

Tough- and Pretty-movement in Maori¹

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1. Introduction

This paper gives an analysis of problematic data from a set of constructions in Maori, which Hooper (1984) called C-comp (presumably an abbreviation of Completion-complement). The data pose a problem inasmuch as C-comp sentences appear to contain two NPs without morphological realisation of Case, where Maori canonically has no more than a single such NP in a given clause².

The analysis proposed here makes the claim that one of the unmarked NPs is in fact not an NP at all, but rather a sentential complement (either CP, i.e. *S'*, or IP, i.e. *S*). According to this analysis then, the 'problem' of double unmarked NPs does not exist. It will be shown here that C-comp sentences belong to one of three types, involving respectively raising, tough-movement,

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The following abbreviations are used in the glosses: abs(olutive), acc(usative), agt(agentive), dat(ive), det(erminant), dir(ectional), d(ual), erg(ative), gen(itive), mnr(manner), neg(ative), nml (nominalisation), nom(inative), pass(ive), perf(ective), pl(ural), pos(itional), s(ingular), tns (tense).

²Non-standard Maori shows a tendency to 'unmark' not only the nominative Case (the Case that in the standard language has no morphological manifestation) but also the accusative Case (manifested in the standard language as *i*-NP). Compare the standard a. with the non-standard b.

a. I tuhituhi Ø ahau i tēnei pānui ki te reo Māori.
write nom 1s acc det-pos letter

'I wrote this notice in Maori.'

b. I tuhituhi ahau tēnei pānui ki te reo Māori.

and what will be referred to here as 'pretty-movement'.

This paper is organised as follows. The data are firstly presented along with a discussion of Hooper's (1984) analysis. A general Government-Binding outline of the structure of Maori follows, with particular attention paid to Case assignment. Finally the C-comp constructions are analysed in detail.

2. C-comp and Case - an outline of the problem

2.1 The two unmarked "NPs"

In Maori, a VSO language, the simple sentence contains no more than one NP without overt Case-marking. The unmarked NP bears nominative Case, while *i*-NP and *ki*-NP are the morphological manifestations of accusative and dative Case respectively. The following sentence shows this basic pattern.

1.

I hoatu \emptyset a Hoani i te pukapuka ki a Mere.
 tns give nom det John acc det book dat det Mary
 'John gave the book to Mary'

Given this fact, it is not surprising that the sentences in 2. are problematic, for they appear to contain two unmarked NPs. As nominal determinants, *te* (and its plural form *ngā*) and *a* are definite articles. The form *a* is used, in both singular and plural, before personal pronouns, proper nouns, nouns expressing location and a few other personified nouns (e.g. *tauiwi* 'non-Maori'), while *te* and *ngā* are found elsewhere. Each of the sentences in 2. contains what is clearly an unmarked NP (*te whare*, *te take*, *a Hērora*). But in addition to this, each sentence contains as one of its complements a verb preceded by *te* (*te hanga*, *te whakatau*, *te whakaputa*). It is the presence of this second *te* that has given rise to the complement being labelled as an NP.

2. a. (Hooper 1984:4)

Kua oti \emptyset te whare i a Rewi te hanga.
 tns completed nom det house acc det Rewi te build
 'Rewi has finished building the house.'

Tough- and Pretty-movement in Maori

b.

Ka taea e rātou te whakatau Ø te take.
tns attain-pass agt 3pl te decide nom det matter

'They can decide the matter'

c. (Foster 1987:146)

Ka tata Ø a Hērora te whakaputa mai i a ia.
tns near nom det Herod te bring.out dir acc det 3s

'Herod was near to bringing him out'

In addition to the verbs *oti* 'be completed', *taea* 'be attained' and *tata* 'be near', there are a number of other verbs which enter into these types of constructions. Hooper (1984) mentions *hohoro* 'be quick', *kapi* 'be covered', *mate* 'die', *mau* 'be caught', *mutu* 'cease', *pau* 'be consumed', *pōrori* 'be slow', *rite* 'be alike', *tīmata* 'begin' and *wawe* 'be quick', while Foster (1987:146) gives an example with *poto* 'be dealt with' and Williams (1971:45) another with *hemo* 'be completed'³. These verbs, with the exception of *hohoro*, *pōrori*, *rite* and *wawe*, can all be construed as containing a notion of completion (or its opposite, commencement, in the case of *tīmata*), hence the label C-comp.

2.2 Hooper (1984)

Using a broad transformational framework, Hooper (1984) gives an account for C-comp sentences based on the assumption that the *te* + V sequence is indeed an NP, albeit one derived from a sentential clause. In the course of her analysis of C-comp sentences, the following three critical observations are made:

- A. The problematic "NP" always has a verbal head, which cannot even be replaced by a nominalised verb bearing the suffix *-Canga*⁴.

³Kāretu (1974:144) gives the verbs *oti*, *pau* and *taea* as occurring in this construction (and it would appear that these three are the most frequently employed C-comp verbs); Wills (1956:101) lists examples with *oti*, *pau*, *poto* and *tae* (in the active form).

⁴In Polynesian linguistics, *-Canga* is used as a cover term for the nominalisation suffix, which in Maori has the following forms: *-nga*, *-anga*, *-hanga*, *-kanga*, *-manga*, *-ranga*, *-tanga*, *-whanga*.

3.a.

Ka taea tēnei rangirangi te whakahoki.

criticism answer

'This criticism can be answered.'

b.

*Ka taea tēnei rangirangi te whakahokinga.

answer-nml

B. The nominal NP patterns as the subject. This is shown by the fact that both the focus marker *ko* and negative verbs such as *kāhore* trigger fronting of the subject only. Now, in C-comp sentences, only the nominal NP can be thus fronted.

4. a. (Hooper 1984:4)

Ko te tangata i mutu te tangi.

ko man tns cease weep

'It was the man who stopped weeping'

b. (Hooper 1984:4)

*Ko te tangi i mutu te tangata.

5. a. (Hooper 1984:4)

Kāhore te whare kia oti i a Rewi te hanga.

neg house tns completed build

'Rewi has not finished building the house'

b. (Hooper 1984:4)

*Kāhore te hanga kia oti te whare i a Rewi.

C. C-comp sentences display two patterns of coindexation with the surface subject. In the first pattern, i.e. where the matrix verb is like *tata* and *mutu*, the surface subject is also the underlying subject of the verbal "NP"⁵.

⁵The position of the empty subject in 6. anticipates the analysis proposed in section 4. It differs in two ways from the interpretation given by Hooper, who has the subject generated post-verbally, and for whom *te* is the nominal determinant, i.e. presumably in [Spec, NP], hence initial in the [NP S] constituent.

Tough- and Pretty-movement in Maori

6. a.

Ka tata te tōtara; [____i te mate].

tns near tōtara die

'The totara (tree) is nearly dead.'

b. (Hooper 1984:4)

Ka mutu te tangata; [____i te tangi].

tns cease man weep

'The man stopped weeping.'

In the second pattern, with matrix verbs like *taea*, *oti* and *pau*, identity is established between the surface subject and the underlying object of the verbal "NP".

7. a.

Ka taea ngā kōpaki; [te patopato ____i].

tns attain-pass envelope type

'The envelopes can be typed.'

b.

Kua oti te take; [te whakatau ____i].

tns finished matter decide

'The matter has finished being decided.'

c.

Kua pau tēnei whenua; [te haere ____i].

tns consumed det-pos land go

'This land has been travelled through.'

Hooper accounts for these three facts, among others, by positing 8a. as the D-structure for C-comp sentences, i.e. the matrix verb subcategorises for a sentential subject, generated under NP. The embedded S has the internal structure of 8b., where the first NP is subject and the second object.

8. a.

[_S V [NP S]]

b.

[_S V NP (NP)]

Tough- and Pretty-movement in Maori

10.

[_{IP} NP [_{I'} I VP]]

Koopman and Sportiche (1985, 1987) propose an alternative Universal Base for IP, as in 11., where NP* is the canonical subject position (of VP) and Vⁿ some projection of V (which in the present paper will be labelled VP_I).

I have chosen to adopt the latter representation, simply in response to the argument that it accounts more neatly for the assignment of the subject θ -role from V via VP. The data under consideration offer no shibboleth to distinguish between the two representations. Moreover, the subject NP is required to move initially from its [NP*, VP_I] position in the Koopman-Sportiche model to [NP, IP] (i.e. its starting position in the Sproat model) because VP_I is a barrier to government and therefore to Case assignment⁶.

11.

[_{IP} ec [_{I'} I [_{VP'} NP* VP]]]

As for Welsh, Irish and Berber, VSO order in Maori can be derived by a series of leftward movements of both V and subject NP*, made necessary by the constraints of Case assignment. The D-structure of a simple transitive sentence is given in 12a,b.

12. a.

[_{CP} ec [_{C'} C [_{IP} ec [_{I'} i [_{VP'} a Hoani [_{VP} kite te hipi]]]]]]
tns det John see det sheep

'John saw the sheep.'

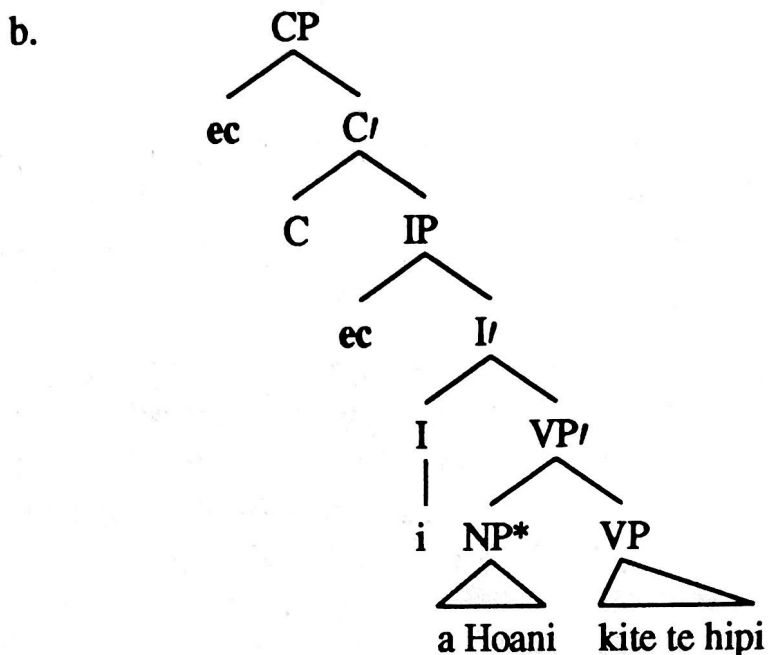
⁶To account for sentences with non-verbal predicates, such as nominal a. and adjectival b., the VP_I of the Universal Base is replaced by the more general XP_I. Since however the present paper is concerned with sentences having verbal predicates, the VP_I notation will be retained.

a. He tohunga \emptyset a Hoani ki te reo.
tns expert nom det John dat det language

'John is an expert in the language.'

b. I pai \emptyset a Hoani ki tana mahi.
tns good nom det John dat det-gen-3s work

'John was good at his work.'



3.2 Case Assignment

As is required by general theory (v. Koopman 1984, Stowell 1981, Travis 1984), Case is assigned under government⁷. For Maori, four additional conditions must also be met for Case assignment to take place: (A) Adjacency, (B) Lexicality, (C) Case Features and (D) Directionality. The formulation of these conditions owes much to Hunt (1987).

A Adjacency

Consider the examples in 13.

13. a.

[NP te tohunga o te reo]
 det expert gen det language

'the expert of the language'

b.

[PP mō te wahine]
 for-gen det woman

'for the woman'

⁷The definition of government assumed is that of Chomsky (1986:9):

α governs β iff α m-commands β and every barrier for β dominates α

c.

[_{AP} pai ki te hutupāoro]
 good dat det rugby

'good at rugby'

In each case the NP preceded by the Case marker is immediately adjacent to a lexical head (the heads being respectively [_N *tohunga*], [_P *m-*] and [_A *pai*]). The same is true in full sentences, where the subject NP* is adjacent to the C/I/V complex, which assigns nominative Case, and where, according to the present analysis, the object NP is adjacent to the trace of the verb, ([_V *t*]), which assigns accusative and dative Case.

14.

I kite_i Ø a Hoani t_i i te hipi.
 tns see nom det John acc det sheep

'John saw the sheep.'

Nor can any element, other than those incorporated into the verbal complex (such as directionals), appear between verb and subject or verbal trace and object⁸. Whereas 15a. is grammatical, 15b,c. show that an intervening adverbial NP renders the sentence ungrammatical.

15. a.

I kite_i a Hoani t_i i te hipi [_{NP} i nanahi].
 acc yesterday

'John saw the sheep yesterday.'

b.

*I kite_i [_{NP} i nanahi] a Hoani t_i i te hipi.

c.

*I kite_i a Hoani t_i [_{NP} i nanahi] i te hipi.

The only instance of non-adjacency occurs in Maori when the verbal trace

⁸Stylistic movements such as heavy-shift, whereby a subject NP may move to the right of a 'lighter' (i.e. shorter) NP complement, do not represent counter-evidence, since they take place post-syntactically, at entry into the phonological component (i.e. independently of the logico-semantic reading of trace and Case).

a. Kua kitea e ia te hipi.

'The sheep has been seen by him.'

b. I riro i a ia te wahine.

'The woman was taken by him.'

assigns two Cases, accusative and dative. It is obviously impossible for both Case-marked NPs to be adjacent to, and to the right of (v. condition (D)), the trace. Here the NPs are sequential.

16. (=1.)

I hoatu_i a Hoani t_i [_{NP} i te pukapuka] [_{NP} ki a Mere].

'John gave the book to Mary.'

Larson (1988) offers an interesting alternative analysis of the double object construction in English, which, when applied to Maori, avoids this very problem (i.e. an apparent violation of the adjacency condition). By adapting Larson's account to the Maori data, we arrive at a D-structure like 17.

17.

[_I i] a Hoani [_{VP} [_V] [_{VP} te pukapuka [_{V'} hoatu a Mere]]]

In this representation, the lower VP is a small clause from which the verb is moved leftward into the verbal slot immediately under the higher VP. After the other movements have occurred (both of V and subject NP), the following S-structure results:

18.

I hoatu_i [_{IP} a Hoani [_{I'} t_i [_{VP} t_i [_{VP} i te pukapuka [_{V'} t_i ki a Mere]]]]].

As can be seen, verbal traces are to be found adjacent to both NP complements, with the result that Case assignment is able to operate within the strict requirement of adjacency.

Given Stowell's (1981) claim that the requirement of strict adjacency is a parameter for Case assignment cross-linguistically, the above data suggest that Maori is set to require strict adjacency.

B Lexicality

For Gitksan, an Amerindian language of British Columbia, Hunt (1987) proposes the requirement that an NP can only be assigned Case from a governing node that bears a lexical head (i.e. V, N, P or A). The same requirement, it is claimed here, applies to Maori. So, while [_I +tns] may hold nominative Case for assignment, the Case cannot be assigned unless I is in a complex category along with a lexical head, namely V.

Lexicality is inherent in the lexical category (V, N, P, A), not in the lexical item it dominates; thus both V and its trace, [_V t], meet the requirement of lexicality. This contrasts with the features examined in the following condition, which are associated with particular lexical items.

C Case Features

To restrain Case assignment further, Levin and Massam (1985) propose the existence of two features, [C] (Case) and [CA] (Case-assigning). [C] represents the Case to be assigned and [CA] enables assignment to take place. As mentioned above, these features are the properties of individual lexical items, not of lexical categories. They may be "left behind" after movement, and so reside with the trace, but cannot be held simultaneously by both V and its trace.

The third condition for Case-assignment in Maori is as follows: for Case to be assigned to an NP, the latter must be governed by a node having the features [+C] and [+CA]. In Maori, unlike some other languages including Gitksan, there appear to be no lexical items which have [+C] but not [+CA]. In what follows, only the [+C] features will be mentioned; [+CA] is to be assumed as co-occurring.

D Directionality

Maori, like most VSO languages (Greenberg 1966), is head-initial in PPs. In Maori, APs are also head initial. Compare the grammatical examples in 13. with the ungrammatical equivalents in 19⁹.

19. a.

*[_{PP} *ō te wahine m(e)*]
gen det woman for

'for the woman'

b.

*[_{AP} *ki te hutupāoro pai*]
dat det rugby good

'good at rugby'

⁹Given the requirements of strict adjacency and rightward Case assignment, it is not surprising that the preposition *m-* never occurs without a following genitive marker (either *ō* or *ā*, v. section 2.2). The form *me* given in the example is used simply in order that Maori phonological structure (vowel-final syllable) is obeyed. *Me* is in fact a tense marker usually glossed 'prescriptive', posited by Clark (1976:115) as being at the probable origin of the preposition *m-*, which indicates virtual or prospective possession, 'for'. Likewise, Clark (following Pawley 1970:347) suggests a Proto-Polynesian past tense marker **ne* as the putative etymon of the preposition of actual or realised possession *n-*, 'belonging to', which also assigns genitive Case. Finally, the determinant *te*, when followed by a genitive marker in the context [_{NP} *te* [_{N'} [_{NP} gen-NP] N]]], also elides to form *tō* and *tā*.

As suggested by Sproat (1985), this phenomenon is linked to the parameter of directionality of Case assignment. The above facts indicate that in Maori, Case must be assigned rightward.

This condition breaks down in two instances. The first, to be discussed in section 3.3, concerns the leftward assignment of nominative Case from I to NP* when the [Spec, CP] position is lexically filled. The second, shown in 20., is peculiar to the assignment of genitive Case from N: it may be rightward, as in 20a., or leftward, as in 20b. Note that all other conditions are met: adjacency, lexicality and Case features.

20. a. (=13a.)

[NP te tohunga o te reo]
det expert gen det language

'the expert of the language'

b.

[NP tō te reo tohunga]
det-gen det language expert

Compare this with other Case assignments from N, with rightward assignment the only possibility. No explanation is offered here for this exception to the directionality condition.

21. a.

[NP te tohunga ki te reo]
det expert dat det language

'the expert in the language'

b.

*[NP te ki te reo tohunga]
det dat det language expert

3.3 Movement

The conditions imposed on Case assignment make it necessary for both subject NP* and V to undergo a series of leftward movements. NP* moves Spec-to-Spec from [Spec, VP/] (i.e. [NP*, VP/]) to [Spec, IP]. V moves head-to-head via I through to C, each time forming a complex head (v. Chomsky 1986:4). V finally lands under C/ in a complex C/I/V node, the exact struc-

Tough- and Pretty-movement in Maori

ture of which is uncertain (whether it is built up through Chomsky-adjunction or otherwise).

Since Case assignment must operate rightwards and between strictly adjacent constituents, in what follows, only those stages in the sequence of movements that result in V being situated immediately to the left of the subject NP* will be considered.

Assignment from I/V to [NP*, VP'] is excluded because VP' constitutes a barrier to government and therefore to Case assignment (v. Chomsky 1986:14).

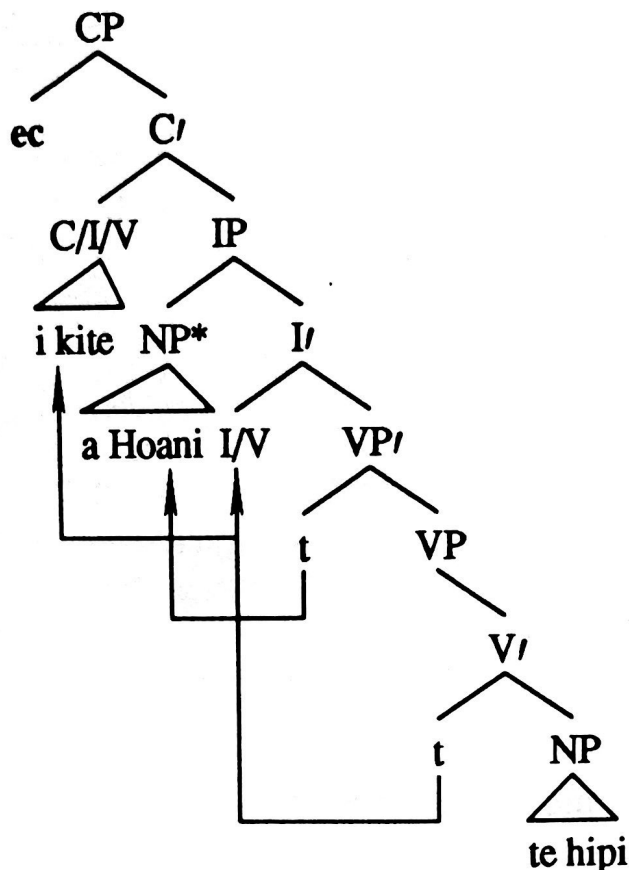
The only possible configuration for Case assignment then is from C/I/V to [NP*, IP]. Here the conditions of adjacency and directionality are obviously met. The presence of V in the assigner complex ensures the lexicality condition is satisfied. [+C] resides in I, which satisfies the Case features condition. Finally, and most importantly, Case can be assigned under government since IP does not constitute a barrier.

This succession of movements results in S-structure 22a,b., with 22c. the sentence after Case assignment.

22. a. (= 14.)

[_{CP} *ec* [_{C'} [_{C/I/V} *i kite*]_i [_{IP} [_{NP*} *a Hoani*]_j [_{I'} *t_i* [_{VP'} *t_j* [_{VP} *t_i* *te hipi*]]]]]]]

b.



c.

I kite Ø a Hoani i te hipi.
 nom acc

'John saw the sheep.'

Mention was made in section 3.2 of an exception to the directionality condition, whereby a lexically-filled [Spec, CP] licenses leftward assignment of Case. The sentences in 23. show that both canonical rightward assignment from C/I/V to [NP*, IP], in a., and exceptional leftward assignment from I/V to [NP*, IP], in b., are possible. Note that in both constructions, all the other conditions are equally satisfied.

23. a.

[_{CP} āhea [_{C'} ka kite [_{IP} a Hoani i te hipi]]] ?
 when? tns see John sheep

'When will John see the sheep?'

b.

[_{CP} āhea [_{IP} a Hoani [_{I'} ka kite i te hipi]]] ?

It is unclear to me what the mechanism would be that licenses this ex-

ceptional leftward Case assignment. What is clear is that such assignment is impossible when [Spec, CP] is empty, as 24. shows.

24. (v. 22.)

*[CP ec [IP a Hoani i kite i te hipi]].

In light of the facts of language typology, it is not surprising that Maori should manifest this alternative word order. Greenberg's (1966) Universal 6 reads as follows: "All languages with dominant VSO order have SVO as an alternative or as the only alternative basic order". Sproat (1985) claims that this stems from the fact that VSO languages are underlyingly SVO and that it is to be expected that the SVO order should surface on occasion.

4. C-Comp

4.1 Not NP but CP/IP

4.1.1 Maori

As pointed out earlier in this paper, the problem of C-comp sentences stems principally from the status of the verb marked with the (apparently) nominal determinant *te*, which prompted Hooper (1984) to label the *te* + V sequence¹⁰ as [NP S].

It is interesting to note that a number of other contexts occur in which *te* specifies a verb. Following the tense markers *kei* 'present' and *i* 'past', *te* + V indicates the progressive aspect, as in 25.

25. a.

Kei te hoki mai a Hoani ki Ōtautahi.

tns *te* return dir det John dat Christchurch

'John is coming back to Christchurch.'

b.

I te hoki mai a Hoani ki Ōtautahi.

'John was coming back to Christchurch.'

Then, following the [\pm tns] marker *ki*, *te* + V forms two structures. The

¹⁰The word 'sequence' is here purposefully vague, and is chosen merely to designate the constituent Hooper defines as [NP *te* [_S V ...]], and which will be analysed here as [VP *te* [_{V'} V ...]].

this nominalised form would be interchangeable with the V. Sentence 28. shows that this is indeed the case, and contrasts with those structures with the 'problematic' *te*, in 29.

28.

Ka uaua te hokinga mai ki Ōtautahi.

det return-nml

'The return to Christchurch will be difficult.'

29. a. (=3b.)

*Ka taea tenei rangirangi te whakahokinga.

b.

*Kei te hokinga mai a Hoani ki Ōtautahi.

c.

*Ka pīrangi a Hoani ki te hokinga mai ki Ōtautahi.

d.

*Ki te hokinga mai a Hoani ki Ōtautahi, ka pōuri tōna hoa.

Secondly, the determinant to a true NP can be other than *te*. In 30a., the determinant is the possessive *tōna* (in fact a combination of det-gen-3s) and in 30b. the plural *ngā*. The examples in 31 show that such determinants are impossible as replacements for the 'problematic' *te*.

30. a.

Ka uaua tōna hoki mai ki Ōtautahi.

'His coming back to Christchurch will be difficult.'

b.

E toru tekau ngā whakahoki mai.

tns three ten det answer dir

'There were thirty answers back.'

31. a.

*Ka taea tēnei rangirangi ngā whakahoki.

'This criticism can be answered (in several ways/again and again/by several people).'

b.

*Kei tōna hoki mai a Hoani ki Ōtautahi.

'John is on his way back to Christchurch.'

c.

*Ka pīrangi a Hoani ki tōna hoki mai ki Ōtautahi.
'John wants himself to return to Christchurch.'

d.

*Ki tōna hoki mai a Hoani ki Ōtautahi, ka pōuri tōna hoa.
'If John has his return to Christchurch, his friend will be sad.'

A third piece of evidence for differentiating the two types of *te* comes from the passive voice, which is formed in Maori by the addition to the active stem of the suffix *-Cia*¹². As in English, the underlying object moves initially into subject position, since it is left without the possibility of being assigned Case (the accusative Case feature being suppressed by Passive).

32. a. (=14.)

I kite a Hoani i te hipi.
'John saw the sheep.'

b.

I kitea te hipi e Hoani.
tns see-pass det sheep agt John
'The sheep was seen by John.'

The passive verb can be inserted into the true NP, just like the active verb, as shown in 33.

33. a.

He uaua te mōhiotia o ngā whakaaro o ngā kaihaina.
tns difficult det know-pass gen det thought gen det signatory
'It is difficult to know what the signatories had in mind.'

b.

Ko te whakahuaina o te reo i kōrerotia e rātou.
ko det pronounce-pass gen det language tns speak-pass agt 3pl
'It was the pronunciation of the language that was being discussed by them.'

The data on passives with 'problematic' *te* are of two kinds. When occurring with a non-PRO subject (i.e. lexical NP or NP-trace), the passive is possible.

¹²-*Cia* is the cover term used in Polynesian linguistics for the whole range of morphological forms of the passive suffix: *-a*, *-ia*, *-hia*, *-ina*, *-kia*, *-mia*, *-na*, *-nga*, *-ngia*, *-ria*, *-tia*, *-whia*.

Tough- and Pretty-movement in Maori

34. a. (Biggs 1969:86)

Kei te katarina a Rewi e Tamahae.

tns *te* laugh-pass det Rewi agt Tamahae

'Rewi is being laughed at by Tamahae.'

b.

Ka whaihua pea, ki te whakamāorititia tēnei pukapuka.

tns fruitful perhaps tns *te* translate-pass det-poss book

'It would perhaps be worthwhile if this book were translated.'

c.

Kua tata te tōtara; [____i te turakina t_i e Rewi].

tns near det tōtara *te* cut.down-pass agt Rewi

'The totara (tree) is about to be cut down by Rewi.'

But with a PRO subject¹³, the passive is impossible.

35. a.

*Ka pīrangi a Hoani; [PRO_i ki te kitea t_i e te katoa].

tns wish det John tns *te* see-pass agt det all

'John wants to be seen by everyone.'

b.

*Kua oti ngā kōpaki; [PRO te patopatohia ____i e Tama].

tns completed det envelope *te* type-pass agt Tama

'The envelopes have finished being typed by Tama.'

This evidence suggests that with 'problematic' *te*, the context is properly verbal-sentential: the admissibility of passive depends on the presence or absence of PRO (the exact reasons for this remain unclear). In a purely nominal context, such as that in 33., the question does not arise, since there is no subject NP* node within the NP¹⁴.

The clear distinctions between 'regular' *te* + V and 'problematic' *te* + V indicate that while the former sequence constitutes a true NP, the latter is something else. What is claimed here is that 'problematic' *te* is a verbal determinant, generated in [Spec, VP] position and proclitic on V, with which

¹³I assume that infinitival clauses not embedded under a raising verb take PRO subjects.

¹⁴This statement would have to be revised if the analysis of 'verbal' NPs in 4.5 is adopted.

it moves (if and when verb movement occurs). In the C-comp sentences then, the complement containing *te* + V is not an NP but rather a tenseless CP/IP (i.e. IP after raising verbs, and CP after tough- and pretty-movement verbs).

4.1.2 Other Polynesian languages

Hawaiian offers data suggesting that the distinction between nominal *te* and verbal *te* is not an innovation in Maori. In Hawaiian, the singular definite article (i.e. a nominal determinant) has two forms: the 'traditional' *ke* (*k* being the Hawaiian reflex of Proto-Polynesian **t*) and the innovation *ka*. Before nouns beginning with *a-*, *e-*, *k-* and *o-*, *ke* is always used (e.g. *ke aloha* 'empathy', *ke ea* 'breath, spirit', *ke kanaka* 'person', *ke ola* 'life'); before *i-*, *l-*, *u-* and *w-*, *ka* is the form always used (e.g. *ka inoa* 'name', *ka lawai'a* 'fisherman', *ka ua* 'rain', *ka wai* 'water'). Before the other phonemes, the usual form is *ka*, although *ke* is found with certain items (e.g. *ka hale* 'house', *ke hoa* 'companion', *ka makana* 'present', *ke mele* 'song', *ka noho* 'seat', *ke noi* 'request', *ka pā* 'enclosure', *ke po'o* 'head', *ka 'ala* 'fragrance', *ke 'aka* 'laugh'). (Williams Wilson, pers. comm.)

This article can precede verbs appearing in a true NP (cf. (27) in Maori). In this case, the distinction between *ke* and *ka* holds.

36.

He mea maika'i ka inu wai.
 tns thing good det drink water
 'Drinking water is a good thing.'

The same applies to nominalised verbs (cf. 28.).

37.

I ka lele 'ana aku o ka manu,...
 acc det fly nml dir gen det bird
 'At the flying off of the bird,...' (i.e. when the bird flew off)

But Hawaiian also has a verbal determinant *ke* which occurs in a number of constructions, and is invariant in form.

38 a. (Elbert 1970:134)

Ke kali nei au.
te wait dir 1s
 'I am waiting.'

b. (Elbert 1970:119)

Hiki i ka manu ke lele.

able acc det bird te fly

'The bird can fly.'

c.

Ke 'ike au iā ia,...

te see 1s acc-det 3s

'If I see him,....'

The fact that this *ke* is not subject to the same phonologically conditioned variation as the definite article demonstrates that they are two quite separate items in Hawaiian, which lends support to the present claim that the same is true of Maori.

It is interesting to note that Hooper (1984) reconstructs C-comp sentences for Proto-Polynesian, using evidence from Tokelauan 39a. and Tongan 39b. (Tongan and Maori belonging to separate branches at the earliest split in the Polynesian language grouping). Since both Tokelauan and Tongan use reflexes of Proto-Polynesian **te* in their C-comp constructions¹⁵, it can be assumed that **te* was already a verbal specifier in Proto-Polynesian, presumably the result of an extension from [Spec, NP] to [Spec, VP]¹⁶.

39. a. (Hooper 1984:14)

Kua uma te povi i nā faine te kai.

tns finished det beef acc det woman te eat

'The beef is used up from having been eaten by the women.'

¹⁵Tokelauan *te* is clearly a reflex of **te*, while Clark (1976:48-49) traces Tongan *he* back to **te* also.

¹⁶The Samoan preverbal marker *te* may also turn out to be evidence for the status of the Proto-Polynesian verbal **te*. Its position between the clitic subject pronoun and the verb (where other verbal markers precede the pronoun) suggests its generation in [Spec, VP] rather than under I.

a. 'Ou te alu 'i le falema'i. (Hunkin 1988:65)

1s ? go dat det hospital

'I am going to the hospital.'

b. Sa 'e alu 'i le a'oga ananafi? (Hunkin 1988:66)

tns 2s go dat det school yesterday

'Did you go to school yesterday?'

b. (Hooper 1984:17)

Kuo 'osi 'a e puaka he kai.
 tns finished abs det pig te eat

'The pig has finished eating.'

Related sentences can be found in Niuean, where *he* (once again the reflex of Proto-Polynesian **te*) is used as a verbal specifier, as can be seen in the following sentences from Seiter (1980:129).

40. a.

Teitei oti tuai e gahua he taute e mautolu.
 nearly finished perf abs work te do erg 1pl

'The work is nearly finished being done by us.'

b.

Makona tuai e moa he fagai aki e tautolu e vala puaka.
 full perf abs chicken te feed with erg 1pl abs piece pork

'The chicken is full from our feeding it with pork.'

c.

Kua ofo a lautolu he nākai kai e koe e ika.
 tns surprised abs 3pl te not eat erg 2s abs fish

'They were surprised you didn't eat the fish.'

If, as Seiter (1980: 298) believes, Niuean *he* has been reanalysed as a Case marker before NPs, then its retention as a verbal marker in the above examples once again lends support to the claim that Proto-Polynesian had **te* in two different categories: nominal specifier and verbal specifier.

4.2 Raising

C-comp sentences fall into three classes. The first, according to the present analysis, involves raising the underlying subject of the embedded clause, and follows the pattern established for raising in English with, say, *certain*.

41. a.

Kua tata a Hoani_i [t_i te whakaoti i te rīpoata].
 tns near det John te finish acc det report

'John has nearly finished the report.'

Tough- and Pretty-movement in Maori

b.

John_i is certain [t_i to finish the report].

Given the series of movements necessary for Case assignment (including the raising from the sentential complement itself), and the fact that CP is deleted after predicates like *tata* in Maori and *certain* in English in order to allow for the NP-trace in [Spec, IP] to be governed (Chomsky 1981:68)¹⁷, 42. represents the S-structure (after Case assignment) of the raising class of C-comp sentences.

42.

Kua tata_j [_{IP} a Hoani_i [_{I'} t_j [_{VP'} t_i [_{v'} t_j [_{IP} t_i [_{VP'} t_i te whakaoti i te ripoata]]]]]].

Other verbs in the raising class include the following: *hohoro* 'be quick', *mutu* 'cease' and *rite* 'be alike'.

43. a. (Williams 1950:20, cited by Hooper)

Kia hohoro tāua_i [t_i te haere].

tns quick 1d te go

'Let us travel quickly.'

b. (=6b.)

Ka mutu te tangata_i [t_i te tangi].

'The man stopped weeping.'

c. (Williams 1971:343, cited by Hooper)

Kia rite koutou_i [t_i te haere].

tns alike 2pl te go

'May you go in like manner.'

4.3 Tough-movement

The second class of C-comp sentences resembles tough-movement sentences in English (and other languages). Compare Maori and English in 44.:

¹⁷IP does not constitute a B[locking] C[ategory] (nor therefore a barrier to government from the verbal trace) for the NP-trace in [Spec, IP], since the verb L-marks the IP (*tata* assigning a θ -role to the sentential complement) (v. Chomsky 1986:14).

44. a.

Kua oti mai ngā tiwhikete_i [PRO_{arb} te tā mai ____i].
 tns completed dir det certificate te print dir

'The certificates have been printed (for us).'

b.

Certificates_i are easy [PRO_{arb} to print ____i].

Other verbs in the tough-movement class in Maori, besides *oti* 'be completed', include *hemo* 'be completed', *mau* 'be caught', *poto* 'be dealt with', *taea*¹⁸ 'be attained' and *tīmata* 'begin'.

45. a. (Biggs 1969:125 in Hooper)

Kua mau koe_i i a au_j [PRO_j te here ____i].
 tns caught 2s acc det 1s te bind

'You are held fast by me.'

b. (Foster 1987:146)

Ka poto katoa ngā iwi_i [PRO_{arb} te iriiri ____i].
 tns dealt.with all det people te baptise

'The people had all been baptised.'

c.

Ka taea te reo_i e te katoa_j [PRO_j te kōrero ____i].
 tns attain-pass det language agt det all te speak

'Everyone can speak the language.'

d. (Maunsell 1894:156 in Hooper)

Ka tīmata tēnā whenua_i [PRO_{arb} te tua ____i].
 tns begin det-poss land te fell

'That land began to be cleared' [i.e. trees were felled.]

Note that scrambling can occur:

¹⁸*Taea* is the passive form of *tae* 'reach, attain' and as such, marks its agent with the agentive Case (*e*-NP). The other verbs in the list are stative verbs (unable to take passive morphology), which assign accusative Case (*i*-NP) to the agent. Some speakers have reanalysed *taea* as a stative verb, unrelated to *tae*, and thus assign accusative to the agent.

Tough- and Pretty-movement in Maori

46. a.

Ka taea e koe_j tō pātai_i [PRO_j te whakautu ____i].
2s det-gen.2s question te answer

'You can answer your question.'

b. (=2b.)

Ka taea e rātou_j [PRO_j te whakatau ____i] te take_i.
3pl te decide det matter

'They can decide the matter.'

A sentence such as the last may lead one to reject the structure proposed in 44. and 45., and to claim that it is in fact these sentences that are scrambled versions of a structure like 47., in which the embedded subject is assigned agentive Case from the passive verb *taea* (across, say, an IP boundary) and the object exceptionally receives nominative Case from *whakatau*.

47.

Ka taea [e rātou te whakatau te take].

Evidence against such an analysis comes from *ko*-focussing and negative raising, as outlined by Hooper (1984) and given here as examples 4. and 5. The focus particle *ko* can front the subject only, while negative verbs optionally cause the raising of subjects only. The examples in 48. show that the NP *ngā kaikōrero* must have been the subject of the C-comp verb at some time in the derivation in order for it to be eligible for further movement.

48. a.

Ko ngā kaikōrero_i ka taea t_i [PRO te whakanui ____i].
ko det speaker te increase

'It's the (number of) speakers that can be increased.'

b.

E kore ngā kaikōrero_i e taea t_i [PRO te whakanui ____i].
tns neg tns

'The (number of) speakers will not be able to be increased.'

Both the Maori and English constructions pose a considerable theoretical problem: how to account for the identity of the surface subject of the matrix clause and the underlying object of the embedded clause?

Chomsky (1977; 1981:308ff) and Kayne (1981) provide an analysis of tough-movement sentences that draws on insights from *wh*-questions and

relativisation, claiming that *wh*-movement takes place within the embedded clause. Examples 49a,b. give the D- and S-structures postulated by this analysis.

49. a.

Certificates are easy [_{CP} for [_{IP} PRO to print *wh*-]].

b.

Certificates are easy [_{CP} *wh*-_i for [_{IP} PRO to print *t_i*]].

According to this view, the *wh*- element will take the NP *certificates* as its antecedent by virtue of the usual rules governing *wh*-interpretation. Both *for* and the *wh*-element itself will be deleted by independently motivated rules located in the P[honological] F[orm] component of the grammar, leaving the surface sequence of 50.

50.

Certificates are easy [_{CP} *ec_i* [_{IP} PRO to print *t_i*]].

The fundamental problem with such an approach, as pointed out by Lasnik (Lasnik and Uriagereka 1988:146-147), involves the thematic status of the matrix surface subject. The NP *certificates* is generated in that position (v. 49a.) yet receives no θ -role there; rather, it receives its only θ -role as the underlying object of the embedded clause. This is evidenced by the alternative version of the same sentence, given in 51. There is thus a violation of the θ -criterion in the analysis proposed in 49a.

51.

It is easy [PRO to print certificates].

Although the Chomsky-Kayne analysis of tough-movement analysis is unsatisfactory, no alternative explanation is offered here. I wish merely to point out that Maori (along with perhaps Tokelauan and Tongan) possesses a tough-movement structure of its own. Since the matrix predicates involved in the Polynesian construction are significantly different from those found in English and other Indo-European examples (*oti* 'be finished', *taea* 'be attained' vs. *difficult, easy, hard, impossible, simple*), Maori could be an interesting source of data for further examination of the tough-movement phenomenon¹⁹.

¹⁹It is interesting to note in this regard that the parasitic gap phenomenon, generally associated with tough-movement, is marginal in Maori.

a. This kind of food is easy to eat without cutting up ___.

An apparent problem arises when a constituent intervenes between the governing verbal trace and the governed empty category, as in 55.

55.

Kua pau_j ngā pihikete t_j i ngā tamariki_k [ec_i [PRO_k te kai t_i]].
acc det children

'The biscuits have been eaten up by the children.'

When discussing tough-movement, Kayne (1981:110) proposes 56a. as the structure for the equivalent English sentence, claiming that if the collocation, *for Mary*, were a PP in the matrix clause, government by *easy* of the empty category in [Spec, CP] would be blocked. Evidence is presented in 56b. from French, where the preposition *pour* cannot be construed as a complementiser in the same way as *for* in English. Kayne claims that the equivalent French sequence is unacceptable precisely because government of the empty category is blocked²⁰.

56. a. (Kayne 1981:110)

John is easy [CP ec_i for [IP Mary to please t_i]].

b. (Kayne 1981:110)

*Jean est facile [PP pour Marie_j] [CP ec_i [IP PRO_j à contenter t_i]].

With Maori, the 'intervening' NP (*i ngā tamariki* in 55.) cannot lie within the embedded clause, since the Case assigned to it depends on the matrix verb (*taea* assigns agentive Case, while the other tough-movement C-comp verbs assign accusative Case). Yet, the intervening NP should block government of the empty category by the matrix verb (*pau* in 55.). It clearly does not.

Hooper (1984) gives two further examples of pretty-movement sentences, with the matrix verbs *mate* 'die' and *kapi* 'be covered'. In both examples, there is an agentive/instrumental constituent; in the first, it intervenes between verbal trace and empty category, and in the second, it has been scrambled out of this position (but was presumably there at S-structure, where government of the empty category is required).

57. a. (Orbell 1968:64 in Hooper)

Ka mate_j tērā t_j i te kaha_k [ec_i [PRO_k te patu t_i]].
tns die det-poss acc det noose te strike

'That one died from the blow of the noose.'

²⁰The corresponding sequence without the PP is an acceptable sentence:
a. Jean est facile à contenter.

Tough- and Pretty-movement in Maori

b. (Biggs, Hohepa and Mead 1967:76 in Hooper)

... ā, kapi_j katoa i a ia_k te whenua t_j [ec_i [PRO_k te tāhae t_i]].
and covered all acc det 3s det land te steal

'..and it (the thistle) completely covered the land, stealing it.'

In all these examples, the verbal trace governs the empty category in accordance with the definition of government given above (v. n.7). What appears to differentiate Maori from French is that, in the former, a sister node that intervenes between governor and governed element does not hinder that government.

4.5 Nominalisation

Compare English and Maori in the following examples:

58. a.

[_{NP} John_i's eagerness [PRO_i to finish the report]]

b.

He pai [_{NP} te pīrangi a Hoani_i [PRO_i ki te ako i te reo]].
tns good det wish gen John tns te learn acc det language

'John's desire to learn the language is admirable.'

59. a.

*[_{NP} John_i's certainty [t_i to finish the report.]]

b. (Maunsell 1894:102 in Hooper)

Kātae [_{NP} te hohoro o tā tātou kai_i [t_i te pau]].
how.great! det quick gen det-gen 1pl food te consumed

'With what speed our food has been consumed!'

60. a.

*[_{NP} the report_i's difficulty [PRO_{arb} to finish ___i.]]

b.

Me pēhea [_{NP} te taea o tēnei kaupapa_i [PRO_{arb} te
tns how? det attain-pass gen det-pos plan te

whakatutuki ___i]]?

realise

'How can this plan be realised?'

While both Maori and English allow the nominalisation of PRO-control predicates 58., only Maori allows the nominalisation of raising 59. and tough-movement predicates 60. It may be that the parallels pointed out in 4.2, 4.3 and 4.4 between Maori and English are more apparent than real, that the analysis given there of C-comp sentences is incorrect and that the differences in nominalisation data result from differences in the structure of the embedded clause between the two languages. However, the claim that Maori and English pattern similarly for PRO-control, raising, tough- and pretty-movement constructions is upheld here; an account for the differences can be formulated in terms of the internal structure of the nominalisation (NP) node itself.

The D-structure presumed for the English examples is as follows:

61.

[_{NP} Spec N [NP* ...V... (NP)]]

In English, the nominalisation (*eagerness, certainty, difficulty*) arrives from the lexicon as a noun and can be inserted directly under an N node (Chomsky 1970). The NP in the [Spec, NP] position (*John*) is assigned genitive Case by a structural rule (v. Chomsky 1981:50). Sentence 58a. presents no problems since PRO has a legitimate antecedent in *John's*, and has no need to be governed.

As for 59a. and 60a., Kayne (1981:109) claims that the ungrammaticality of similar examples, given in 62., stems from the inability of nouns to govern across a CP or IP boundary, that is, there is no government of the NP-trace in the raising nominalisation 62a., nor of the empty category left behind after wh-deletion in the tough-movement nominalisation 62b.²¹ Nouns, according to Kayne, differ from their verbal counterparts in this feature.

62. a.

**John_i's appearance* [*t_i to have left*]

b.

**John_i's easiness* [*ec_i [PRO to please t_i]*]

Now I want to claim that in Maori, the core element of the 'nominalisation' (*pīrangi, hohoro, taea*) comes from the lexicon as a verb, and is nominalised by moving to a 'verbal-noun' node ([_N V]), which assigns genitive

²¹Chomsky (1977:110) explains the same facts by suggesting that sentential complements of nouns, unlike verbs, are 'immune' to *wh*-movement (or perhaps to relative interpretation).

Case in a way that parallels the association of nominative Case with I(nfl). Indeed, I want to extend the parallel with sentence structure (i.e. between NP and CP/IP) by claiming for the nominalised C-comp a D-structure like that of 63., in which an empty [_N V] head governs an CP/IP complement.

63.

[_{NP} Spec [_N vec] [_{IP} ec I [_{VP'} [_{NP*} ec] V^c [NP* ...V... (NP)]]]]

Parallelling the leftward movements within the C-comp sentence, detailed in section 3.3, the C-comp verb (V^c) moves head-to-head via I to [_N vec], while the subject NP* of the innermost clause moves Spec-to-Spec via [NP*, VP'] to [Spec, IP], where it receives the genitive Case inherent in [_N V]. (Note that I is tenseless and therefore Caseless.) The resulting S-structure for a raising predicate is given in 64.

64.

[_{NP} Spec [_N V^c_i] [_{IP} NP*_j t_i [_{VP'} t_j t_i [t_j ...V... (NP)]]]]

As in the corresponding C-comp sentence, CP is deleted in the C-comp nominalisation after raising verbs, which must be able to govern the NP-trace through a bare IP (v. section 4.2); as before, CP is retained as the maximal sentential projection after tough- and pretty-movement verbs since PRO cannot appear in a governed position. This account provides NP-movement with a legitimate landing site, as well as accounting for the assignment of genitive Case under nominalisation to the element that would have received nominative Case as the surface subject of the corresponding C-comp sentence. It is an assumption made here that whatever mechanism (as yet unexplained) licenses the coindexing of surface matrix subject and underlying embedded object in tough-movement sentences does the same for the corresponding elements in the nominalisation.

5. Conclusion

This paper has taken the data on C-comp sentences collected by Hooper (1984) and reformulated her insights within a GB framework.

By using a sentential analysis for the *te* + V sequence in C-comp sentences, it has been shown that the Case-markings fall out naturally: since *te* + V forms the core of a CP/IP (rather than an NP), the lack of Case marking on this constituent is to be expected.

The three different types of C-comp sentences noted by Hooper (char-

acterised by *mutu*, *oti* and *pau*) are reanalysed as involving raising, tough-movement and 'pretty-movement'. The raising construction fits well into the pattern generally accepted for its English equivalent. Tough-movement sentences remain without a satisfactory explanation, but the analysis developed by Chomsky and Kayne for tough-movement was found to be applicable to what I have called 'pretty-movement'. Finally the difference between nominalisation data in Maori and English are explained in terms of differences in internal NP structure.

What I hope is most interesting here is the fact that Maori offers a wide range of data manifesting great structural similarities with, say, English, while, between the two languages, there is significant difference in the semantic types of predicates that subcategorise for these structures.

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Tough- and Pretty-movement in Maori

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Review

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Introductory textbooks on historical linguistics, unlike those on syntax where a moratorium is long over due, are relatively rare. Furthermore, such an introductory text which uses Pacific languages to illustrate techniques and exemplify points must be in the unique category. This text, which is actually a revised edition of Crowley (1981), falls into the unique category.

The revisions to the 1981 edition are outlined in the preface. These include: improved explanation and exemplification where the author felt it was necessary, replacement of the original transcription by an IPA-based one, additional problems from a wider range of languages, a redistribution of the 1981 chapter five into chapters two and ten, and the addition of two new chapters - Causes of Language Change and Observing Language Change.

The overall style of the text is straightforward, uncomplicated and, consequently, very easy to read. This is in keeping with Crowley's aim of producing a text which could be used by students for whom English is a second language. However, there are a number of places where a little more attention should have been paid to style, for example p.27 "So, for instance, [naif] in English 'strengthens' the final consonant to become [naip] in Tok Pisin." How can *knife* in English strengthen anything?

Throughout the book unfamiliar terms and new concepts are explained simply and illustrated with examples drawn from Pacific languages. The notion 'unfamiliar terms' does not just apply to linguistic terminology but is extended to the names of languages for which a geographical location and, if necessary, historical period is given, and to terms, including place names, familiar only to Papua New Guineans. This is in line with the author's aim of explaining simply all concepts and terms without simplifying the concepts themselves and not assuming that readers know what terms such as, for example *Umlaut*, *spiritus aspirate* and *sandhi* mean. Such an approach is welcome. Students beginning linguistics often complain that the discipline seems to consist only of endless lists of terms. While nothing can be done

to eliminate the terminology, any attempt to present it in a more acceptable form has to be good.

The book covers not just the areas one would expect to find in an introductory text, for example types of sound change, phonetic and phonemic change, the comparative method, internal reconstruction, semantic and syntactic change, but also includes chapters which cover writing and ordering phonological rules, observing language change, explaining language change and cultural reconstruction. This breadth is achieved at the sacrifice of depth. This is not necessarily bad, especially in an introductory text. However, there may well be issues where a little further discussion would be helpful for the students. Let me give two examples. Firstly, the discussion of opposition to the neogrammarian hypothesis makes no mention of lexical diffusion which introduces the time dimension into change. (See Chen 1972, Chen and Hsieh 1971 and Chen and Wang 1975 for a discussion of lexical diffusion.) Secondly, the chapter on internal reconstruction fails to point out that the method has been shown to give false results when tested against a language for which we have considerable historical texts. (See Lass 1975 where it is shown that internal reconstruction gives false results for the history of vowel nasalization in French.)

Each chapter concludes with a set of reading guide questions, designed to direct students to the important points of the chapter, a set of exercises which allow students to practice the concepts introduced in the chapter, and a list of further readings. Both the reading guide questions and the exercises are extremely useful in reinforcing the concepts introduced. Most aspects of linguistic analysis are better learned through practical application than by simply reading about them. Although the lists of further readings are helpful, especially to the motivated student, they raise a number of questions. Antilla (1972) is included in the list of recommended reading for a number of chapters yet this textbook is probably too demanding for most introductory students. In addition, the further reading for the chapter on syntactic change contains no reference to the works of Traugott or Lightfoot which are no more demanding than that of Antilla.

Although it is not my intention to comment on each chapter, there are two chapters I would like to discuss in some detail.

Chapter two - Types of Sound Change - is a good introduction to various phonological processes and contains material usually not found in historical linguistic textbooks and occasionally either omitted from or given only a

cursory discussion in phonology textbooks. The chapter covers lenition (but not fortition), apocope, syncope, haplology and cluster reduction (but not aphaeresis although an example of this is given). Various processes which insert segments are discussed, as are metathesis, fusion, unpacking, breaking, assimilation and dissimilation. Each process is clearly and simply defined and each definition is accompanied by an appropriate illustrative example.

Most of these processes are familiar and require little further comment. However, I would not refer to them as types of sound change but as phonological processes which may lead to either phonetic or phonological change. There are two types of change which do require further comment. These are 'compression' and 'unpacking'.

Crowley states that compression is not very general and occurs only with a few words in a language. It occurs when one or more syllables are dropped off the end or middle of a word, for example *administration* > *admin.* or *university* > *uni.* One particular type of compression reduces certain words to their initials, for example *television* > *TV* and another type, referred to as 'word mixes' produces the following; *administrative college* > *adcol.* I do not consider these processes to be of the same status as phonological processes such as, for example, epenthesis, apocope or metathesis, and consequently they do not belong in this chapter. Whereas one may write phonological rules to express the other processes, it is impossible to write a rule or rules to express such an irregular and highly restricted change.

Unpacking is defined as being the opposite of fusion. An original sound may develop into a sequence of two sounds, with each sound having some of the features of the original sound. Two examples of this process are given. One involves the unpacking of French nasalized vowels into a sequence of oral vowel plus nasal in Bislama, for example French [kamiõ] > Bislama [kamioŋ]. The other, also from Bislama, involves the unpacking of English /æ/ into /ai/, e.g. English 'bag' [bæg] > Bislama [baik]. The first example is transparent and convincing but the second is slightly opaque and not so convincing. In contrast to Crowley's analysis, Clark (1987:87) claims that the change of English /æ/ into /ai/ occurs only when there is an adjacent velar. The sequence /ai/ in Tok Pisin and Bislama consists of a low vowel followed by a high front glide, represented by /i/. The glide is a result of the transition from vowel to velar. When the velar precedes the vowel /æ/, the glide precedes the vowel for example English 'captain' /kæptən/ > Bislama /kiap/ 'government'. The change of /æ/ to /ai/ would appear to be a case of assimilation rather than

unpacking.

The other chapter on which I would like to comment is chapter five - Sound Correspondences and Reconstruction. This chapter is one of the clearest expositions of the comparative method I have come across in any historical linguistics textbook. Tongan, Samoan, Rarotongan and Hawaiian provide the data for a fully worked reconstruction of the Proto-Polynesian sound system. This reconstruction includes discussion of whether or not the Proto-Polynesian sound system had /l/, /r/ or both.

However, despite the care taken to achieve clarity in an area which, to introductory students, often looks more like a neat conjuring trick rather than the application of a logical method, it is in this chapter that the book's main editing error occurs. Page 94 concludes with the following sentence:

Similarly, in the word for 'gall' given on the next page, we find that there are sound in Tongan corresponding to nothing in the other languages:

and we would expect the next page to begin with a set of correspondences which illustrate this point. However, page 95 begins with a set of correspondences to be used in the first stage of reconstructing the stop system of Proto-Polynesian. The missing paragraph may be reconstructed by comparing mother and daughter texts.

The switch to a more IPA-type transcription system has clearly caused some problems for the typesetters who, it would appear, have had to cobble together some of the symbols. This is particularly noticeable with /ŋ/. There are also a number of misprints but I do not intend to mention these here. However, it must be mentioned that the publishers have managed to produce this text for \$NZ29.95, which is not outrageous and within the budget of most students.

Despite the criticisms mentioned above, I wish this book had been available ten years ago, when I was a student of historical linguistics. I would have found it extremely helpful and interesting and later, as a lecturer in historical linguistics, I would have adopted it as prescribed reading ahead of other introductory texts such as, for example Bynon (1977) and Jeffers and Lehiste (1982). Its clear style and lack of Indo-European based data would make it an ideal textbook for students of historical linguistics in the U.K. where familiarity with European languages other than English often leads students to follow their intuitions rather than to learn and apply thoroughly the methods of

comparative and internal reconstruction. I hope that UPNG and USP can be persuaded to produce a second edition of this volume in which the misprints can be corrected.

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