

Maximal Words and the Māori Passive

Minimal word restrictions – limitations on the smallest possible root- or word-size – have received a great deal of attention (McCarthy & Prince 1986 and many others). In comparison, restrictions on the maximum size of words have hardly ever been studied. Accordingly, I have two goals in this talk. The empirical goal is to show that Maximal Word restrictions do exist, and actively influence the morphology and phonology of many languages. The theoretical goal is to show that Optimality Theory can account for Maximal Word restrictions in a straightforward way without any additional apparatus and only minor revision to its constraint component.

This talk is of broad interest to Austronesianists in general because – as I will show – a good number of Austronesian languages have Maximal Word restrictions. Furthermore, I will show that Maximal Word effects open up a new way to analyze otherwise quirky and baffling morphological and phonological alternations. In fact, the example I will examine in detail is famous for its complexity: the Māori passive.

A great many linguists have examined the Māori passive (Blevins 1994, Hale 1968, Sanders 1990 to name but a few). However, I will depart from their descriptions in significant ways; showing that there is clear evidence for the set of alternations listed in the table below. Incidentally, Māori has a minimal word restriction: PrWds of the form [CV] are not allowed, explaining its absence in the table below.¹

(1)	<i>Allomorph</i>	<i>Found with Roots of Shape:</i>	<i>Examples</i>	<i>Glosses (active)</i>
	[a]	CV: ^{-low} CVCV ^{-low} CVCVV	hu:+a horo+a kopou+a	<i>erupt</i> <i>fall in fragments</i> <i>appoint</i>
	[ia]	Ca: CVCa CVCVC CVCVCVC	pa:+ia hoka+ia inum+ia koharak+ia	<i>block up</i> <i>run out</i> <i>drink</i> <i>split open</i>
	[tia]	CVCVCV CVVCV CV:CV	mahue+tia taute+tia ha:ro+tia	<i>put off</i> <i>consider</i> <i>scrape clean</i>

I will show that the alternations above are primarily due to a Maximal Word restriction that is demonstrably operative in other parts of Māori phonology: Prosodic Words of more than three moras are not allowed. The only exception is words of four moras that have a medial foot: i.e. [CV(CVV)CV], as in [ko(póu)a]. The other permissible PrWd types are therefore [(CVCV)], [(CVV)], [CV(CVV)], and [CV(CVV)].

The Māori Maximal Word restriction comes about through the action of two constraints:

- (2) *Ft̄ “Don’t have non-head feet (i.e. feet with secondary stress)”
LAPSE_μ “Don’t have two adjacent unfooted moras in a PrWd.”

As Hayes (1995) has shown, feet are universally limited to the shape (CVCV), (CVV) and (CV:). Coupled with the constraints above, this limitation on foot form allows only PrWds with a single foot and no footable sequences. Well-known constraints such as MAX “Don’t delete” interact with the constraints in (2) to produce the Maximal Word restriction (McCarthy & Prince 1995).

¹ Italicized consonants are optional, and the sequence VV indicates a diphthong while V: indicates a long vowel. Absent from the table are *-n* final roots (e.g. /arohain/ ‘love’, /tahun/ ‘burn’); I will discuss these forms thoroughly in my talk, but leave them aside here because of the additional complexity they introduce.

The following tableau shows how the maximal word effects militate against unacceptable four-mora PrWds:

(3)

/patakite/	*Ft ⁻	LAPSE _μ	MAX
(a) (páta)kite		x!	
(b) (páta)(kìte)	x!		
(c) (páta)ki			x x
(d) (páta)			x x x x!

In the tableau above, the undesirable four-mora candidates (a) and (b) are eliminated by the maximal word constraints: (a) because it contains an unfooted footable sequence [kite], and (b) because it contains a non-head foot [(kìte)]. Other alternatives (e.g. [pa(táki)te]) are ruled out by footing requirements. Both (c) and (d) satisfy the maximal word requirements, but (d) gratuitously violates MAX, leaving candidate (c) as the winner.

The Māori Maximal Word restrictions illustrated above provide a great deal of insight into the passive's allomorphy. The underlying form of the passive is /ia/. However, if /ia/ were to attach to a bimoraic root, it would create an unacceptable four-mora PrWd: e.g. /hu: + ia/ would surface as *[hu:ia]. In this situation, the passive allomorph is forced to simplify to [a], producing a grammatical tri-moraic PrWd: /hu: + ia/ → [hu:a].

In some situations, though, /ia/ cannot simplify to [a]. For example, with tri-moraic roots like *mahue*, simplification to [a] will still produce an ungrammatical four mora form: /mahue + ia/ would surface as *[mahuea]. Here, the only alternative is for the passive to form a PrWd on its own. However, Māori requires PrWds that do not begin with root segments to start with a consonant (evidence from reduplication and allomorphy support this generalization). So, the default consonant in Māori – [t] – is epenthesized when the passive forms its own PrWd. Thus, /mahue + ia/ surfaces as [t{mahue}{tia}], where { } mark PrWd boundaries.

The other situation where the passive cannot simplify to [a] is when this would produce two identical adjacent elements, as with roots ending in [a] (e.g. /hoka + ia/ → *[hokaa]. In this situation, the ban on identical elements (i.e. the OCP) overrules the maximal word restriction, allowing the input form of the passive to surface faithfully, as in [hokaia].

I will show that the constraint ranking presented in (3) above – supplemented with a few other widely accepted constraints (e.g. the OCP) – produces the attested passive allomorphs. I will show that further support for this approach comes from dialect variation, which can be explained straightforwardly by minor rerankings of the constraints in this system.

In summary, the passive allomorphy in Māori – along with a number of other processes – shows that Maximal Word restrictions do exist. On the theoretical side, these restrictions can be effectively reduced to constraint interaction within Optimality Theory.

References

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