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Determiner phrases in Maori

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0. Introduction

According to common linguistic wisdom, it is the noun *house* that forms the core of the phrase *the house*. Generative terminology refers to this core position as the 'head' of the phrase. Analyses of Maori have followed this approach, with Hohepa (1967:16), Biggs (1969:18), Chung (1978:25), Reedy (1979:3), Bauer (1981:20) and Barlow (1990:22) referring to a noun such as *whare* as the head (or nucleus) of the phrase *te whare* 'the house'.

Recent work (Abney 1987, Fassi Fehri 1989) suggests that it is the determiner (DET) (i.e. the articles, English *the* and Maori *te*, in the above examples) rather than the noun that is in fact the head of such phrases. The present paper attempts to show that this new analysis accounts for the facts of Maori more elegantly than previous studies.

1. Theoretical Foundations

As Mutu (1989:407) noted in her survey of the history of theoretical orientations adopted in the study of Polynesian syntax, "descriptions of Polynesian languages since the mid-1970s have been somewhat eclectic as to theoretical approach and informal in their presentation". However, in contrast to Mutu's claim (1989:408) that by "eschew[ing] any discussion of theoretical orientation" recent studies have been able to "present[...] their data and arguments with a clarity not obscured by the idiosyncracies of one particular theoretical stance", the present paper is predicated upon the belief that the adoption of a formal framework for linguistic analysis enables the linguist not only to describe, but also to explain, linguistic phenomena.

The Government-Binding structure sketched here for Maori is that outlined in Waite (1989), except for a few details.[1] The universal rules that constrain the shape of the d-structure (i.e. underlying syntactic structure) are those of the X-bar theory and follow the pattern given in (1), where X is any category (lexical or functional) and XP is its maximal projection.

[1]The outline given in Waite 1989 is based in turn on Sproat's 1985 analysis of VSO word order in Welsh.

(1) (where '->' signifies 'dominates immediately')
XP -> Spec, X' (where the specifier (Spec) is a maximal projection)
X' -> X', Comp (where the complement (Comp) is a maximal projection)[2]
X' -> X, Comp

Although the hierarchy $[_{XP}\ [_{X'}\ X]]$ is taken to be universal, the order of constituents within each level varies across languages. In Maori, the underlying order is shown in (2).

(2) (where '>' signifies 'precedes')
Spec > X'
X' > Comp
X > Comp

These well-formedness conditions sanction the d-structure for the simple verbal sentence in Maori. (3)a. gives the skeletal d-structure, while (3)b. shows a lexicalised d-structure.[3] At this level, Maori and English share the same underlying SV(O) word order.[4]

(3) a. d-structure
$[_{CP}\ [_{C'}\ C\ [_{IP}\ [_{I'}\ I\ [_{VP}\ DP_{subj}\ [_{V'}\ V\ DP_{obj}\ ]]]]]]$
b.
$[_{CP}\ [_{C'}\ C\ [_{IP}\ [_{I'}\ i\ [_{VP}$ a Moetū $[_{V'}$ tūtaki tōna hoa]]]]]]
Tns / Det / Moetū / meet / Art-Gen-3s / friend[5]

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[2]This recursive rule allows a binary branching structure to account for "double complement" structures:

$[_{CP}\ [_{C'}\ [_{IP}\ [_{I'}$ I hoatu$_i$ $[_{VP}$ Ø ia $[_{V'}\ [_{V'}$ v$_i$ i te pukapuka] ki a Mere]]]]]]
Tns/give/Nom/3s/Acc/Art/book/Dat/Art/Mary
She gave the book to Mary.

[3]CP is the maximal projection of the complementiser (COMP) and is equivalent to S'. IP is the maximal projection of the inflection (INFL) and the equivalent of S. The appearance of the constituent DP (the maximal projection of DET), where traditionally one would expect NP is the subject of this paper.

[4]The grammatical functions 'subject' and 'object' are used as labels for syntactic constituents, defined respectively as the DP directly under the predicate XP and the DP directly under the predicate X'. Grammatical functions are associated, but not isomorphic, with categories of Case (e.g. nominative, accusative, dative and genitive), which in turn are to be distinguised from thematic roles (e.g. theme, agent, experiencer and instrument).

[5]Glosses use the following abbreviations: Acc (accusative), Agt (agentive), Anaph (anaphoric), Art (article), Caus (causative), Dat (dative), Deict (deictic),

As described in Waite (1989), three of the requirements for the correct assignment of Case in Maori are (i) that the Case assigner and assignee be adjacent to one another,[6] (ii) that Case be assigned rightward, and (iii) that Case be assigned under government.[7] In order to satisfy these requirements for the assignment of nominative Case from INFL[8] to the subject DP, V must move leftward into INFL. This leftward movement gives rise to the standard V|S(O) word order of Maori.[9] The resulting s-structure (i.e. the syntactic structure that serves as an input into the phonological and semantic components of the grammar) is shown in (4).

(4) a. s-structure

$[_{CP}\ [_{C'}\ [_{IP}\ [_{I'}\ I+V_i\ [_{VP}\ DP_{subj}\ [_{V'}\ v_i\ DP_{obj}\ ]]]]]]$[10]

DET or D (determiner), Dir (directional), Erg (ergative), Foc (focus), Gen (genitive), Nml (nominalisation), Nom (nominative), Pass (passive), Tns (tense/aspect).

[6]The Case assigner may be a head, or its trace.

[7]That is, the consituent assigning a given Case must 'govern' the constituent receiving that Case. The use of the term 'government' in the Government-Binding theory is related to its use in traditional grammar (where, for example, the Latin verb *placere* 'to please' is said to govern a noun in the dative case). The technical definition of government used here is that of Chomsky 1986:9: a governs b iff a m-commands b and every barrier for b dominates a.

[8]The Government-Binding theory holds that nominative Case (indicated where appropriate by Ø) is assigned by INFL, while accusative and dative are assigned by V. Further on, we assume that genitive is assigned by DET.

[9]Maori appears to have an exceptional nominative Case assigning position. When lexically filled by a PP or QP, the [Spec, CP] position licenses COMP to assign nominative Case. This means that the subject DP can move leftward into the [Spec, IP] position and receive Case from COMP. So alongside,

a. $[_{CP}$ Kātahi anō $[_{C'}\ [_{IP}\ [_{I'}$ ka tūtaki$_i$ $[_{VP}$ Ø a Moetū $[_{V'}$ v_i i tōna hoa]]]]]]

Moetū just met his friend.

the following is also possible:

b. $[_{CP}$ Kātahi anō $[_{C'}\ [_{IP}$ Ø a Moetū$_j$ $[_{I'}$ ka tūtaki$_i$ $[_{VP}$ t_j $[_{V'}$ v_i i tōna hoa]]]]]]

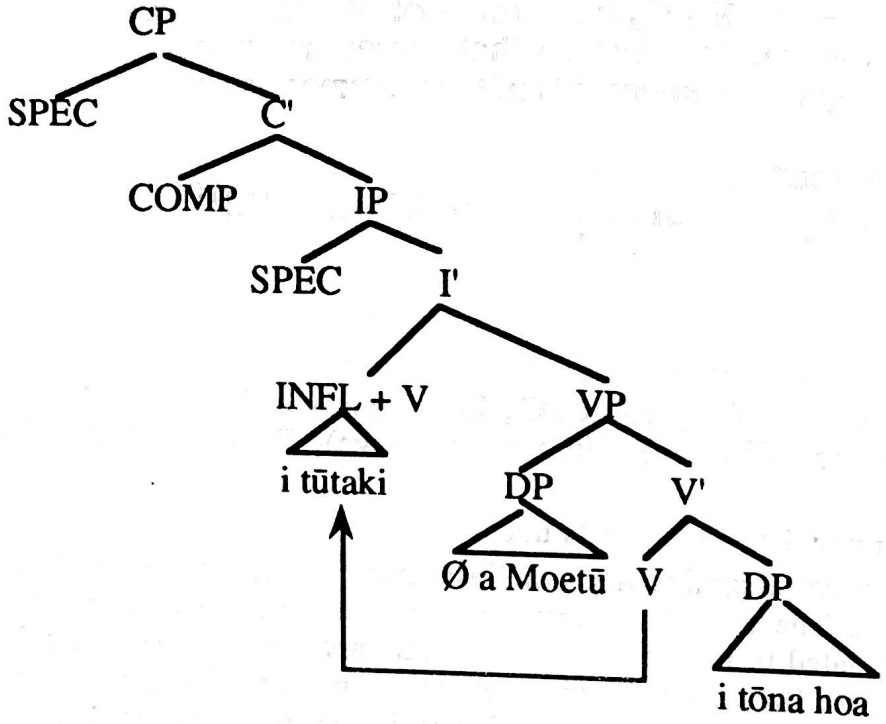
Moetū just met his friend.

[10]Co-indexing with italicised subscript characters is used to indicate chains, formed in this case between the displaced constituent (e.g. V) and its trace(s) (v for verbal trace, n for nominal trace, a for adjectival trace, and t for DP trace).

b.

[CP [C' [IP [I' I tūtaki$_i$ [VP Ø a Moetū [V' v$_i$ i tōna hoa]]]]]]
Tns / meet / Nom / Art / Moetū / Acc / Art-Gen-3s / friend
Moetū met his friend.

c. (=(4)b.)



The structures in (3) and (4) can easily be generalised to account not only for sentences with verbal predicates (i.e. where X = V in (1)), but also for those with nominal and adjectival predicates (i.e. where X = N, or X = A in (1)). Thus, (3)a. and (4)a. can be generalised to (5)a. and (5)b., giving parallel s-structures for all three types of predicates in (6) - (8).[11]

(5) a. d-structure
[CP [C' [IP [I' I [XP DP$_{subj}$ [X' X DP$_{obj}$]]]]]]

b. s-structure
[CP [C' [IP [I' I+X$_i$ [XP DP$_{subj}$ [X' x$_i$ DP$_{obj}$]]]]]]

(6) verbal predicate (=(4)b.)
[CP [C' [IP [I' I tūtaki$_i$ [VP Ø a Moetū [V' v$_i$ i tōna hoa]]]]]]
Tns / meet / Nom / Art / Moetū / Acc / Art-Gen-3s / friend
Moetū met his friend.

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[11] I am taking *he* in (7) and (8) to be a tense-aspect marker generated under INFL.

(7) nominal predicate
[$_{CP}$ [$_{C'}$ [$_{IP}$ [$_{I'}$ He tohunga$_i$ [$_{NP}$ Ø ia [$_{N'}$ **n**$_i$ ki te reo]]]]]]
Tns / expert / Nom / 3s / Dat / Art / language
She is an expert in the language.

(8) adjectival predicate
[$_{CP}$ [$_{C'}$ [$_{IP}$ [$_{I'}$ He mōhio$_i$ [$_{AP}$ Ø a Moana [$_{A'}$ **a**$_i$ ki te waiata]]]]]]
Tns /knowledgeable / Nom / Art / Moana / Dat / Det / song
Moana is knowledgeable about song.

2. Syntactic Categories

Biggs (1969:50-51) makes an initial division of the word inventory of Maori into two groups, bases and particles, which correspond grosso modo to the Government-Binding distinction between lexical and functional categories respectively. In further dividing the group he calls bases, Biggs explicitly rejects the traditional categorisation (noun, verb, adjective) as being inappropriate for Maori, since a single lexical form may range across a number of these categories. Rather, he takes a structural approach, drawing up a set of new categories based on the distribution of items in nominal and verbal phrase contexts. The resulting system involves five classes: noun, universal, stative, locative and personal.

As pointed out by Bauer (1981:28), "Biggs is able to claim that no classes overlap because he has created the class 'Universal' to contain essentially those items which would otherwise belong to overlapping classes". Apart from the fact that the retention in this paper of the categories noun, verb and adjective is theoretically motivated,[12] it is simply not necessary to abandon the traditional categorisation of lexical items. Indeed, locatives and personals can be taken to be specific cases of the category noun,[13] while statives can be reclassed as either adjectives or unaccusative verbs.[14]

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[12]According to the Government-Binding theory, lexical categories can be considered the result of combining the binary features [±N] and [±V] (Chomsky 1981:48).

[13]Common nouns, personal nouns and locative nouns appear in the same contexts, despite minor differences with regard to the form (including Ø) of the article:

a. E pēhea ana {te whānau / a Rangi / a waho}?
How is {the family / Rangi / it outside}?

b. Kei te haere au {ki te whānau / ki a Rangi / ki Ø waho}.
I am going {to the family / to Rangi / outside}.

[14]While adjectives can occur with the tense/aspect marker he (e.g. he roa te kauri 'the kauri [tree] is tall'), unaccusative verbs cannot (e.g. *he mahue ngā morehu 'the survivors are left behind').

This leaves only universals outstanding. Bauer prefers to retain the categories noun and verb (and, by extension, adjective) in the light of the fact that Biggs' universal class covers precisely those lexical items that belong to more than one of these categories. The position taken in the present paper is that the impression gained of Maori as a language that allows a very large number of forms to belong to more than one category is partly real, partly apparent, and is due to two distinct phenomena, one morphological, the other syntactic.

Firstly, Maori has few morphological affixes that signal a derivational change in lexical category: [$_V$ *haina*] 'to sign' plus the nominalisation suffix *-Canga* gives [$_N$ [$_V$ *haina*] *-tanga*] 'signing'; [$_V$ *haina*] 'to sign' plus the agentive prefix *kai-* gives [$_N$ *kai-* [$_V$ *haina*]] 'signatory'; and [$_A$ *mārama*] 'clear' plus the causative prefix *whaka-* gives [$_V$ *whaka-* [$_A$ *mārama*]] 'to clarify'.

In addition to these three affixes, Maori makes use of zero derivation. Thus *koroua*, a noun meaning 'old man', has also become a verb meaning 'to grow old (of a man)', while *tangi*, a verb meaning 'to produce a sound', has also become a noun meaning '(the resulting) sound'.[15] These verb-noun pairs are the result of a lexical rule, rather than a syntactic rule, operating on the basic member of the pair to create the other. Each member has its own specific semantic content: for example the verb *waiata* 'to sing' can be distinguished semantically from *waiata* 'song'.

(9) a.
Ka pakaru te wini i te [$_V$ waiata] a te wahine.
Tns/broken/Art/window/Acc/Art/sing/Gen/Art/woman
The woman's singing broke the window.

b.
I whakaputaina e te kaitito āna [$_N$ waiata] katoa.
Tns/Caus-come.out-Pass/Erg/Art/Agt-compose/Gen-3s/song/all
The composer published all his songs.

Secondly -- and this is the central thesis of this paper -- nouns, verbs and adjectives that appear in determiner phrases (or what have traditionally been called 'nominal phrases') without undergoing semantic change maintain their lexical category; that is, verbs and adjectives do not become nouns, or even 'verbal nouns' or 'adjectival nouns'. Just as the Maori sentence can have a nominal, verbal or adjectival predicate (see (6)·

[15]The direction of derivation suggested here for zero affixation is intuitive only, and has no bearing on the arguments put forward.

(8)), so determiner phrases can have nominal, verbal or adjectival complements.

3. Structure of DP

Parallels between the sentence and the 'nominal phrase' have long been noted in generative literature. One example is Chomsky's (1970) treatment of gerundive nominalisation (e.g. *John's refusing the offer*) and derived nominalisation (e.g. *John's refusal of the offer*) in English. The conclusion drawn within the version of transformational-generative theory current at the time has it that gerundive nominalisation is a transformational process (whose d-structure is close to that of the corresponding full sentence (e.g. *John refused the offer*)), while derived nominalisation is a lexical process that occurs pre-syntactically. Although the theoretical framework has evolved considerably since this time, it is fair to say that the present analysis of the DP (i.e. the constituent traditionally referred to as the 'nominal phrase') in Maori has more in common with gerundive nominalisation than derived nominalisation.

Within the current Government-Binding framework, Fassi Fehri (1989) argues for a DP structure in Standard Arabic that is parallel to that generally accepted for IP (i.e. the sentence), claiming that the parallelism extends to the assignment of nominative and genitive Case by INFL (in IP) and DET (in DP) respectively. The same analysis can be applied to Maori.

The d-structure of the DP follows the X-bar pattern of (1), parallel to IP in (5)a:

(10) d-structure
$[_{DP}\ [_{D'}$ DET XP]], where X = {V, N, A}

Whereas DET is traditionally considered part of the NP, namely its specifier ([Spec, NP]), the above view takes it as (i) being the head of its own phrase, and (ii) being followed by an NP, AP or VP complement. Thus the following three d-structures are all possible.

(11) a.
$[_{DP}\ [_{D'}$ te $[_{NP}$ whare]]]
Art / house
the house

b.[16]
$[_{DP}\ [_{D'}$ te $[_{AP}$ tere (ki) te whakahoki mai]]]
Art / rapid / (Dat) / Art / Caus-go.back / Dir
the speed of reply

[16]The appropriate Case markers are included in parentheses for clarity of presentation, although Case is assigned in s-structure, not in d-structure.

c.[17]

[$_{DP}$ [$_{D'}$ te [$_{VP}$ kimi (i) ngā kupu hou]]]

Art / search.for / (Acc) / Art / word / new

the search for new words

By postulating DET as the head of these phrases and stipulating for Maori that this DET can take nominal, adjectival and verbal complements, we gain two important advantages over the more familiar 'noun-as-head-of-NP' analysis. Under the latter approach, it is necessary either to state that all adjectives and verbs could also be classed as nouns (in order not to violate the X-bar theory, which states that configurations such as [$_{NP}$ A] and [$_{NP}$ V] are impossible) or to simply ignore the constraints of the X-bar theory (thus allowing adjectives and verbs to head NPs). In the present analysis however, the X-bar theory is maintained, since the head of DP is always DET and the head of DET's NP, AP or VP complement is always N, A or V, respectively. There is moreover no need to introduce lexical redundancy rules converting all adjectives and verbs to nouns, since it suffices to stipulate that, in Maori, DET can take NP, AP or VP complements.

Just as the head of INFL's complement moves leftward to attach itself to INFL (cf. (5)b.), so too the head of DET's complement can attach itself to DET, as shown in (12). The requirements for Case assignment from the head of the complement XP are met whether or not this movement takes places. The movement becomes crucial however when genitive Case is to be assigned, as in examples (16) and (17).

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[17]This sequence of *te* + V, having the d-structure [$_{DP}$ [$_{D'}$ te [$_{VP}$ V]]] is distinct from the use of *te* as a tense-aspect marker in infinitival clauses involving, for example, raising (a) and tough-movement (b), as well as in finite clauses, such as (c), all of which have the d-structure [$_{IP}$ [$_{I'}$ te [$_{VP}$ V]]]. For details, see Waite (1989).

a. Ka tata ngā tōtara te mate. *The totara is almost dead.*

b. E kore tō mate e wawe te rautapu. *Your death will not rapidly be avenged.*

c. Tēnei au te pōhiri atu nei kia... *I am inviting [you] to...*

Nor should this construction be confused with nominalisations involving the suffix *-Canga*, which operates a lexical derivation from the category V (or A) to N. Hence the d-structure [$_{DP}$ [$_{D'}$ te [$_{NP}$ N]]] of (d).

d. te hokinga mai *the return*

(12) s-structure[18]
$[_{DP}\ [_{D'}\ DET/X_i\ [_{XP}\ [_{X'}\ x_i\ \ (DP)\ ]]]]$

This movement can apply to the head of any type of complement XP, whether an active transitive verb (13)a., a passive transitive verb (13)b., an intransitive verb (13)c., an unaccusative verb (13)d.,[19] an adjective (14), or a noun (15).

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[18]It has been suggested that the comparison between 'sentential' and 'nominal' constructions be extended, not only to establish a parallel between INFL and DET, but also between COMP and K (abstract Case).

a. $[_{CP}\ [_{C'}\ COMP\ [_{IP}\ [_{I'}\ INFL\ ]]]]$

b. $[_{KP}\ [_{K'}\ K\ [_{DP}\ [_{D'}\ DET\ ]]]]$

Since the exact locus of the generation of Case markers in Maori (whether as the specifier of DET, or under a K) does not bear on the issues being discussed in the present paper, it has been decided not to introduce a further syntactic category (cf. Travis 1984).

[19]The existence of a class of unaccusative verbs was first demonstrated in a Relational Grammar framework (Perlmutter 1978), and later reformulated in Government-Binding terms (Burzio 1986). Whereas the s-structure subject of transitive and intransitive verbs is generated in the subject position (i.e. directly under the VP node), the s-structure subject of an unaccusative verb is generated in the object position (i.e. directly under the V' node) and subsequently moves to the subject position due to the unaccusative verb's inability to assign accusative Case to the object position.

Given that the application of passive morphology to a verb effectively raises the d-structure object to subject position, it follows that such a verb must first have a d-structure object that is free to be raised. Since the d-structure object of unaccusative verbs is raised for the reason given above, it is unavailable for raising by passivisation; it is therefore to be expected that unaccusative verbs would not have passive forms (e.g. **mahuetia*).

In addition, as the s-structure subject of an unaccusative verb is initially a d-structure object (like the s-structure subject of a passive verb), it is not surprising that the meaning of unaccusative verbs in Maori is in some sense 'passive' (cf. English glosses: *mahue* 'be left behind', *mau* 'be caught', *oti* 'be completed', *riro* 'be obtained'), and that unaccusative verbs pattern syntactically with passives:

a. Kei te pīrangi ia ki te { waiata / *kitea / *mahue }.
b. *She wants to { sing / be seen / be left behind}.*
te waiata { a / *o } te wahine; te kitea { o / *a } te wahine; te mahue { o / *a } te wahine
the woman's singing; the woman's being seen; the woman's being left behind

(13) a.
[DP [D' te patu$_i$ [VP [V' v$_i$ i te poaka]]]]
Art / strike / Acc / Art / pig
killing the pig
b.
[DP [D' te kitea$_i$ [VP [V' v$_i$ e te kaiako]]]]
Art / see-Pass / by / Art / Agt-teach
being found by the teacher
c.
[DP [D' te torotoro$_i$ [VP [V' v$_i$ ki tāwāhi]]]]
Art / go.forth / Dat / other.side
visiting overseas
d.
[DP [D' te mahue$_i$ [VP [V' v$_i$ i te kaitaraiwa]]]]
Art / left.behind / Acc / Art / Agt-drive
being left by the driver

(14)
[DP [D' te pai$_i$ [AP [A' a$_i$ ki te waiata]]]]
Art / good / Dat / Art / sing
being good at singing

(15)
[DP [D' te tohungatanga$_i$ [NP [N' n$_i$ ki te whakairo]]]]
Art / expert-Nml / Dat / Art / embellish
expertise in carving

As is seen in the above examples, dative Case in Maori can be assigned by any one of the lexical categories, V, N, or A, whereas accusative Case can only be assigned by V. Nominative and genitive Case are assigned from outside the VP, NP or AP complement, nominative Case coming from INFL and genitive from DET. These differences in Case assignment account for the fact that (i) nominative Case is only found in sentential contexts (i.e. headed by INFL), (ii) genitive Case is only found

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c. Ka haere mai ia hei { āwhina i a mātou / *whāngaia e mātou / *rato i a mātou }.
He came to { help us / be adopted by us / be provided for by us }.
d. Ka haere mai ia hei { whāngai mā mātou / *rato mā mātou }.
He came to { be adopted by us / be provided for by us }.
Unaccusative verbs have traditionally been labelled 'participles' (Williams 1862), 'neuter verbs' (Williams 1904) or 'statives' (Biggs 1969) in writings on Maori.

in contexts headed by DET, and (iii) the remaining Cases (accusative and dative) are found in both types of contexts.[20]

The same set of facts explains why, in a DET-headed context, the genitive-marked DP can occur both to the left and right of its head in s-structure, as in (16),[21] while DPs bearing other Cases, such as the dative in (17), can only occur to the right of their head.

(16) a.
tā te wahine tamaiti
Art-Gen / Art / woman / child
the woman's child

b.
tō te wahine whaea
Art-Gen / Art / woman / mother
the woman's mother

c.
te tamaiti a te wahine
Art / child / Gen / Art / woman
the woman's child

d.
te whaea o te wahine
Art / mother / Gen / Art / woman
the woman's mother

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[20] An account which maintains the internal structures of NPs, APs and VPs within a larger DP explains not only Case-marking phenomena, but also the fact that sentential complements within VPs remain unchanged:

a. te kore o te rangatahi [IP e kai paipa]
Art / negative / Gen / Art / youth / Tns / eat / pipe
the youths' not smoking

b. te oti o te pukapuka [IP te tuhi]
Art / completed / Gen / Art / book / Tns / write
the book's being finished writing

[21] I am taking DPs such as *tōku whaea* 'my mother' and *tēnei tamaiti āna* 'this child of hers' to have the structure of (15) and (18):

a. $[_{DP}\ [_{D'}$ te $[_{NP}$ o -ku$_i$ $[_{N'}$ whaea t_i]]]] -> tōku whaea
Art / Gen / 1s / mother

b. $[_{DP}\ [_{D'}$ tēnei tamaiti$_i$ $[_{NP}$ a -na $[_{N'}$ n_i]]]] -> tēnei tamaiti āna
Art-Deict / child / Gen / 3s

(17) a.
*te ki te wahine whanaunga
Art / Dat / Art / woman / relative
the woman's relative
b.
te whanaunga ki te wahine
Art / relative / Dat / Art / woman
the woman's relative (lit. the relative to the woman)

The d-structure of such phrases is given in (18).

(18) a.
$[_{DP}\ [_{D'}$ te $[_{NP}$ te wahine $[_{N'}$ tamaiti]]]]
b.
$[_{DP}\ [_{D'}$ te $[_{NP}$ **ec** $[_{N'}$ whaea te wahine]]]]
c.
$[_{DP}\ [_{D'}$ te $[_{NP}$ **ec** $[_{N'}$ whanaunga te wahine]]]]

The assignment of genitive Case from DET combines with the optional movement of the complement head (in this case N) to produce two possible s-structures for each of (18)a. and b. Remember that Case must be assigned rightward, to an adjacent constituent, under government.

(19) a.
$[_{DP}\ [_{D'}$ te $[_{NP}$ a te wahine $[_{N'}$ tamaiti]]]]
-> tā te wahine tamaiti[22]
b.
$[_{DP}\ [_{D'}$ te tamaiti$_i$ $[_{NP}$ a te wahine $[_{N'}$ $\mathbf{n}_i$]]]]
c.
$[_{DP}\ [_{D'}$ te $[_{NP}$ o te wahine$_j$ $[_{N'}$ whaea $\mathbf{t}_j$]]]]
-> tō te wahine whaea
d.
$[_{DP}\ [_{D'}$ te whaea$_i$ $[_{NP}$ o te wahine$_j$ $[_{N'}$ $\mathbf{n}_i$ $\mathbf{t}_j$]]]]

Since Cases other than genitive (and nominative) are assigned by N, V and A, the dative Case in (20) must be assigned rightward from the N *whanaunga* to the DP *te wahine*. This is achieved whether or not the N moves to attach itself to DET. If however the DP were to move to the left of the N, dative Case could not be assigned rightward; hence the agrammatical (21).

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[22]The s-structure sequences *te + a* and *te + o* emerge from the grammar's phonological component as *tā* and *tō* respectively. Likewise, *ngā + a* and *ngā + o* (or rather 'plural definite article' + 'genitive') emerge as *ā* and *ō*.

(20) a.
$[_{DP}\ [_{D'}$ te $[_{NP}$ **ec** $[_{N'}$ **whanaunga ki te wahine**]]]]

b.
$[_{DP}\ [_{D'}$ te whanaunga$_i$ $[_{NP}$ **ec** $[_{N'}$ **n**$_i$ **ki te wahine**]]]]

c.
$[_{DP}\ [_{D'}$ te whanaunga$_i$ $[_{NP}$ ki te wahine$_j$ $[_{N'}$ **n**$_i$ **t**$_j$]]]]

(21)
*$[_{DP}\ [_{D'}$ te $[_{NP}$ ki te wahine$_j$ $[_{N'}$ whanaunga **t**$_j$]]]]

The difference between the *a*- and the *o*-genitives has traditionally been explained in semantic terms; Biggs (1969:43) for example describes the *a*-genitive as marking a 'dominant' relation between 'possessor' and 'possessed', and the *o*-genitive as marking a 'subordinate' relation. As shown in (18)a. and b., I am assuming that this semantic difference has a structural corollary at the level of d-structure, with *a*-genitive being assigned to DPs that originate as the specifier of their head, and *o*-genitive going to DPs that originate as a complement of their head. When the head is verbal, the specifier and complement positions correspond to the d-structure positions of subject and object respectively. The s-structures in (22) give examples of *a*-genitives assigned to d-structure subjects, while those in (23) show *o*-genitives assigned to subjects that have been raised from d-structure objects.

(22) a. active transitive
$[_{DP}\ [_{D'}$ te patu$_i$ $[_{VP}$ a Hoani $[_{V'}$ v$_i$ i te poaka]]]]
Art / strike / Gen / John / Acc / Art / pig
John's killing the pig

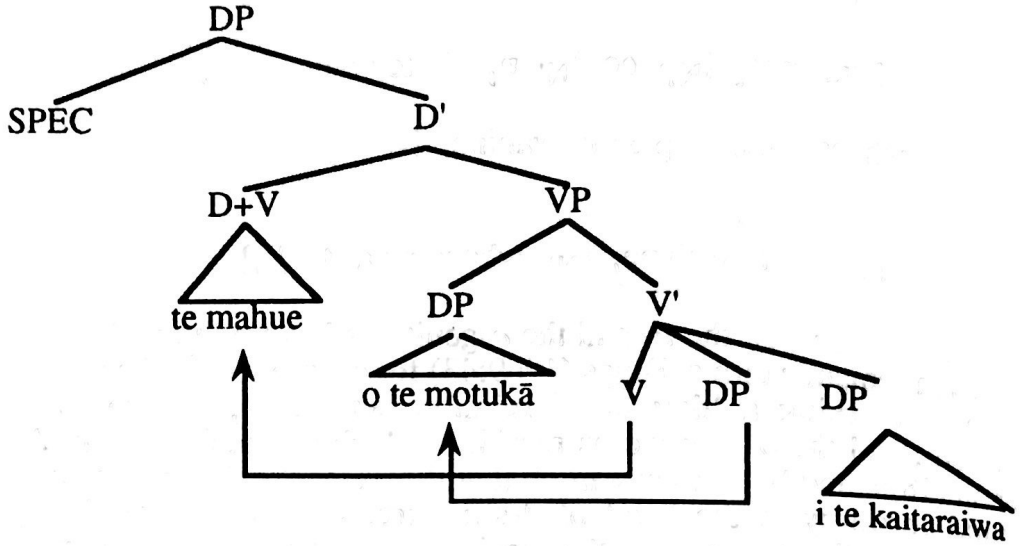
b. accusative intransitive
$[_{DP}\ [_{D'}$ te torotoro$_i$ $[_{VP}$ a te Minita $[_{V'}$ v$_i$ ki tāwāhi]]]]
Art / go.forth / Gen / Art / minister / Dat / other.side
the Minister's visiting overseas

(23) a. active transitive
$[_{DP}\ [_{D'}$ te patu$_i$ $[_{VP}$ o te poaka$_j$ $[_{V'}$ v$_i$ **t**$_j$]]]]
Art / strike / Gen / Art / pig
the killing of the pig

b. passive transitive
$[_{DP}\ [_{D'}$ te kitea$_i$ $[_{VP}$ o te tamaiti$_j$ $[_{V'}$ v$_i$ **t**$_j$ e te kaiako]]]]
Art / see-Pass / Gen / Art / child / by / Art / Agt-teach
the child's being found by the teacher

c. unaccusative intransitive
$[_{DP}\ [_{D'}$ te mahue$_i$ $[_{VP}$ o te motukā$_j$ $[_{V'}$ v$_i$ **t**$_j$ i te kaitaraiwa]]]]
Art / left.behind / Gen / Art / car / Acc / Art / Agt-drive
the car's being left by the driver

d. (= (23)c)



It is to be noted that, within the DP construction, the d-structure object of an active transitive verb can take either an accusative Case from the verb, as in (13)a., or an *o*-genitive from DET, as in (23)a. The present analysis predicts also that only one genitive Case can be assigned in any given DP construction, since only one DP can be in the appropriate position to receive genitive Case from DET (i.e. in the specifier position of the head of DET's complement). The data in (24) bear this prediction out.

(24) a.
te patu a te tama i te poaka
Art / strike / Gen / Art / boy / Acc / Art / pig
the boy's killing the pig

b.
te patua o te poaka e te tama
Art / strike-Pass / Gen / Art / pig / by / Art / boy
the killing of the pig by the boy

c.
*te patu(a) a te tama o te poaka
Art / strike(-Pass) / Gen / Art / boy / Gen / Art / pig
the boy's killing of the pig

It should also be noted that DPs can occur either with an empty complement head, as in (25).

(25) a.
Ko wai [$_{DP}$ [$_{DET}$ tēnei] [$_{NP}$ [$_{N}$ Ø]]] ?
Foc / who? / Art-Deict
Who is this?

b.
Kua kitea [$_{DP}$ [$_{DET}$ te] [$_{NP}$ a Hoani [$_{N}$ Ø]]]
-> Kua kitea tā Hoani.
Tns / see-Pass / Art-Gen / John
John's has been found.

c.
He aha [$_{DP}$ [$_{DET}$ te] [$_{NP}$ a Hoani [$_{N}$ Ø] [$_{IP}$ i mea ai]]] ?
-> He aha tā Hoani i mea ai.
Tns / what? / Art-Gen / John / Tns / say / Anaph
What did John say?

4. Conclusion

By adopting a Case-assignment model which takes the genitive-assigning DET to be the head of its phrase (parallel to the nominative-assigning INFL in sentential constructions), this paper has attempted to show that a single explanation can be given to accounts for three facts about Maori: (i) NPs, VPs and APs can all follow a determiner, while maintaining their internal structure, (ii) nominative Case and genitive Case are in complementary distribution, and (iii) within what are now called DPs, the phrase marked with the genitive Case is the only Case-marked phrase able to occur to the left of its immediate head. The analysis proposed here accounts for these facts, while respecting the theoretical constraints of X-bar structure and Case-assignment that are basic tenets of the Government-Binding framework.

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