	i.e., and
			oti	verb	i.e., finish
		Temporal Overlap	***kei . . . ana***	subordinating conjunction	i.e., while
			e . . . ana ka	TAM (ongoing) + TAM (inceptive)	
			i . . . ka	preposition + TAM	i.e., as
			i te . . . ka	phrasal co-ordinating conjunction + TAM	i.e., while/when
Additive	Bonding	*Bonding* (including *Rhetorical Coupling*)	*me*	co-ordinating conjunction	i.e., and
			ā	co-ordinating conjunction	i.e., and
			hoki	adverb	i.e., also

[195] Bold print in this *Table* indicates signals which were provided by Houia (2001a) on the basis of intuition and which are not also indicated by him as being present his corpus.

Table 5.21 (continued): **Discourse relational signalling (*inter*-propositional): Houia (2001a)**

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Associative	Matching Compatibility	*Paraphrase*			
		Statement-Affirmation	***whakaae* + replacement of subject**	verb + replacement of subject	i.e., agree
		Simple Comparison	***ā . . . pērā/ (anō)***	co-ordinating conjunction + nominal/ verbal/ adverbial/ adjectival substitute + (adverb)	i.e., and so; and X too
			pēnei (anō)	nominal/ verbal/ adverbial/ adjectival substitute and/ or ellipsis	i.e., this is like
		Exemplification	***inā koa***	preposition	i.e., for example
	Matching Contrast	*Simple Contrast*	***he X ia; he Y ia***	repetition and replacement (with substitution and/ or ellipsis)	
		Statement-Denial			
		Denial-Correction	*heoi anō*	co-ordinating conjunction	i.e., but
			i te	quasi coordinator	i.e., rather than
			***ehara* + repetition and replacement**	negator + repetition and replacement	i.e., not
		Exception	***i tua mai***	preposition	i.e., except
			hāunga	subordinating conjunction	i.e., disregarding
		General-Particular			
	Alternation	*Supplementary Alternation*	*rānei*	co-ordinating conjunction	i.e., or
		Contrastive Alternation	***rānei . . . rānei***	co-ordinating conjunction	i.e., either . . . or

Table 5.21 (continued): **Discourse relational signalling (*inter*-propositional): Houia (2001a)**

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Causal	Causality	*Reason-Result*	*nō te mea*	subordinating conjunction	
			nā te mea	subordinating conjunction	
			i te mea	subordinating conjunction	i.e., because/in that
			inā	subordinating conjunction	i.e., now that
			nā	preposition	
			i	preposition	
			mō	preposition	implied reason
			mō runga	complex preposition	i.e., as a consequence
			i runga	complex preposition	i.e., because of
			take	noun	i.e., reason
			nā reira	sentence conjunct or subordinator	i.e., hence/therefore
		Grounds-Conclusion	***nā reira***	sentence conjunct or subordinator	i.e., so/therefore
			hei	preposition	i.e., because (of)
		Means-Result	***mā***	preposition	i.e., by
		Means-Purpose	*kia*	subordinating conjunction	i.e., so that
			kia . . . ai	correlative co-ordinating conjunction	i.e., so that
			kei	preposition	i.e., so as to

Table 5.21 (continued): **Discourse relational signalling (*inter*-propositional): Houia (2001a)**

Relational Types	*Inter*-propositional relation	Relational varieties	Signal	Classification	Notes
Causal	Conditionality	*Realisable Condition*	*mehemea*	subordinating conjunction	i.e., if
			mēnā	subordinating conjunction	i.e., if
			inā	subordinating conjunction	i.e., if/provided (that)
			ki te	subordinating conjunction	i.e., if/assuming that
			mā	subordinating conjunction	i.e., unless/ if . . .not
		Unrealisable Condition	*me mea*	subordinating conjunction	i.e., if/so long as
			kei	preposition	i.e., in case/if not . . .then
	Concession	*Concession-Contraexpectation*	*ahakoa*	sentence conjunct or subordinator	i.e., although
			ahakoa ōku ake	phrasal coordinator	i.e., for all I care/for all it matters
			engari	co-ordinating conjunction	i.e., but/however
			otirā	co-ordinating conjunction	i.e., nevertheless/however

5.6 Amalgamating the results

In the following *Tables*, I have amalgamated the findings derived from *Chapters 4* and *5*. Readers should be, therefore, able to see at a glance the distribution of the relational signals. Following the *Tables*, there is a short discussion of the findings.

Table 5.22: **Comparison of *Ngata* and *Kāretu* texts to Bauer (1981) in terms of case/ role relational signalling (*intra*-propositional)**

Intra-propositional relations	Ngata and Kāretu texts	Classification	Comment	Bauer (1981)	Classification	Comment
Source (Non-Transitional) S(NT)	*e*	preposition	marker of *S(NT)* in passive construction	*e*	preposition	
	e	preposition	vocative			
	nō	preposition	emphatic			
	mō	preposition	emphatic			
	nā	preposition	emphatic	*nā*	preposition	emphatic
	mā	preposition	emphatic	*mā*	preposition	emphatic
	a	preposition	possessive *(S(NT))*			
	ko	preposition	emphatic			
	ki	preposition				
	ki	preposition	in the context of timeless/ universal truth			
	i	preposition	only with *mate* which implicitly involves a second proposition (i.e., X died because Y did Z)	*i*	preposition	with stative verbs
	ki taku whakaaro	preposition + possessive + noun	*ki taku whakaaro* (in my opinion) – phrasal idiom			
	e ai ki	preposition + archaic verb + preposition	phrasal idiom (i.e., according to)			
Instrument (I)	*ki*	preposition		*ki*	preposition	
	i	preposition	where the *Instrument* is possessive			

Table 5.22 (continued): **Comparison of *Ngata* and *Kāretu* texts to Bauer (1981) in terms of case/ role relational signalling (*intra*-propositional)**

Intra-propositional relations	Ngata and Kāretu texts	Classification	Comment	Bauer (1981)	Classification	Comment
Directional Focus (DF)	*ki*	preposition		*ki*	preposition	
	i	preposition	only in context of the signal *hei* in *Means-Purpose*; preceding a possessive			
	ko	preposition	emphatic	*ko*	preposition	emphatic
Predicate Range (PRG)	*i*	preposition				
	ko	preposition	emphatic			
	o	preposition	(of/about); possessive *(PRG)*			
	mō	preposition	(about/ concerning)	*mō*	preposition	
Material (M)	*i*	preposition				
Result (R)	*i*	preposition		*i*	preposition	
	ko	preposition	emphatic			
Event Location (EL)				*i*	preposition	past location including temporary possession (i.e., temporary location with someone)
				kei	preposition	present position including temporary possession (i.e., temporary location with someone)
				hei	preposition	future location including temporary possession (i.e., temporary location with someone)
Mutant (Mu)						

Table 5.22 (continued): **Comparison of *Ngata* and *Kāretu* texts to Bauer (1981) in terms of case/ role relational signalling (*intra*-propositional)**

Intra-propositional relations	Ngata and Kāretu texts	Classification	Comment	Bauer (1981)	Classification	Comment
Identified State(IS)	*ko*	preposition	emphatic			
	kia	particle	preceding nominal substitute (i.e., *pēnei*)			
	o	preposition	possessive *(IS)*			
	i	preposition		*i*	preposition	provisional assignment
	mā	preposition	emphatic			
Entity Location (Spatial) (EL(S))	*i*	preposition				
	i roto i	preposition + locative + preposition				
	ko	preposition	emphatic			
	o	preposition	possessive *EL(S)*			
	kei roto	preposition + locative	more likely with *EL(S)* rather than *EL*			
	kei runga	preposition + locative				
	ki	preposition	with *EL(S)* rather than *EL*			
Experiencer (E)	*i*	preposition	preceding nominalisation			
	o	preposition	content of nominalisation of the predicator			
	ko	preposition	emphatic			
Appertainant (A)	*ki*	preposition		*ki*	preposition	in the case of verbs relating to the senses, with experiential processes
	i	preposition	in the context of possessive; in the context of nominalisation of the predicator	*i*	preposition	in the case of verbs relating to the senses, with experiential states

Table 5.22 (continued): **Comparison of *Ngata* and *Kāretu* texts to Bauer (1981) in terms of case/ role relational signalling (*intra*-propositional)**

Intra-propositional relations	Ngata and Kāretu texts	Classification	Comment	Bauer (1981)	Classification	Comment
Source (Transitional) (ST)						
Starting Point (SP)	*i*	preposition		*i*	preposition	
End Point (EP)	*ki*	preposition		*ki*	preposition	
Transitional Range(TR)				*whaka*	preposition	
Transitor (T)	*i*	preposition				
	ko	preposition	emphatic			
	o	preposition	possessive *(T)*			
Possessor (Pr)	*o*	preposition	possessive			
	mō	preposition	in the context of a nominalised predicator			
	mō	preposition	emphatic	*mō*	preposition	actual possession (dominant)
	tō	possessive determiner	intrinsic possession			
	kei	preposition	possession (preceding a pronoun)			
				nā	preposition	actual possession (subordinate)
				nō	preposition	actual possession (dominant)
				mā	preposition	intended possession (dominant)
Possessed (Pd)						
Quantified (Qd)						
Quantifier (Qr)	*ki*	preposition				
Affector (Afr)						
Affected (Afd)						

Table 5.22 (continued): **Comparison of *Ngata* and *Kāretu* texts to Bauer (1981) in terms of case/ role relational signalling (*intra*-propositional)**

Intra-propositional relations	Ngata and Kāretu texts	Classification	Comment	Bauer (1981)	Classification	Comment
Relational Specifier (RS)						
Relational Target (RT)	*i*	preposition				
	ki	preposition				
Temporal Location(TL)	*i*	preposition				
	a muri ake nei	TAM + locative + postposed particles	phrasal idiom (future time)			
				i		with all times where there is a time marker accompanying the verbal phrase
				i; nō	preposition	past temporal location (and with adverbials: - *inanahi* (yesterday); *i ēnei rā* (these days); *i tērā wiki* (last week))
				a	preposition	future temporal location (and with adverbials: - *āpōpō* (tomorrow) and *ākuanei* (presently))
				hei	preposition	present and future temporal location
Temporal Transition (TT)						

Table 5.23: **Comparison of *Ngata* and *Kāretu* texts to Houia (2001a) and Bauer (1981) in terms of discourse relational signalling (*inter*-propositional)**[196]

Inter-propositional relations	Ngata and Kāretu texts	Classification	Comment	Houia (2001a)	Bauer (1981)	Classification	Comment
Temporal Sequence	*hei muri + i tēnā*	time reference + substitution					
	nō muri	preposition + locative (subordinating conjunction)	in the context of verbal ellipsis				
	nā wai . . . (nā wai)	subordinating conjunction					
	kātahi . . . ka	subordinating conjunction	lit. 'and then'				
	i paku muri mai	preposition + noun + locative + particle					
	i muri tonu	preposition + locative + particle					
	anō	adverb					
				tae noa atu		subordinating conjunction	i.e., till/until
				kia . . . rawa		subordinating conjunction	i.e., till/until
				nō muri mai		subordinating conjunction	i.e., after
				i mua i		subordinating conjunction	i.e., before
				ana		subordinating conjunction	i.e., once/after
				i runga tonu		subordinating conjunction	i.e., as soon as
				i taua wā		sentence conjunct	i.e., whereupon
				mutu		verb	i.e., complete/over
				ka . . . ka		TAM + TAM	i.e., and . . . and
				ā		sentence conjunct	i.e., and
				oti		verb	i.e., finish

[196] Bold print in this Table indicates signals which were provided by Houia (2001a) on the basis of intuition and which are not also indicated by him as being present his corpus.

Table 5.23(continued): **Comparison of *Ngata* and *Kāretu* texts to Houia (2001a) and Bauer (1981) in terms of discourse relational signalling (*inter*-propositional)**

Inter-propositional relations	Ngata and Kāretu texts	Classification	Comment	Houia (2001a)	Bauer (1981)	Classification	Comment
Temporal Overlap				***kei . . . ana***		subordinating conjunction	i.e., while
				e . . . ana ka		TAM (ongoing) + TAM (inceptive)	
				i . . . ka		TAM + TAM	i.e., as
				i te . . . ka		phrasal co-ordinating conjunction + TAM	i.e., while/when
***Bonding* (including *Rhetorical Coupling*)**	*ā*	co-ordinating conjunction		*ā*		co-ordinating conjunction	
	me	co-ordinating conjunction		*me*	*me*	co-ordinating conjunction	
	i . . . ai; i . . . ai	structural repetition with replacement					
	ko . . . ko	structural repetition with replacement					
	otirā	sentence conjunct	*Rhetorical Coupling*				
	tae atu hoki	verb + directional particle + adverb	*Rhetorical Coupling*				
	i tua atu	sentence adjunct	*Rhetorical Coupling*				
	waihoki	subordinating conjunction	*Rhetorical Coupling*				
				hoki		adverb	i.e., also
Paraphrase							
Statement-Affirmation				***whakaae* + replacement of subject**		verb + replacement of subject	i.e., agree
Simple Comparison	*pērā anō*	verbal substitute + (adverb)					
	pērā tonu	verbal substitute + manner particle					
				ā . . . pērā/ (anō)		co-ordinating conjunction + nominal/ verbal/ adverbial/ adjectival substitute + (adverb)	i.e., and so; and X too
				pēnei (anō)		nominal/ verbal/ adverbial/ adjectival substitute and/ or ellipsis	i.e., this is like

Table 5.23(continued): **Comparison of *Ngata* and *Kāretu* texts to Houia (2001a) and Bauer (1981) in terms of discourse relational signalling (*inter*-propositional)**

Inter-propositional relations	Ngata and Kāretu texts	Classification	Comment	Houia (2001a)	Bauer (1981)	Classification	Comment
Exemplification	*pēnei/ pērā*	nominal substitute					
				inā koa		preposition	i.e., for example
Simple Contrast	*kāore . . . pērā*	negator + verbal substitute					
	rite	verb	lit. 'like/resembles'				
	piri ngahuru . . . *taha raumati . . .*	repetition and replacement	(contrastive replacement of the two terms)				
				he X ia; he Y ia		repetition and replacement (with substitution and/ or ellipsis)	
Statement-Denial	*engari mō tēnā*	idiomatic denial					
Denial-Correction	*kāore . . . engari*	negator + co-ordinating conjunction	i.e., not . . . but				
	engari . . . tē	*co-ordinating conjunction . . .* + negator	i.e., but . . . not				
				heoi anō		co-ordinating conjunction	i.e., but
				i te		quasi coordinator	i.e., rather than
				***ehara* + repetition and replacement**		negator + repetition and replacement	i.e., not
Exception				***i tua mai***		preposition	i.e., except
				hāunga		subordinating conjunction	i.e., disregarding

Table 5.23(continued): **Comparison of *Ngata* and *Kāretu* texts to Houia (2001a) and Bauer (1981) in terms of discourse relational signalling (*inter*-propositional)**

Inter-propositional relations	Ngata and Kāretu texts	Classification	Comment	Houia (2001a)	Bauer (1981)	Classification	Comment
General-Particular	*heoi anō*	co-ordinating conjunction					
	tonoa . . . + content specification	verb (speech/ thought etc.) + content specification					
	kiia . . . + content specification						
	mōhio + content specification						
	pātai . . . he aha kē ia	noun (question) + interrogative form					
	te hunga + content specification	noun (general) + content specification					
Supplementary Alternation	*rānei*	co-ordinating conjunction		*rānei*		co-ordinating conjunction	i.e., or
Contrastive Alternation				***rānei . . . rānei***		co-ordinating conjunction	i.e., either . . . or
Reason-Result	*nā te mea*	subordinating conjunction		***nā te mea***		subordinating conjunction	
				nō te mea		subordinating conjunction	
	i te mea	subordinating conjunction		*i te mea*		subordinating conjunction	i.e., because/in that
	nā reira	subordinating conjunction		*nā reira*		sentence conjunct or subordinator	i.e., hence/therefore
	nō reira	subordinating conjunction					
	take	noun	i.e., reason	*take*		noun	i.e., reason
	i runga	complex preposition		*i runga*		complex preposition	i.e., because of
				mō runga		complex preposition	i.e., as a consequence
				inā		subordinating conjunction	i.e., now that
	whaka-	causative prefix	with nominalisation				
	he . . . nō	*he* fronted phrase + possessive *nō*					
				i	*i*	preposition	empathic marker
				nā	*nā*	preposition	
				mō		preposition	implied reason

Table 5.23(continued): **Comparison of *Ngata* and *Kāretu* texts to Houia (2001a) and Bauer (1981) in terms of discourse relational signalling (*inter*-propositional)**

Inter-propositional relations	Ngata and Kāretu texts	Classification	Comment	Houia (2001a)	Bauer (1981)	Classification	Comment
Grounds-Conclusion	*kāti*	sentence conjunct					
	i te mea	subordinating conjunction	general causative introducing the *Grounds* member				
	nō reira	sentence conjunct					
				nā reira		sentence conjunct or subordinator	i.e., so/therefore
				hei		preposition	i.e., because (of)
Means-Result	*me te aha*	subordinating conjunction	signals the *Result* member (metaphoric use of *aha* (what))				
				mā		preposition	i.e., by
Means-Purpose	*hei*	determiner					
	hei	preposition			*hei*	preposition	
	kia	subjunctive TAM marker	signalling the *Purpose* member	*kia*		subordinating conjunction	i.e., so that
	kia . . . ai	correlative co-ordinating conjunction	signalling the *Purpose* member	***kia . . . ai***		correlative co-ordinating conjunction	i.e., so that
					mō	preposition	
					mā	preposition	
				kei		preposition	i.e., so as to

Table 5.23(continued): **Comparison of *Ngata* and *Kāretu* texts to Houia (2001a) and Bauer (1981) in terms of discourse relational signalling (*inter*-propositional)**

Inter-propositional relations	Ngata and Kāretu texts	Classification	Comment	Houia (2001a)	Bauer (1981)	Classification	Comment
Realisable Condition	*mēnā*	subordinating conjunction		*mēnā*		subordinating conjunction	i.e., if
	ki te	subordinating conjunction		***ki te***		subordinating conjunction	i.e., if/assuming that
				mehemea		subordinating conjunction	i.e., if
				inā		subordinating conjunction	i.e., if/provided (that)
				mā		subordinating conjunction	i.e., unless/ if . . .not
Unrealisable Condition	*kei*	preposition	negative condition	*kei*		preposition	i.e., in case/if not . . . then
				me mea		subordinating conjunction	i.e., if/so long as
Concession-Contraexpectation	*engari*	subordinating conjunction	general causative signal introducing *Contraexpectation* member	*engari*		co-ordinating conjunction	i.e., but/however
	ahakoa	subordinating conjunction	signalling *Concession* member	*ahakoa*		sentence conjunct or subordinator	i.e., although
				ahakoa ōku ake		phrasal coordinator	i.e., for all I care/for all it matters
	otirā	co-ordinating conjunction		*otirā*		co-ordinating conjunction	i.e., nevertheless/ however
					mā	preposition	

5.7 Discussion

As *Table 5.22* indicates, there appears to be no detectable difference between the signalling of *intra*-propositional relations at the beginning of the twentieth century and at the end. Nor does there appear to be any difference in that signalling in relation to provenance.[197, 198] Because the signalling of *intra*-propositional relations is, in general, fundamental to the grammar of the clause, it is not surprising to find that it does not appear to be subject to major variation over the relatively limited time span represented in the corpora. Equally, much of the signalling of *inter*-propositional relations is fundamental to the grammar of the sentence (e.g., subordinators such as *ahakoa*; sentence conjuncts such as *heoi anō*), is built into lexical items (e.g., *take*) or into the morphology of lexical items (e.g., *whaka-*). It is therefore not surprising to find that there do not appear, in this area either, to be differences that can be attributed to the effect of provenance and/or language change (see *Table 5.23*).

I believe that the range of signals of *intra*-propositional relations in both the Ngata and Kāretu texts is considerably more extensive than that which is apparent in the language of the majority of contemporary users of Māori, particularly younger users of the language. Houia (2001a, p. 1), a native speaker of Māori with many years of experience of teaching the language, notes that second language learners tend to confine themselves to common ways of expressing certain types of meaning relationship between parts of a text. If this is the case – and it is something that requires further research before it can be asserted with complete confidence – then teachers and learners of the language, as well as curriculum designers, might benefit from exposure to the results of analyses of this type. Furthermore, to the extent that analyses of this type offer a semantically-based rationale for the selection of prepositions in the case of *intra*-propositional relations, they can provide teachers, learners and curriculum designers with information that may help to resolve the confusion that sometimes surrounds the

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[197] Although two of the prepositional signals of *Means-Purpose* detected in relation to Bauer's texts – *mā* and *nā* – do not occur in the other corpora, it is unlikely that they would not be in evidence in the case of more extensive corpora.

[198] Differences between the Ngata and Kāretu texts in the area of *intra*-propositional signalling relate to either (a) to the non-occurrence in one or the other corpus of a particular relation, or (b) the presence of examples that appear to be very specific in contextual terms (e.g., the use of the phrasal idiom *e ai ki* in the context of *S(NT)* in one of the texts).

circumstances that call for the selection of a particular preposition (e.g., *i* or *ki*) in cases where the direct object of certain relations may be associated with either.

Chapter 6

Conclusions

6.1 Introduction

My primary aim in this research project was to address the following questions:

- What are the main differences among different accounts of relations in terms of the number and type of relations proposed?
- What are the critical areas of disagreement among analysts of different persuasions and how do they affect theory and modelling?
- Is it possible to design models of *intra-* and *inter*-propositional relations that is based on a critical review of earlier models and can that model take into account the problems encountered in these models?
- What can application of the models referred to above to a corpus of written Māori texts reveal about these relationships and their encoding and signalling in Māori?
- Can the re-examination of existing studies of *intra-* and *inter*-propositional relations in Māori provide any useful material to supplement the findings of the corpus based study referred to above?

I began by critically reviewing a number of publications in the area of *intra*-propositional relations (see *Chapter 2*) and *inter*-propositional relations (see *Chapter 3*).

So far as *intra*-propositional relations are concerned, that critical review revealed that the differing aims and objectives of different analysts led to different types of model – from models in which the roles/ relations are domain-specific or even verb-specific, to models involving two roles/ relations only (referred to as 'theta-roles' or 'macro-roles'). Of most interest from my perspective were those models, generally proposed by linguists, which were designed primarily to capture significant generalisations across domains and which included a limited number

of thematic roles (generally somewhere between eight and twenty). A focus on these models revealed some lack of coherence and internal consistency in some cases. This appeared sometimes to be attributable to the lack of a clear distinction between *intra*-propositional relations and *inter*-propositional relations and/ or to a failure to distinguish clearly between meaning and form. What was also evident was the difficulty of making generalisations that are robust in the face of cross-linguistic evidence, particularly in view of the ubiquity of scalar (as opposed to binary) concepts.

So far as *inter*-propositional relations are concerned, a major problem revealed by the literature review was the existence of some uncertainty in relation to the distinction between relational meanings and the encoding of relational meanings. Thus, whereas some taxonomies are clearly primarily semantic (or semantic-pragmatic) in orientation, reflecting a search for significant cross-linguistic generalisations, others seem to be much more specifically linked to the existence of certain types of cohesive device (such as subordinating conjunctions) in the language or languages under investigation. Once again, as in the case of *intra*-propositional relations, a number of the models examined appear not to distinguish clearly between meaning and form. In particular, the fact that several relations may co-occur within a single clause or sentence appears to create difficulties in relation to models that are predicated on the expectation that a single clause will realise a single relational member.

Overall, significant differences among the models can be traced to a number of factors: intended aim/ function of the model (generally reflected in the degree of delicacy of the description upon which the model is based); whether, and to what extent, the model is intended to be cross-linguistic; the extent to which the model recognises and accommodates the fact that a single surface unit (the clause) can encode more than one proposition; and whether the model is relationally integrated (including *intra*-propositional and *inter*-propositional relations). In terms of internal consistency and coherence, a critical issue seems to be the extent to which relational models differentiate among relational types (*intra*-propositional versus *inter*-propositional relations) and the extent to which they allow for a variety of surface realisations of a single relationship.

On the basis of the critical review of selected literature, a model of *intra*-propositional relations and *inter*-propositional relations was proposed and applied to a corpus of complete written texts in Māori, yielding the data about *intra*-propositional and *inter*-propositional relational encoding, with specific reference to signalling, outlined in *Tables 4.19* (pp. 244-247) and *4.20* (pp. 248-251) (see *Chapter 4*). A study of the interaction between prepositional selection and case roles (*intra*-propositional relations) that was reported in the early 1980s (Bauer, 1981) was then re-examined in the light of the *intra*- and *inter*-propositional relational models outlined in *Chapter 4,* as was a later study of the signalling of discourse relations (*inter*-propositional relations) in Māori (Houia, 2001a). The data derived in this way were compared with the data derived from the corpus-based analysis reported in *Chapter 4*, and the overall findings were recorded (see *Tables 5.22* (pp. 323-327) and *5.23* (pp. 328-333)).

6.2 Significance of the research

This research project contributes to knowledge and understanding in the area of *intra*- and *inter*-propositional relations by:

- critically reviewing existing literature in the area from the perspective of its relevance to, and potential impact on Māori and thereby revealing a number of inconsistencies and contradictions in the existing literature;
- proposing, and applying to a corpus of complete written texts in Māori, models of *intra*- and *inter*-propositional relations designed to be responsive to some of the problems identified in existing models and thereby providing information about, and explanations of, the encoding of *intra*-propositional and *inter*-propositional relations in Māori;
- re-examining two existing studies of Māori in the light of the proposed relational models and thereby supplementing the data concerning *intra*- and *inter*-propositional relational encoding (particularly signalling) that was derived from the corpus-based analysis.

At the beginning of his thesis, Houia (2001a, p. 1) makes the following observation:

> I have noticed that second language learners tend to confine themselves to common ways of expressing certain types of meaning relationship between parts of a text. Thus, for example, reasons tend to be expressed by *notemea*, conditions by *mehemea* and purposes by *hei*.

This is a particularly significant observation in view of the fact that research on second language learning now emphasises the importance of linking form and function (see, for example, Celce-Murcia, Dornyei, & Thurrell, 1997) and includes discourse creation and comprehension as an important aspect of communicative competence (see, for example, Bachman & Palmer, 1996; McNamara, 1996). Comparatively few linguists have used their skills to describe and analyse the Māori language and even fewer have produced descriptions of the language that are specifically designed to reveal information about the relationship between meaning and form in which the former is intended to provide an explanation for the latter. For this reason, there is little material available that can directly inform that search for an understanding of the relationship between form and meaning that is fundamental to the effective teaching and learning of the language. As Crombie, Johnson and Te Kanawa (2001) have pointed out, this dearth of relevant information is reflected in the limitations of some of the syllabus and curriculum documents that are currently available. In attempting recently, in collaboration with a colleague, to design a curriculum document for teachers and learners of Māori in New Zealand schools (for the *New Zealand Ministry of Education*), I found that it was necessary to provide examples and explanations to support the achievement objectives (which were expressed in terms of meanings rather than forms).[199] In the case of relations and relational meanings, the descriptions, explanations and examples available in published literature appeared to be patchy at best. Furthermore, an examination of existing textbooks designed for learners of Māori indicated that the range of possible relational encodings included was very narrow.[200]

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[199] Such as, for example, *give and respond to information and opinions, giving reasons.*

[200] This study of textbook resources was carried out as part of the work done in preparation for the design of the curriculum to which reference has been made.

This suggests that the present study has something to offer that will be of value to teachers and learners of Māori as well as to linguists who are interested in providing semantically-centred descriptions of the language.[201] In particular, information about the signalling of *inter*-propositional relations in the early part of the twentieth century could assist teachers of Māori in their efforts to extend the capacity of their learners to comprehend, and produce, texts that are more linguistically diverse. This sort of information also, I believe, has implications for the production of dictionaries (see, for example Bond and Shirai (1997) on the valency dictionary), for the theory and practice of English-Māori and Māori-English translation and interpreting (see, for example, Hollenbach (1975) and Beekman and Callow (1974) on translation) and, perhaps in the longer term, for computer-based analyses of Māori language corpora (see, for example, the discussion of computational lexicography in Fillmore and Atkins (1994), and Boas (2001), and of the automatic labelling of semantic roles in Gildea and Jurafsky (2002)). I hope that the critical review of literature in the area, as well as the relational analysis of a text-based corpus, will also be of use to linguists working with other indigenous languages.

6.3 Limitations of research

When I first began the research project reported here, my primary interest was in the potential relevance of *intra*-propositional relational study to the Māori language revitalisation programme in New Zealand. It soon became apparent, however, that it was unlikely that this could be achieved unless the research was extended to include *inter*-propositional relations. It also became apparent that this would necessarily involve sourcing and reviewing a considerable body of literature in addition to selecting and analysing a corpus. Because that corpus would need to be analysed in terms of both *intra*- and *inter*-propositional terms and because the analysis in *intra*-propositional terms would need to accommodate factors such as propositional embedding, that corpus, in terms of the time available, could not be as extensive or as varied (including, for example, spoken as well as written discourses) as I would have liked. As a result, there was likely to be inadequate coverage of some aspects of the relational models applied. This

[201] It will, of course, be necessary to produce a more pedagogically-oriented account if the work is to be of any direct value to teachers and learners of Māori.

proved to be the case. Re-analysing data from an earlier study of *intra*-propositional relational signalling and using this, together with data from a more recent study of *inter*-propositional relational signalling, to supplement my own findings does not fully compensate for the limited nature of my own corpus.

A further limitation of the research is that the analysis of the corpus (reported in *Chapter 4*) was conducted by a speaker of Māori as a second language without the benefit of informant responses. The inclusion of informant responses might have helped to resolve some problems relating to interpretation. However, the fact that the corpus itself consisted of texts that had already been translated into English by a native speaker of Māori, and the fact that that translation was intended to be as close to the original as possible, went some way towards compensating for this, as did the fact that one of my supervisors was a native speaker of Māori.

Finally, the thesis does not include a detailed examination of the results from a pedagogic perspective. I originally intended to include a chapter dealing with the potential pedagogic relevance of the work (with particular focus on that aspect of the Māori language revitalisation agenda that relates to the teaching and learning of Māori). However, this would have entailed the inclusion of material relating to contemporary meaning-based approaches to teaching and learning, and I could find no way of doing this that did not, in terms of the time available, result in an unsatisfactory and uneasy balance between analysis and application. Although I reluctantly abandoned this aspect of the research project, leaving it as a task for the future, I believe that its omission is unfortunate at a time when there is a very real need for linguists to make a direct contribution, wherever possible, to the Māori language revitalisation agenda.

6.4 Recommendations for future research

There is much that remains to be done in the area of *intra*- and *inter*-propositional relational encoding and signalling in Māori. In particular, a comprehensive study based on a large corpus drawn from different historical periods and different geographical areas and including both written and spoken discourses would be likely to yield more reliable and more comprehensive results than the current study.

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Appendix 1: Longacre (1996) – Rows A-H.

Row A: Ambient

Longacre's Row A ambient verbs refer to environmental factors. With this type of relation there is no "notional structure *Patient* or *Agent* unless we assume some highly general noun such as weather or climate" (p. 173). He notes that in the state ambient frame "we make a descriptive statement regarding the environment, in the process ambient frame, we assert a change in state in the environment, and in the action ambient frame, we assert that there is something happening in the environment" (p 173). He views action–process as probably more likely to be a causative formation rather than an action-process and as such, marks it as doubtful but he still includes it within his framework. Verbs in this frame "have deity, nature, or something of the sort as their *Agent*" (p. 173) (examples of state ambient verbs are given in (1) and (2) below, process verbs as in (3) and (4) below, action verbs as in (5) and (6) below, and action process verbs mental activity predicates as in (7) and (8) (pp. 173-175)):

(1) It's hot.
(2) It's cold.
(3) It's warming up.
(4) It cooled off.
(5) It's snowing.
(6) It's raining.
(7) God caused it to warm up.
(8) Mother Nature caused it to cool off.

Row A': Ambient experiential

Row A' ambient experiential verbs exist with state, process and action predications. State ambient experiential verbs refer to environmental factors "registering on the nervous system of an animate being" (p. 175) (the state ambient experiential frame can be demonstrated in examples (9) – (11) following (p. 175)):

(9) The *Patient* is hot.

(10) The *Patient* is cold.

(11) I'm uncomfortable in here (either too hot or too cold).

When dealing with process ambient experiential frames, he also views it as an environmental factor that registers on the nervous system of the animate being, but here, there is a change of state in the environment (examples (12) and (13) below demonstrate this relationship (p. 175)):

(12) I'm getting cold.

(13) John got cold (during the night).

He considers the action ambient experiential frame as marginal in English but he provides examples (like (14) below) where the person may have come in from a bad storm with their hat out of place and complained that 'It hailed on me' (where that person experienced hail), and (15) below, where that person is in an environment of unexpectedness where they got caught in the rain (p. 175):

(14) It hailed on me.

(15) I got caught in the rain.

However, Longacre feels that action–process ambient experiential frames as doubtful and as a result has left this cell blank in all his tables.

Row B: Experiential

Row B experiential verbs refer to emotive, psych, affective, and impingement relations. The emotive and psych relations are state and process respectively and "involve an experiencer and an optional *Instrument* (correlating with the verbal feature *Instrumental*)" (p. 176). The affective and impingement relations are action process and action respectively and involve an *Agent*, *Experiencer*, and an optional *Instrument* role. Longacre's emotive frame without an *Instrument* can be seen in examples (16) and (17) below (p. 176):

(16) The cat is nervous.

(17) Mary's happy.

Emotive verbs with an *Instrument* (as a stimulus or depressant) can be expressed as in examples (18) to (20) below (p. 176):

(18) John is discouraged at the prospect/about his work.
(19) Priscilla is scared of cats.
(20) Our children are scared of strangers.

Longacre assumes that in the latter two of these examples there exists an unintentional animate stimulus that is equal to an *Instrument*. He suggests, "it is not that strangers deliberately scare children, it is rather that the strangers are the unconscious and unintentional stimulus of fright to the children" (p. 176). He notes that animates are not usually associated with *Instruments*, however in the case where it appears that the *Agent* is an unintentional animate it may well be an *Instrument*, i.e., a stimulus rather than an *Agent*.

The psych verbs are a process rather than a state. There may be an *Instrument* involved of the form illustrated with the emotive verbs above (examples (21) to (23) below show this relationship (p. 177)):

(21) Tom got scared.
(22) Mary brightened up.
(23) John is becoming discouraged at the prospect/about his work.

He believes that we should also include examples of an animate being as the unconscious stimulus. He provides the following as an example of this relationship (shown in example (24) below (p. 177)):

(24) John has come to be afraid of his mother-in-law.

He also suggests that a body part of an animate being may be an *Instrument* with a psych verb (as in example (25) below (p. 177)):

(25) Our dog was frightened, i.e., became frightened, by Terry's black beard.

He notes that the affective verbs are not only action process experiential with an optional *Instrument* component, they also have an *Agent* present in some cases, which involves intention (examples of this relationship are shown in (26) to (28) below (p. 177)):

(26) He amused me with his small talk.
(27) I cheered her up.
(28) He scared me with a firecracker.

The impingement verbs are action verbs which are similar to the affective *intra*-propositional frame in their selection of noun roles. "The verb forms found here refer to surface contact on the experiencer. The objects are not *Patient*s (they do not necessarily undergo a change of state), but are experiencers in that their nervous systems register the act of physical impingement" (pp. 178-79). With verbs of this frame the majority of these relations have an optional *Instrument* of a body part (examples of this relationship are provided in (29) to (32) below (p. 179)):

(29) John hit Bill with his fist.
(30) John kissed his wife with a greasy mouth.
(31) John petted the cat with both hands.
(32) John kicked the dog with his bare foot.

Row C: Experiential (completable)

Row C experiential completable verbs refer to factual knowledge. The verbs within this frame "show a progression involving the verbs know, learn, teach, and study, which are respectively state, process, action process, and action" (p. 180). The feature completable characterizes all the verbs within this frame. This Longacre, "correlates with occurrence of the role *Range*" (p. 180). The first two frames have the *Experiencer* and *Range* roles, while the third and fourth frames

add an *Agent* role (examples of experiential completable state types of verbs can be seen in examples (33) and (34) below (p. 180)):

(33) Susan knows a lot of factual knowledge.
(34) Susan knows algebra.

In example (34) above, 'algebra' is simply a more specific example of factual knowledge. Longacre notes with verbs that take *Range*, "there may be a resort to a substitute verb of highly generic meaning with most of the verbal content carried by the *Range* noun" (p. 180). Hence, in his following examples (shown in (35) to (39) below) he has replaced 'knows' in some examples (p. 180):

(35) Susan has much factual knowledge.
(36) Susan knows/has a lot of this world's knowledge.
(37) Susan really knows algebra.
(38) Jim understands the matter thoroughly.
(39) Jim understands geometry quite well.

Process experiential completable verbs can be seen in examples (40) to (44) below (pp. 180-181):

(40) Susan has learned a lot of algebra.
(41) Susan learned her lesson.
(42) (Give her time;) Susan is learning.
(43) Tom forgot the matter.
(44) Tom remembered the matter.

The action process experiential completable frame is shown in examples (45) to (47) below (p. 181):

(45) Mr. Smith taught Susan algebra.
(46) Mr. Smith imparted his knowledge to Susan.
(47) Mr. Smith is teaching right now.

The action experiential completable frame is exemplified in examples (48) to (51) below (Longacre notes that the *Agent* and the *Experiencer* roles are co-referential in the following examples) (p. 181):

(48) He's studying tonight.
(49) He's studying algebra.
(50) He's memorizing the times table.
(51) The burglar cased the joint.

He regards "most of the surface structure clauses which illustrate the verbs know, learn, and teach as surface transitive clauses. This is because these verbs characteristically take an object. Examples occur, however, in all four case frames in which objects are deleted" (p. 181) (these are shown in examples (52) to (55) below (p. 181)):

(52) Susan knows.
(53) Susan is learning.
(54) Mr. Smith is teaching right now.
(55) He's studying tonight.

It is also possible that the *Instrument* role can occur in this row (as can be seen in example (56) below) where 'from the phonograph records' is an *Instrument* and in example (57) below where 'the children' became unconscious *Instruments* (teachers) while visiting him (p. 181):

(56) I'm learning modern Israeli Hebrew from phonograph records.
(57) I learned Trique from the children at the door.

Row D: Experiential (directed)

Row D desire/cognition verbs refer to the knowledge of a person, and not factual knowledge. The frames of this row include both *Experiencer* and *Goal*, and the following row (D'-sensation) includes *Experiencer* and *Source*, and as a result

Longacre attaches the feature of 'directed' to these frames claiming "there is a flow here not unlike that which we find in motion verbs or verbs of transfer" (p. 182). The state experiential directed frame involves not only the verbs like 'know', 'love' and 'appreciate', but also verbs like 'want' and 'desire' which may be directed towards an inanimate or animate *Goal* (examples of state experiential directed verbs can be seen in (58) to (62) below (p. 182)):

(58) Mary wants a Cadillac.
(59) Tom desires her.
(60) Mary loves Tom.
(61) Mary knows Tom.
(62) Mary appreciates Tom.

The process experiential directed relation also includes an *Experiencer* and a *Goal* (this is shown in (63) to (65) below (p. 182)):

(63) Mary fell in love with Tom.
(64) Mary has come to appreciate Tom.
(65) Mary has gotten acquainted with Tom.

Longacre believes that "fall in love, come to appreciate, and get acquainted with refer to changes of state and therefore are process verbs. They are not simple verbs in the surface structure but verbal expressions involving idiom formation and paraphrases" (p. 182).

The action process experiential directed frame adds to the roles of *Experiencer, Goal* and the role of *Agent*. In these examples, the experience is mediated by the further participant (shown in examples (66) and (67) below (p. 184)):

(66) I introduced Mary to Tom.
(67) Through me Mary came to love Tom.

The action experiential directed frame expresses evaluation. The *Experiencer* role may occur as separate from the *Goal* or as co-referential with it. "Presumably, one evaluates someone or something to someone else: John praised Mary to Tom, John is openly scornful of VW's with everyone he meets". However, the *Experiencer* "may also be the *Goal*: John makes fun of Pete (whenever he sees him)" with this type of predication. "If the object of an evaluation does not know that he is being evaluated, he is simply *Goal* and whoever hears the evaluation is experiencer. If, however, the object of the evaluation knows that he is being evaluated he is both the *Experiencer* and the *Goal*" (p. 184).

Longacre notes that verbs in this frame can express positive evaluation (praise), neutral evaluation (describe) or negative evaluation (disdain or scorn) (further examples of action experiential directed verbs are given in examples (68) to (71) below (p. 184)):

(68) John disdained/scorned/derided/described/praised Mary.
(69) The witness accused the defendant.
(70) The jury condemned the criminal.
(71) The governor pardoned the convicted man.

Row D': Experiential directed (completable)

Row D' are sensory-descriptive, sensation, speech, and attention verbs which refer to a *Source* rather than a *Goal* and have the feature completable. The state experiential directed completable frame is sensory-descriptive. "It specifies the *Source* as subject, with *Range* as an adjectival which qualifies the sensation indicated in the verb, and with an *Experiencer* implied. When the latter is overtly stated it is commonly encoded as a *to* adjunct phrase" (p. 184) (examples of state experiential directed completable verbs can be seen in examples (72) to (74) below (p. 185)):

(72) The soup tastes too salty (too me).
(73) The meat smelled bad (to almost everyone).
(74) The music sounds dreadfully loud (to us older people).

The process experiential directed completable relation involves verbs that refer to impressions on physical senses where the *Experiencer* is the subject (as is shown in examples (75) to (78) below (p. 185)):

(75) Tom heard (the sound of) an owl.
(76) George smelled (the odor of) onions.
(77) David saw/caught sight of Bathsheba.
(78) I saw a strange sight (on Boston Common this morning).

Longacre notes that in English we are able to say 'Tom heard the owl' where it is understood that what Tom hears is the sound of an owl and 'George smelled onions' where it is understood that George smells the odour of the onions. However he notes that with other languages such as Korean and Trique (Mexican) there are features, which are obligatory, and others, which do not feature in that language (p. 185). "Possibly then, there is a notional structure *Range* noun present whatever freedom or restriction of surface structure there is found in various languages" (p. 185). In examples (75) and (76) above, the roles of the respective nouns ('owl' and 'onion') are of *Source*s from which the physical waves emanate which in turn register on the nervous system of the *Experiencer*. He views the verb 'see' as slightly more problematic because light waves travel faster than sound waves or smell "and therefore the experience of sight is a much more immediate experience. We usually do not specify such a noun as sight (notional structure *Range*) unless we have some special reason for doing so" (p. 185).

The action process experiential directed completable involves verbs which refer to speech and kindred functions. A characteristic of this role is that the *Range* need not be specified. In the following examples, we do not have a *Source* such as 'owl' or 'onions' but a person who is consciously engaged in the activity (the *Agent* is co-referential with the *Source*) (this can be noted in examples (79) to (85) below (p. 185)):

(79) The mother told her child a story.

(80) The artist showed Tom the painting.

(81) The pastor preached a sermon.

(82) The teacher recited a poem

(83) Say a word, please.

(84) Tell me.

(85) Speak, Rover, speak.

Longacre labels his action experiential directed completable frame as attention. The verbs in this "frame involve the conscious exercise of the senses on the part of the experiencer so that the *Agent* and the *Experiencer* are co-referential. A *Range* noun is possible with all of these and the *Source* is usually specified" (p. 186) (examples of action experiential directed completable verbs can be seen in examples (86) to (88) below (p. 186)):

(86) Tom listened to the owl.

(87) The audience watched the performance.

(88) The cook tasted the soup.

Row E: Physical states

Row E is physical states, processes, action processes, and bodily activities. Longacre regards the first three columns (state, process, and action process) as forming a derivational progression, which is, characterized by the feature physical, which he considers, correlates with the occurrence of a noun in the role of *Patient*.

The state physical frame takes only a verb and a *Patient* as in examples (90) to (93) below:

(89) The dish is broken.

(90) The blanket is wet.

(91) The bolt is loose.

(92) The pig is dead.

(93) The road is wide.

He does not consider an optional feature of relative (discussed in the work of Chafe (1970) and seen in examples like, 'The road is wider', and 'The valley is deeper'), as practical as it implies an implicit comparison of some degree in which there is a deep structure of comparison.

The process physical relation includes a *Patient* with an optional *Instrument*. The *Instrument* is accidental (something that is never used intentionally by someone) (this relationship can be noted in examples (94) to (99) below (p. 187)):

(94) The dish broke.
(95) The blanket has dried out.
(96) The bolt came loose.
(97) The pig died.
(98) My foot got caught on a sharp rock.
(99) The bolt came loose from the vibration of the motor.

The action process physical frame has an optional feature of *Instrument* (here, there is an *Agent* present) (the following examples shown in (100) to (106) below are action process without the optional *Instrument* (p. 188)):

(100) John broke the dish.
(101) He cut the rope.
(102) Susan dried the blanket.
(103) Tom killed the pig.
(104) Edward speared five fish.
(105) We trapped a bear.
(106) Bill beat up on John.

In these examples the majority of the verbs can "delineate pretty well the sort of *Instrument* which may be used with them" (p. 188). Thus, 'cut' implies some sort of sharp *Instrument* with a sharp blade. 'Smash' implies something heavy and

blunt. 'Spear' implies a spear and 'trap' implies some kind of trap. He notes that with an example similar to that in example (100) above "we probably mean that John dropped the dish by accident and it broke (process, with John as stimulus, i.e., unintentional instigator)". Therefore, it is clear, "that whenever a verb implies a specific kind of *Instrument*, it means the *Instrument* as used intentionally; all such uses are action process with *Agent* as *Instrument*" (p. 188).

Longacre has divided the action physical frame into two frames instead of only one. The two frames have the feature 'completable' and 'directed' respectively (as is shown in examples (107) to (110) below (p. 190)):

(107) Stephen ran a race/100 yard dash.
(108) They fought a good fight/a hard battle.
(109) The children played a game/kick-the-can.
(110) They ate too much food/sauerkraut.

In these examples the *Agent* and *Patient* are co-referential. The purpose of the "final noun phrase is to specify better the activity already stated in the verb itself" (p. 190). The *Range* is typically optional with this relation. He includes factitive verbs (verbs which refer to the making or creation of something) as part of this frame (examples can be seen in (111) to (113) below (p. 190)):

(111) The carpenter made a table.
(112) The Indians make many beautiful artefacts.
(113) Beethoven composed nine symphonies.

He suspects that the examples in (111) to (113) above are basically the same as in the previous examples (107 to 110) but they require obligatory surface structure object (these nouns are notionally *Range*).

The second type of frame in the action physical verbs has the feature directed. In this type of relation the *Agent* exerts himself/herself in an action which is directed toward a *Goal*. Thus, for example, in the following examples shown in (114) to

(117) below, 'chair', 'glass', 'door', and 'chin' are not considered as *Patients* because their physical state has not changed by the action of the performer on them, nor can they be considered to be *Experiencers*, since they do not have registering nervous systems. Hence, Longacre believes that "it is best to regard these inanimate objects of the surface structure as encodings of deep structure *Goal*" (p. 191):

(114) John kicked the chair.
(115) John tapped on the glass.
(116) John knocked on the door.
(117) John stroked his chin.

Row F frames have a nuclear feature of measurable and a corresponding role of measure in their frame. State physical measurable frame involves a state measurable predicate, a noun in the roles of *Patient* and *Measure*. This can be seen in examples (118) and (119) below (p. 191):

(118) The statue weighs one ton.
(119) This hat cost $1.98.

He does not consider an optional feature of relative (discussed in the work of Chafe 1970 and seen in examples like, *The road is wider*, and *The valley is deeper*) as it seems to him that this feature implies an implicit comparison of some degree in which there is a deep structure of comparison. He views the expressions of measure in the previous two examples as extrapolations of the verbs 'weigh' and 'cost' (p. 191):

> *One ton* is a further specification of the idea inherent in the verb *weigh*, while *$1.98* is a further specification of the word *cost*. In this respect *measure* resembles *Range*. But measure, unlike *Range*, can never be a surface structure object and cannot be passivized.

The process physical measurable *Patient* frame has process, physical, and *Measurable* as its features. This can be noted in examples (120) to (123) below (p. 192):

(120) He grew an inch.
(121) I've gained a lot of weight/30 pounds.
(122) My bonds have lost value.
(123) My bonds went down 10%.

The action process physical measurable frame has action process, physical, and measurable as its features with nouns in the roles of *Agent*, *Patient*, and *Measure*. The following examples shown in (124) to (127) below show this relationship (p. 192):

(124) I shortened it two inches.
(125) I cut it of two inches (where cut off is not equal to cut).
(126) My sister lengthened her hemline two inches.
(127) They've widened the road ten feet.

The action physical measurable frame has action physical measurable as its features with nouns in *Agent/Patient* and measurable roles. The *Agent* and *Patient* are co-referential in this relation as is shown in examples (128) and (129) below (p. 192):

(128) The army advanced/retreated a mile.
(129) Our team gained/lost five yards.

Longacre provides two further examples of this frame (provided below in examples (130) and (131)) to clarify the differences between the *Range* and *Measure* roles. In example (130) below, the '100 yard dash' is simply a more specific substitute for 'race', which in turn is a *Range* noun with 'run'. In addition, the 'run' verb is not merely an activity but locomotion as it implies a measurable distance (a beginning and an end point) (p. 192):

(130) John ran the 100-yard dash.

(131) John ran 100 yards.

Row G can be characterized as location (state), allocation (process), placement (action process), and stance (action). These frames have the feature *Locative* and posture (the latter is optional in the first three frames but obligatory in the stance frame). The locative state frame is characterized as state physical locative with an optional posture feature. It has *Patient* and *Locative* as its associated nouns. This can be seen in examples (132) to (135) below (p. 194):

(132) The knife is in the box.

(133) The key is under the rug.

(134) The house is on the corner

(135) The statue is in the park.

Longacre clarifies his term posture by indicating and including the shape, size, or posture of the *Patient* into the surface structure of the following examples shown in (136) to (140) below. Here, it is necessary to refer to the *Patient* as an inanimate object (p. 194):

(136) The key is lying on the rug.

(137) The old house is still standing on the corner.

(138) The cottage sits on the corner.

(139) The statue stands in the park.

(140) Pharaoh's statue sits in the temple.

The locative process frame (or allocation frame) involves process physical locative predicates with the optional feature of posture, with nouns in the roles of *Patient,* and *Locative.* When the resultant position is described, the optional posture feature is present. Examples (141) and (142) below show this relationship (p. 195):

(141) The plate ended up upside down on the floor.

(142) (It fell down inside and) wedged sideways out of reach.

The locative action process frame (or placement frame) involves an action process physical locative predicate with the optional posture feature with nouns in the roles of *Agent*, *Patient* and *Locative*. This is shown in examples (143) to (146) below (p. 195):

(143) They placed a book by the phone.
(144) Mary put the salad in the icebox for an hour.
(145) The mother laid the baby down in the crib.
(146) He planted rice in the field.

The locative action frame (or stance frame) involves an action physical locative predicate with the obligatory posture feature which makes the *Agent* and *Patient* roles as co-referential. This is shown in examples (147) to (150) below (p. 198):

(147) He's standing on the corner.
(148) The returning POW stood by his wife.
(149) The king was sitting on his throne.
(150) Phyllis is lying on the bench.

Row G' has the feature motion rather than locative with a noun in the role of *Path*. "While the feature *directed* correlates with the occurrence of *Source* and/or *Goal*, *Path* is crucial to a case frame whose verbs have the feature motion" (p. 198). The state and process frames represent state motion and process respectively, while the latter two represent propulsion and locomotion. The feature physical and the role *Patient* occur within these frames. The *Agent* occurs in the last two frames and is co-referential with *Patient* in the last frame.

The state physical motion frame is "characterized by verbs which predicate motion (as a physical state) to certain *Patient*s. The nouns in the role of *Patient* are either astronomical bodies or products of technology" (p. 199). The second relation or noun is considered *Path* and frequently occurs with examples of this

frame. Thus, the state physical motion frame can be demonstrated in examples (151) to (154) below (p. 199):

(151) The earth rotates on its axis once every twenty-four hours.
(152) The moon revolves (makes one revolution) around the earth once every month.
(153) The earth orbits the sun.
(154) The wheel spun around several turns.

He adds examples of machinery without the *Path* relation in the following examples provided in (155) and (156) below (p. 199):

(155) The press is going.
(156) The machinery is running.

The process physical motion frame has the features process, physical, and motion with the possible occurrence of a noun in the *Path* role. Frequently, however, this frame occurs as a *Patient* and an optional location (p. 199):

> The optional location which specifies the motion as occurring at a certain place may be alternatively replaced by the cases, *Source*, *Path*, *Goal*, or some combination of them. The commonly occurring combinations seem to be either *Source* by itself, *Goal* by itself, or *Source* plus *Goal* or *Path*; but all three may be encoded within the same clause.

The following example shown in example (157) below, has a *Patient* without a *Locative* (p. 199):

(157) The ship sank.

This example can be expanded to include a *Locative* which specifies the location where it occurs as in example (158) below. With a verb like 'fall' it is usual practice to specify a *Source* as in example (159) below. However, if there is no *Source* noun present, there usually is at least an adverb of direction present as in

example (160) below. Longacre notes that with the verb 'sink' it is more likely to be specified as a *Goal*, as in example (161) below, rather than a *Source* as in example (162) below. What can be noted in all of the following predications is that they report what is happening to something or someone as opposed to any action someone is undertaking (p. 199):

(158) The ship sank at sea.
(159) Don fell from the chair/second story window.
(160) John fell down.
(161) The ship sank into the depths.
(162) The ship sank from the surface.

The action process physical frame (or propulsion frame) involves a *Patient* with either a *Location*, or some combination of *Source*, *Path*, and *Goal*. Longacre provides two examples with the verb 'carry', where *Patient* and location is involved as in example (163) below, and a *Patient*, *Source*, *Path*, and *Goal* is involved as in example (164) below (p. 200):

(163) Don't carry a burden inside the temple enclosure.
(164) Tom carried the basket from the kitchen through the dining room into the living room.

With verbs of this frame, either *Agent* and *Source* are co-referential or *Agent* and *Goal* as in the following two examples shown in (165) and (166) below:

(165) We pushed the boat out into the current.
(166) Tom pulled the book away from Susan.

The action physical frame (or locomotion frame) involves a co-referential *Agent* and *Patient*, and a noun in the optional *Locative* role. Some or all of the set, *Source*, *Path*, and *Goal* may replace the optional component of this frame. This can been seen in the examples provide below in (167) to (171) (p. 200):

(167) Joan travelled a lot this summer (where no *Locative* occurs).

(168) The baby crawled from the kitchen to the front room (*Source* and *Goal*).

(169) We returned from Papua New Guinea via Europe (*Source* and *Path*).

(170) The car crossed over the bridge from Nuevo Laredo (*Path*, *Source*, and *Goal*).

(171) Sam swam through the water to the raft (*Path* and *Goal*).

Longacre addresses frames H and H' simultaneously in his work. The same process will be done in the following section. H and H' frames refer to property with the feature possession which specifies that the nouns in the roles of *Source*, *Path*, and *Goal* must be animate. Row H has the added feature of 'directed' which occur with *Goal*, or both *Source* and *Goal*. "In these frames, *Source* is the original owner and *Goal* the nontransitory or terminal owner" (p. 202). Row H' has the added feature of 'motion' which specifies *Path*, and may also specify *Source* and/or *Goal*. "In such predicates, *Source* and *Goal* are defined as in Row H with the feature directed, and *Path* indicates the transitory owner in the transfer" (p. 202). Both rows can be labelled possession, acquisition, transfer, and appropriation. The acquisition verbs (p. 202):

> do not involve expenditure of effort (no *Agent* is present with them) but indicate *come into possession of*. Verbs of transfer and appropriation involve the activity of an *Agent*. Transfer verbs are transactional and thus indicate *come into possession of* (or *forfeit possession of*) *by ones own activity* (e.g., *buy* or *sell*). Appropriation verbs are not transactional but indicate a physical action such as *grab*, *snatch*, *take*, *collect*.

The state physical possession directed frame (row H) takes a *Goal* (owner) and a *Patient* (thing possessed). This is demonstrated in examples (172) to (174) below (p. 202):

(172) Dick has a new book.

(173) Tom owns a lot of real estate.

(174) He has possession of the car now.

The state physical possession motion frame (row H') takes a *Patient*, *Path*, and a *Goal*. This is demonstrated in examples (175) and (176) below (p. 202):

(175) Dick has a book for you.
(176) Tom has some tickets for all of us.

The process physical possession directed frame (row H acquisition frame) "has the same accompanying noun roles as in the preceding frame, with much the same sort of surface structure actualizations" (p. 203). This can be noted in examples (175) and (176) below (p. 203):

(177) Tom has acquired a St. Bernard.
(178) Mary obtained an honorary degree (here we mean simply that Mary came to have the degree, not that she actively got it by expenditure of effort).

The process physical possession motion frame (row H' transitory acquisition frame) has motion and adds *Path* as is shown in examples (179) and (180) below (p. 203):

(179) Tom got/found the tickets for you.
(180) The department obtained a visa for Dr. Ho.

Longacre considers the transfer and assisted transfer frames as extremely complicated because "they compare in many ways to propulsion and locomotion in their use of *Source*, *Path*, and *Goal*" (p. 203). Similar to propulsion, there is an *Agent* in a co-referential with the *Source*. However, unlike propulsion, "there is one variety of assisted transfer in which the *Agent* is co-referential with the *Path*. *Instrument*, i.e., price may also be specified" (p. 203). Thus, the action process physical transfer motion frames (transfer) have an optional *Instrument* plus directed (Row H for transfer) and motion (Row H' for assisted transfer). The examples in (181) to (184) below the *Agent* is co-referential with *Source* (p. 203):

(181) Tom gave Bill a book (H).

(182) Tom gave Bill a Book for Susan (H'- Tom is *Agent* and *Source*, Bill is *Goal*, and book is *Patient*).

(183) Mr Smith sold Tom a convertible (H)

(184) Mr Smith sold Tom a convertible for his wife (H').

In examples (185) to (187) below the *Agent* is co-referential with *Goal* (p. 204):

(185) Bill received a book from Tom (H- Bill is *Agent* and *Goal*, book is *Patient*, and Tom is *Source*).

(186) Bill bought a book (H- Bill is *Agent* and *Goal*, and book is *Patient*).

(187) Bill brought a book from Tom (H- Tom specifies *Source*).

In example (188) below the *Agent* is co-referential with *Path* (p. 204):

(188) Bill bought a book for his wife (H').

When an *Instrument* is added (price) as in example (189) below, 'Bill' is the *Agent* and *Source*, 'book' is the *Patient*, and for '$5.00' is the *Instrument* (p. 204):

(189) Bill sold the book for $5.00.

In the following example (190), 'to George' specifies the *Goal* (p. 204):

(190) Bill sold the book to George for $5.00.

The appropriation frame or action physical, possession, directed and *Instrument* (H) has accompanying nouns of a co-referential *Agent* and *Goal*, *Patient*, and an optional *Source* and *Instrument*. The H' has the features action physical, possession, motion and *Instrument* while the nouns occur in the roles of *Agent* and *Path* (co-referential), *Patient*, *Goal*, and *Source*. In example (191) below, George is *Agent* and *Path*, book is *Patient*, and John is *Source*. Example (192) below has an *Instrument* and example (193) specifies a body part as an *Instrument* (p. 205):

(191) George grabbed the book from John (H)

(192) He picked the coal up with the tongs (H).

(193) He snatched it with his left hand (H).

Some example of appropriation (H') are provided in examples (194) and (195) below (p. 207):

(194) Levi collected taxes for Rome.

(195) John picked it up for me.

Appendix 2: Vocabulary 3 lexical items as identified by Winter (1977)

Vocabulary 3: Lexical items of Connection			
achieve;	converse;	(happen);	repeat;
addition;	correct;	hypothetical;	replace;
(action);	correspond;	identify;	reply;
affirm;	deduction;	instance;	requirement;
alike;	deny;	instrumental;	resemble;
alike;	depend;	justification;	respect;
analogous;	differ;	kind;	result;
antithesis;	differentiate;	lead to;	reverse;
(attitude);	distinction;	like(ness);	same;
attribute (2);	distinguish;	manner;	similar;
basis;	(do);	match;	situation;
case;	effect;	matter (2);	sort;
cause;	equal;	mean (2);	(solution);
characteristic;	error;	means of;	specify;
change;	(evaluation);	method;	state;
common;	(event);	(move);	subsequent;
compare;	exemplify;	name;	(surprising);
compatible;	exception;	(observation);	synonymous;
concede;	(except);	object;	technique;
conclude;	explanation;	opposite;	(thing;
condition;	fact;	parallel;	time;
confirm;	feature;	particular;	truth;
connect;	follow (2);	point (2);	unique;
consequence;	form;	(problem);	way;
constant;	function;	real;	etc.
contradict;	general;	reason;	
contrast;	grounds;	reciprocate;	

Appendix 3: Intra- and inter-propositional Māori text analysis

Please note: The raw data for the six texts are included as a PDF file on the accompanying compact disk.