Case Variation in Eastern Polynesian Spatial P

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1 Introduction

Polynesian languages have a strong potential to contribute to comparative syntax, where ‘comparative syntax’ is understood in the sense of Kayne (2013). For instance, Polynesian is generally taken to have approximately 40 ‘named’ languages (the specific number depending on various cultural distinctions), yet linguistic diversification in Polynesia began maximally 3000 years ago for Western Polynesia (e.g. Samoan, Tongan) and approximately 2000 years ago for Eastern Polynesian (e.g. Tahitian, Hawaiian, Maori) (Gray et al. 2009). Yet, relatively little research within generative linguistics has focused on the comparative syntax of Polynesian.¹

This paper is concerned with the micro-comparative syntax of spatial prepositions in two closely related languages within the Central Eastern Polynesian subgroup of Polynesian, namely Hawaiian and Maori. The micro-variation analyzed here involves case marking within spatial prepositions, and in particular the realization of the case-marking preposition that occurs within complex spatial prepositions.

For example, English uses the case-marking preposition *of* within spatial prepositions of the following form:

(1) on top *of* the table

¹Earlier and more recent exceptions include e.g. Chung (1978) and Potsdam & Polinsky (2011), respectively.
The preposition *of* in (1) appears to serve two related morpho-syntactic purposes. First, *of* is uncontroversially thought to be a case marker in English, and in (1) it can be taken to case mark/value the nominal *the table.* Second, *of* can analyzed as a marker of genitive case specifically; therefore, some relationship (semantic and/or syntactic) must hold between *top* and *table* in (1), such that genitive case occurs in this context.

To explain the presence of genitive marking, I follow research on spatial prepositions, influenced by Kayne’s (2004, 2007) analysis of locative constructions, which suggests an analysis in which complex prepositions are in fact a phrasal modifier of a silent head, PLACE. Under this analysis, the complement of the complex preposition (e.g. *the table* in (1)) is in a possessor relationship with PLACE, thereby deriving the genitive marking in (1). Cinque (2010) represents the structure of this analysis as (2), where ‘XP’ may also be understood as encoding the ‘axial part’ relationship (Jackendoff 1996, Svenonius 2007, 2010).

\[
\begin{align*}
(2) & \quad [PP_{stat} \text{ (at) } [DP_{place} \text{ under } [X \text{ [PP P [NP_{place} \text{ the table [PLACE ]]]]]]])] \quad \text{(Cinque 2010)}
\end{align*}
\]

As Terzi (2010) notes, an analysis which includes modification of the null element PLACE can explain genitive case marking for languages which can express inherent case morphologically, such as Ancient Greek, as in (3).

\[
\begin{align*}
(3) & \quad \text{estradopedefsanso ekso tis poleis} \\
& \quad \text{camped-3p outside the-gen city-gen} \\
& \quad \text{they camped outside the city} \quad \text{(Zenophon)}
\end{align*}
\]

To the extent that the structure (2) is taken to analyze the underlying syntax of spatial prepositions cross-linguistically, independent operations (e.g. movement, non-pronunciation, or other parametric effects) should inform those instances where surface variation occurs. In this paper, I argue that the complex genitive marking systems of these Eastern Polynesian languages explains variation with respect to case marking within spatial P constructions.

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2In this paper I will use the term case ‘marking’ instead of case ‘valuation,’ though nothing hinges on this terminology. The specific mechanism of case agreement between the functional preposition and the relevant nominal is not a focus here.
Further, I argue that apparent variation within Maori is in fact due to a dialect difference, such that one dialect patterns with Hawaiian to the exclusion of the other.

In Eastern Polynesian, two different case patterns are observed for correlates of (1). In Hawaiian and for some speakers of Maori, a genitive case marker occurs between the two elements of the spatial preposition, as in English. (4) illustrates this pattern.³

(4) Aia ka nupepa ma luna o ka pakaukau
there the newspaper on top gen the table
‘The newspaper is on top of the table’ (Hopkins 1992) Hawaiian

Given the close genetic relationship between Hawaiian and Maori, it is surprising, then, that for many older speakers and for classical texts in Maori (Bauer et al. 1993), it is not a genitive case marker but rather an alternative case assigning preposition that occurs, as in (5).

(5) ... tu ana ano a ia i roto i te wai
... stand TAM still PERS she at inside at the water
... she was still standing in the water (Bauer 1997, p. 226) Maori

The contrast between (4) and (5) raises several questions with respect to the micro-comparative syntax of Polynesian, especially in light of broader trends in the analysis of spatial prepositions, discussed above, in which the realization of genitive case within complex prepositions follows from their syntactic structure. Under the assumption that genitive marking is expected in examples such as (1-5), a primary question to consider is what blocks genitive marking in (5). A secondary question to address is what governs the realization of the case marker in examples such as (5), when the genitive marker is blocked.

In this paper I will address these questions from the perspective of distributed morphology. I will argue that the typologically rare genitive marking system found throughout Polynesian is implicated in the contrast between (4) and (5); in this system, there are two

genitive markers which obligatorily encode information regarding the (real world) relationship between the possessor and possessum, such as alienable versus inalienable possession or dominant versus subordinate possession. I will argue that the locus of difference with respect to the two case marking patterns follows from independently motivated differences between the genitive case marking systems of these languages, and even between older and modern Maori.

This paper is structured as follows. First, I will introduce basic aspects of the prepositional system in Hawaiian. Next, I will present data from Maori, and argue that observed variation should be treated as the result of dialect differences. The distinctive genitive marking systems in these languages will be addressed next. I then offer an analysis in which the morpho-semantic features of the genitive system block genitive marking in the relevant context for some dialects of Maori. Since case must be marked in the construction under discussion, a non-genitive case marker is selected as a default marker.

2 Spatial P in Hawaiian

Like the other Eastern Polynesian languages under discussion here, Hawaiian has predicate initial syntax and nominative/accusative case marking. With respect to prepositions, descriptive grammars (e.g. Elbert & Pukui 1979, EP henceforth) list three functional spatial P-elements in Hawaiian (6):

\begin{align*}
\text{(6)} & \quad \text{a. } i = \text{at, to} \quad \quad \quad \text{b. } ma = \text{at} \quad \quad \quad \text{c. } mai = \text{from}
\end{align*}

These P-elements can assign case directly (7); when \(ma\) and \(i\) co-occur, \(i\) is generally more specific (7a). Note \(i\) has allomorphs \(ia/io\) optionally before proper nouns.

\begin{align*}
\text{(7)} & \quad \text{a. noho } i \quad \text{Waikiki ma } O\text{‘ahu} \\
& \quad \text{living at } \text{Waikiki at } O\text{‘ahu} \\
& \quad \text{living at Waikiki on } O\text{‘ahu}
\end{align*}
b. mai Hilo
from Hilo
from Hilo (EP)

According to several generative researchers in the wake of Kayne (2004), spatial-P structures involve a silent head noun place. In fact, EP note the optional inclusion of the noun la ‘place’ for P-structures with i (8) in Hawaiian, a possible overt realization of place.

(8)  a. hiki io Kea‘au (la)
go to Kea‘au (place)
go as far as Kea‘au [Kea‘au = a place]

b. ho‘i akula io ‘Umi (la)
go back to ‘Umi (place)
go back to ‘Umi [‘Umi = a person] (EP)

The meaning of the preposition (location, destination, etc.) is derived in combination with the main verb.

(9)  a. Aia ke kumu i ka hale.
there the teacher in the house
The teacher is home.

b. Ua hele ‘o ia i ke kuahiwi.
PERF go SUBJ he to the mountain
He went to the mountain. (Cook, 2002)

The proposal discussed above in connection with (2) directly explains the morphosyntactic behavior of Hawaiian complex prepositions; these involve (what are known in the Polynesian literature as) ‘local’ or ‘locative nouns,’ which can be understood as expressing the axial relationship. Some examples in (10) show that the complement of the locative noun is followed by the genitive preposition ‘o.’

(10)  a. i luna o ka wa‘a
at top GEN the canoe
in the canoe (EP)

b. Aia ka nupepa ma luna o ka pakaukau
there the newspaper on top GEN the table
The newspaper is on top of the table (Hopkins 1992)
c. Ua pe'e ‘o Ko‘olau malolo iho o ka lapa
    PERF hide SUBJ Ko‘olau pause down GEN the ridge
    ‘Ko‘olau hid under the ridge’ [lit. down of the ridge] (EP)

d. I ka moe ‘ana o loko o ka hale.
    at those sleep DIR GEN inside GEN the house
    ‘While those in the house slept’ [lit. inside of the house] (Elbert & Pukui 1986)

e. mawaho aku o ka po‘ina nalu
    out DIR GEN the crest wave
    ‘beyond the breakers’ [lit. out beyond of the breakers] (Elbert & Pukui 1986)

In these structures, the locative noun is: i) introduced (case marked) by an overt functional preposition, and ii) takes a genitive marked complement (see also Cook 2002). Specifically, the relevant case marker o ‘of’ has generally been taken to be a ‘possessive preposition’ (EP, Hawkins 1979), similar to English ‘of.’

3 Dialect variation in Maori

Maori has complex prepositions similar to Hawaiian (10). Both languages have a set of locative nouns, introduced by functional prepositions i ‘at’ or ki ‘to.’ However, the complement of the locative noun (i.e. the ‘2nd part’ of the complex preposition) in Maori is only variably introduced by the genitive marker o. This is surprising given the close genetic relationship between the two languages.

Instead of genitive marking, some examples of spatial P in Maori include a functional preposition. For example, Bauer (1997) includes examples in which i, as opposed to o, introduces the complement of the locative noun.

(11) a. ... tu ana ano a ia i roto i te wai
    ... stand TAM still PERS she at inside at the water
    ... she was still standing in the water (Bauer 1997, p. 226)

There are actually two variants of this possessive preposition, o and a - the distinction between the two will be discussed below.
b. Haere atu i roto i tenei whare.
   move away from inside at this house
   Go from this house. (p. 228)

c. ... ka mau ki waho i te whare
   ... TAM carry to outside at the house
   ... and carry (it) outside the house (p. 229)

Bauer et al.’s (1993) grammar also includes examples with the same unexpected case marking.

(12) a. Ka titiro ia ki te parani i runga i te pounamu.
   TAM look he to the brand at top at the bottle
   ‘He looked to the brand on the bottle.’ (Bauer et al. 1993, ex. 1327)

b. E kaukau ana a Rewi i roto i te awa.
   TAM swim TAM PERS Rewi at inside at the river.
   ‘Rewi is swimming in the river.’ (ex. 1351)

c. I haerere matou i roto i te ngahere.
   TAM walk we at inside at the bush
   We walked through the bush. (ex. 1361)

In contrast to the pattern observed above, Bauer et al. (1993) also includes complex spatial prepositions that apparently differ with those in (12) only with respect to case marking. Whereas (12) has i as the case marker, the example (13) patterns with Hawaiian in that the genitive marker appears.

(13) a. te haererenga i roto o Inia
   the travel.nom at inside GEN India
   ‘traveling round in India’ (Bauer et al. 1993, ex. 1352)

b. Ko Puhihuia i noho i te whakarei o te waka
   TOPIC Puhihuia TAM sit at the stern of the canoe
   Puhihuia sat in the stern of the canoe (Bauer 1997, p. 184)

In fact, Bauer et al. (1993) suggests that the relevant difference in case marking pattern is dialectal, and specifically based on the age of the speaker or text. Bauer suggests a dialectal difference in connection with the examples in (14).
(14) a. I whiua atu au e koe ki roto ki te tai.
    TAM throw.pass away I by you to inside to the sea
    ‘I was thrown by you into the sea.’ (ex. 1354)

    b. I takaia ia e au ki roto ki toku-tikitiki.
    TAM wrap.pass him by I to inside to girdle
    ‘I wrapped him in my girdle.’ (ex. 1355)

With respect to (14), Bauer observes that “since the source of these is an older text, the
adnominal preposition with the local noun matches the introductory preposition. In modern
Maori, either i or o could be used instead of the adnominal ki” (Bauer et al. 1993, p.315). A
similar observation is made with respect to the following two two examples, in which (15a)
is textual and (15b) was preferred by a native speaker consultant.

(15) a. Haere atu i roto i tenei whare.
    move away from inside at this house.
    Go from this house.

    b. E puta atu ki waho o tenei whare.
    IMP appear away to outside GEN this house
    ‘Get out of this house.’

Given these data and Bauer et al.’s (1993) discussion of the variation in case marking, it
appears that the surface variation is in fact an instance of dialect variation along the lines of
age of speaker/text. In other words, the examples with i and those with o represent different
grammars.

As discussed at greater length below, it is not surprising that dialectal variation would
occur in Maori, given that the language is actively undergoing successful revitalization after
a period of serious endangerment (on the other hand, the dialectical difference observed
here could also be an instance of regular language change over time). In any case, these
data can be understood in the greater context of Eastern Polynesian by comparison with the
Hawaiian data introduced above. In particular, the dialect spoken by modern Maori speakers
either selects or (at least) prefers o in complex spatial prepositions, just like Hawaiian. On
the other hand, older speakers and ‘classical’ texts follow a different pattern, in which a
functional preposition other than o is used. I develop an analysis below that explains this
difference in case marking in terms of the grammar of possession in these languages. In the
following section, I introduce the relevant aspects of the possessives in Polynesian.

4 Analysis

The data presented above shows that while the complement of a locative noun is always
introduced by a genitive preposition in Hawaiian, this case pattern varies along dialectal
lines in Maori. Abstracting away from grammatical phenomena in Maori which are outside
the scope of this paper, I will refer to the grammar which prohibits the genitive preposition
“classical Maori” and the grammar which allows (possibly requires) the genitive preposition
“modern Maori,” though these terms are used here for descriptive convenience only. Formally
speaking, the relevant contrast for micro-comparative syntax is therefore between classical
Maori, on the one hand, and Hawaiian and modern Maori, on the other hand. Given the
discussion of cross-linguistic trends in the theorizing of spatial P, Hawaiian and modern
Maori have a case marking pattern which is expected (i.e. genitive), while the case marking
pattern in classical Maori is unexpected.

I argue that the underlying source of this variation across grammars can be traced to
the (typologically rare) grammar of genitive marking in these languages, independently from
the discussion of prepositions. Crucial to the analysis will be the notion of ‘late insertion’ of
vocabulary items, as articulated by Halle and Marantz (1993, 1994) and subsequent research
within the Distributed Morphology (DM) framework. According to DM, language specific
vocabulary items have featural properties, and these vocabulary items are taken to insert
in contexts in which the vocabulary items ‘match’ with (the greatest number of) morpho-
syntactic features present at the terminal nodes, following the completion of the syntactic
derivation. Therefore, to the extent that a given language’s vocabulary items differ in feature
content, cross-linguistic variation might be expected. In the following section, I discuss the
genitive marking system in the relevant languages, and then return to the analysis of case variation within a late insertion model.

4.1 Possession in Polynesian

It is likely that possession is the one topic in Polynesian that has seen the most amount of research in the descriptive literature; according to Elbert and Pukui (1979), it “is one of the most discussed, and most intriguing, of Polynesian problems.” While I cannot explore all of the literature in this domain as it relates to Maori and Hawaiian, I will begin by laying out the properties of possession in Hawaiian; I will then argue that possession in Maori can be taken to differ, if subtly, between the classical and modern dialect.

Possessives in Hawaiian take one of two vowels, either a or o; this applies both to the prepositional correlate of English ‘of’ and to possessive pronominals. The difference between the a class and the o class has been understood in different ways, but it is generally taken to represent something regarding the relationship between the possessor and possessee or, alternatively, the nature of the possession relationship itself. For example, Lynch (2011), in his sketch of Marquesan grammar,\(^5\) discusses the “typical Polynesian pattern,” in which “o-possession may be characterized as inalienable or passive” and “a-possession may be characterized as alienable or active.” However, other scholars have characterized the distinction differently, as discussed below.

Consider, for example the minimal-pair contrast in Hawaiian (16).

(16) a. ka heana a ke ali’i
    the corpse GEN the chief
    ‘the chief’s victim’

    b. ka heana o ke ali’i
    the corpse GEN the chief
    ‘the chief’s (own) corpse’ (EP)

\(^5\)Marquesan is closely related to Hawaiian; within Eastern Polynesian, Marquesan and Hawaiian are further grouped in the Marquesan sub-branch while Maori is grouped with Tahitic.
In (16), the object of possession, ‘corpse,’ is the same in both examples, but in (16a) ‘corpse’ has to be understood as not the chief’s own corpse, but rather a victim of the chief. Likewise in (16b) the corpse must be the chief’s own corpse. The o versus a contrast also plays a role in kinship relations; ‘blood relatives’ of one’s own generation and all ancestors take the (16b) possessive (i.e. possession is inalienable) and current generation relatives by marriage and future generations take the a possessive.

(17) a. ko’u makua kane
      my parent male
      ‘my father’

     b. kana keiki
         his child
         ‘his child’ (EP)

Likewise, purchased personal possessions are possessed with a possessives and inherited items with o possessives.

In their discussion of Hawaiian, Elbert and Pukui (1979) suggest another way in which the a/o distinction can be understood, namely in terms of the nature of the relationship between the possessed and possessor. Under this model, a possession show that the possessor caused the ownership, while o possession show that the possessor did not cause the possession (Wilson 1976 offers a similar view of Hawaiian possession). This analysis explains contrasts such as those in (18), in which the a possessive indicates caught fish and the o possessive indicates fish that are inherent to a certain place.

(18) a. ka i’a a kakou
       the fish GEN our
       ‘our fish’

     b. ka i’a o keia wahi
       the fish GEN this place
       ‘the fish of this place’ (EP)

A point that will be of some relevance later is that occasionally unexpected items are possessed with the o possessive, such as canoes and fresh water. This can be explained, however,
in the context of Hawaiian culture: canoes and fresh water were traditionally possessed by families or tribes, and thus were understood as a type of inherited item (Elbert and Pukui 1979).

Across Polynesian, some descriptive linguists have attempted to determine the precise relationship encoded by the \( a/o \) distinction across the language family (e.g. Elbert and Pukui’s characterization of this issue as a “Polynesian problem”). However, I suggest that it is unlikely that a unified semantic analysis across exists across Polynesian. Since variation exists across Polynesian at all levels of formal structure, it is reasonable to suggest that the lexical semantics of items like \( a/o \) would also vary by grammar. From the ‘I-language’ perspective, different analyses of \( a \) versus \( o \) possession across the language family (and between dialect) may represent real differences at the grammatical or lexical level (depending on framework).

For example, consider local nouns in Hawaiian and Maori (without making a dialect distinction in Maori, for the moment). While local nouns were discussed above in connection with the case marking variation that is the subject of this paper, they also be used to show differences between Hawaiian and Maori with respect to the grammar of possession (independently of their role in complex spatial prepositions). For example, in Hawaiian, these are preceded by \( o \) or the functional preposition \( i \) when subject, though “older people may prefer \( o \)” (Elbert and Pukui 1979).

(19) Ua nani o waho.
   PERF beautiful GEN outside
   ‘the outside is pretty’

By contrast, Maori local nouns are introduced by the personal article \( a \) in the same context.

(20) He whero a roto
   CLS red PERS inside
   ‘the inside is red’

This contrast demonstrates that the precise lexical field expressed by \( a \) versus \( o \) possessives varies between grammars. In Hawaiian, local nouns, when subjects, are preceeded by \( o \),
whereas Maori differs.

Now, the situation in Maori presented by Bauer et al. (1993) is more complex that that discussed by Elbert and Pukui (1979) for Hawaiian; this may be expected since Elbert and Pukui’s (1979) grammar is largely based texts and recordings of speakers produced prior to revitalization efforts in Hawaiian. Bauer et al. (1993) discusses both ‘classical’ texts and the judgments of modern Maori speakers.

With respect to possession, Bauer et al. note first that the prevalent view among linguists working on Maori has its origins in the work of Biggs (1969), who worked with older speakers and texts, prior to (or right at the beginning of) the revitalization effort in New Zealand. According to Biggs (1969), the relevant distinction between a and o possession is between dominant (a) possession and subordinate (o) possession. Bauer et al. (1993) present a different view; according to them a represents dominant possession (following Biggs (1969)), whereas o possession represents a type of elsewhere condition. In other words, under Bauer et al.’s account, o is used for any possessive relationship not explicitly related to dominant possession.

However, Bauer et al. (1993) note also that variation exists between speakers, and that some of the relevant variation may well be related to speaker age, or what I am calling the distinction between classical and modern Maori. For example, fresh water is usually claimed to take the o possessive in Maori (as well as Hawaiian), as in (21), but Bauer et al.’s consultant produced (22) in elicitation and also rejected an equivalent of (22) with the o form ‘nooku.’

(21) Homai he wai mooku.
    bring a water for.GEN.1sg
    ‘Bring some water for me.’

(22) Naaku tera wai.
    EMP.GEN.1sg that water
    ‘That’s my water.’ (Bauer et al. 1993 p. 209)

Given this contrast, Bauer et al. claim that “what may once have been relatively transparent
categories have become blurred ... I suspect that the categories are applied nowadays in a manner which resembles gender categories far more than they were prior to the general demise of the language” (p. 209). While one might take issue with the choice of the word ‘demise’ in the context of Maori, which is enjoying some success in revitalization, there is little doubt that language revitalization can affect the process of language change, although a post-revitalization native speaker’s grammar is certainly as linguistically valid as a pre-revitalization grammar (see e.g. Leonard 2008 in this context).

In sum, it appears that the lexical semantics of the a versus o distinction varies by language. While it is likely that more research remains to be done on the exact nature of this distinction and also dialectal variation, my approach here is to assume the analysis of possessive marking given by descriptive grammars at face value, since in the relevant languages each grammar either has a native speaker co-author (Elbert and Pukui 1979 & Bauer et al. 1993) or had extensive access to native speaker consultants (Biggs 1969). Therefore, I will assume the lexical semantics for each grammar as outlined in Table 1.

<table>
<thead>
<tr>
<th>language</th>
<th>A-possession</th>
<th>O-possession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaiian (Elbert and Pukui)</td>
<td>possessor control</td>
<td>no possessor control</td>
</tr>
<tr>
<td>Older Maori (Biggs)</td>
<td>dominant</td>
<td>subordinant</td>
</tr>
<tr>
<td>Modern Maori (Bauer et al.)</td>
<td>dominant</td>
<td>elsewhere</td>
</tr>
</tbody>
</table>

Table 1: A/O distinction in different grammars according to descriptive literature

Assuming now the descriptions for the grammar of possession outlined in Table 1, the case marking variation within complex spatial prepositions has an intuitive explanation, which will be formalized below. In this context, recall from the discussion in section 1 that I am assuming a structure in which the complement of the complex preposition is in a modifier relationship with a null noun PLACE, a hypothesis advanced by Bernstein and Tortora (2005), Cinque (2010), and Terzi (2010). Under this analysis, a complex prepositional phrase such as ‘in front of the house’ can be understood as having the following structure.

\[
(23) \quad [P_{Ploc} [P_{Loc} \text{ in } [D_P \text{ front } \text{PLACE}_i [D \text{ of } [AgrP \text{ the house } [NP \text{ t }]]]]]]]
\]
Under the analysis in (23), the relationship between ‘the house’ and the null head noun PLACE is what triggers genitive case, realized by ‘of’ in (23). Terzi (2010) also argues on the basis of Greek, Spanish, and English, that the relevant relationship which triggers genitive case marking is possession (and not e.g. partitive, see also Aboh 2010).

To the extent that possession is indeed involved, this should interact with the grammar of possession in Polynesian, and in particular the a / o distinction discussed here. The relevant relationship, then, is between the nominal in the 2nd half of the prepositional construction and the silent noun PLACE which it modifies. In Hawaiian (24), repeated from above, this would be the relationship between ka pakaukai ‘the newspaper’ and PLACE.

(24) Aia ka nupepa ma luna o ka pakaukau
     there the newspaper on top GEN the table
     The newspaper is on top of the table (Hopkins 1992)

In the possessive relationship between ka pakaukai and PLACE, there is no ‘possessor control’ (in Elbert and Pukui’s (1979) terms), and therefore the o genitive is appropriate. For modern Maori, o is also appropriate, since it is the elsewhere condition and the relationship between the two relevant elements is inherently genitive, under the cross-linguistic analysis assumed here.

Classical Maori, on the other hand, exhibits the alternative pattern, which is apparently typologically unexpected as well (i.e. when case is expressed on the relevant element, it is typically genitive, as in (3)). In this case the possession relationship between the relevant nominal and PLACE is neither dominant nor subordinate possession. Therefore, since neither a nor o possession is appropriate, genitive marking (otherwise expected) is blocked. This type of blocking can be formalized within the ‘late insertion’ theory of vocabulary items provided by DM, and this formalization is discussed in the following section.

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6As noted by Terzi (2010), complex English spatial Ps which resist overt realization of ‘of’ are transparently compounds, such as ‘inside’ and ‘behind.’ See Terzi (2010) for further discussion.
5  Morphological Analysis

The blocking effect discussed above, according to which the lexical semantics of classical
Maori genitive markers blocks genitive case (though genitive is expected) has a natural
formalization in the DM framework. In this framework, morpho-syntactic features are ma-
nipulated in the syntax, and then vocabulary items 'compete' for realization in the relevant
terminal nodes (DM as a theory has additional content, though not relevant here given the
scope of this paper). This mechanism is usually referred to as 'late insertion.'

Late insertion can be demonstrated by considering the present tense indicative endings
for tense in English; this example is discussed in Bobaljik (2011). An important notion in
this framework is underspecification of vocabulary items. In the context of English present
tense endings, the relevant vocabulary items in (25) compete for insertion:

(25) Vocabulary of English (fragment)
  a. [ 3SG, PRES ] ⇔ -s
  b. [ PRES ] ⇔ ∅

As Bobaljik (2011) discusses, these statements of vocabulary items are equivalent to
rules of exponence. Under this model, the vocabulary item that matches the most features
in the relevant terminal node will be the item inserted. If, for example, the tense node has
the features [1PL, PRES], then (25a) cannot apply, as its structural description is not met.
However, (25b) can and will apply, since its structural description (i.e. [PRES]) is met and no
other item is more highly specified for the relevant features. Informally, a vocabulary item
applies if it matches the greatest number of morphosyntactic features, but the vocabulary
item is not allowed to have features not present in the target node.

In the DM system, lexical semantics are therefore encoded in the features inherent to
vocabulary items (though note that DM assumes an additional component which encodes
idiomatic meaning). Now, if we reconsider the various proposals for the lexical semantics
encoded in the a / o distinction in Hawaiian and both dialects of Maori, note that the o
possessive may be analyzed as an underspecified elsewhere condition in both modern Maori and Hawaiian. In classical Maori, by contrast, o possession is specified for the feature ‘subordinate,’ as characterized by Biggs (1969).

If, under the assumptions regarding spatial prepositions outlined above, genitive case arises due to possession (see e.g. Terzi 2010, Aboh 2010), then the DM framework adopted here explains why modern Maori and Hawaiian pattern together in the (cross-linguistically expected) realization of genitive case, to the exclusion of classical Maori. From this standpoint, we can ask what kind of possessive relationship exists between the ground argument and place. Intuitively, this type of possession could be considered to be inalienable, not under the possessors control, or simply unspecified; within the DM approach, I assume the relationship is unspecified, but crucially not specified as a type of subordinate possession. Therefore, I assume a morphosyntactic analysis for the relevant P node with the feature specification is as in (26).

(26) \[ \text{[case, poss]} \]

In other words, the relevant P position is a case marker that also expresses possession.

Based on Table 1, and assuming underspecification where possible, the relevant feature composition of the possessives under discussion is as in (27).

(27) Possessive vocabulary items in the relevant languages

a. Hawaiian
   i. a \(\leftrightarrow\) \[ \text{[case, poss, alienable]} \]
   ii. o \(\leftrightarrow\) \[ \text{[case, poss]} \]

b. modern Maori
   i. a \(\leftrightarrow\) \[ \text{[case, poss, dominant]} \]
   ii. o \(\leftrightarrow\) \[ \text{[case, poss]} \]
c. classical Maori

i. $a \leftrightarrow \left[ \text{CASE, POSS, DOMINANT} \right]$ 

ii. $o \leftrightarrow \left[ \text{CASE, POSS, SUBORDINANT} \right]$ 

Comparing (26) to (27), it is clear that $o$ can and will apply in Hawaiian and modern Maori, while $o$ is blocked in classical Maori. This analysis explains also why $a$ possession is never allowed within spatial prepositions in these languages, as $a$ is always overspecified for the relevant morphosyntactic context.

Given the inability for $o$ to apply in classical Maori, the least specified case-marking prepositions apply, namely either $i$ or $ki$. Under this analysis, the underlying morphosyntax of classical Maori is identical to that of modern Maori, Hawaiian, and indeed unrelated languages which have undergone detailed analysis for spatial prepositions. However, independently motivated, idiosyncratic properties of vocabulary items can explain the observed surface variation within these Eastern Polynesian languages.

6 Conclusion

This chapter discussed variation which, superficially, appeared to hold between Hawaiian and Maori. Upon closer inspection, a bona-fide dialectal difference was proposed within Maori, such that modern Maori patterns with Hawaiian, to the exclusion of classical Maori for the data under discussion. Given prior literature on spatial prepositions which has focused on unrelated languages (e.g. Terzi 2010, Aboh 2010), it appears that a possession relationship holds in complex spatial prepositions, which explains the realization of genitive case which is common across languages and observed in Hawaiian and modern Maori. However, this also suggested that the typologically rare system of possessive marking in Polynesian may account for instances, as in classical Maori, where the expected genitive case marking is blocked. A morphological analysis was developed to explain the variation.

Crucial for this discussion is the notion of dialect difference. As Kayne (2013) points out,
initial confusion regarding apparently variable data often is the result of a dialect difference which has not been previously articulated or expected. Here, once the dialect difference was taken into account, analysis was possible such that an apparent counter-example for the cross-linguistic proposals under discussion was in fact able to be explained by the behavior of independent components of the grammar.
7 References


