Max-Position Drives Iterative Footing

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1. Motivating iterative footing

In this paper I will argue that several prosodic phenomena are better captured if MAX-*Position* constraints, rather than PARSE-σ, are the pressure behind iterative footing.

A language with iterative footing builds as many feet per word as possible, while one with non-iterative footing builds only one foot per word, aligned to one of the word edges.

In the Optimality Theory analysis of Prince & Smolensky 1993, whether footing is iterative is determined by the ranking of 2 constraints: PARSE-σ and a constraint aligning feet with word edges, such as ALL FEET LEFT.

(1) PARSE-σ
Syllables must be parsed by feet (Prince & Smolensky 1993)

(2) ALL FEET LEFT
Every foot is aligned with the left edge of a word.

As shown below, ALL FEET LEFT prefers to build only one foot per word, so that no foot is unaligned with the left word edge, while PARSE-σ favors iterative footing in order to foot as many syllables as possible.

(3) motivating iterative footing

/CVCVCVCV/	PARSE-σ	ALL FEET LEFT
a. → (CV́.CV).(CV́.CV)		*
b. (CV́.CV).CV.CV	*!*	

An iterative footing pattern, as in a), occurs if PARSE-σ outranks ALL FEET LEFT, while non-iterative footing, as in b), occurs otherwise.

The presence of the constraint PARSE-σ in the grammar, however, has undesirable effects. These arise from the basic OT premise that constraints are freely rerankable, and that every ranking should produce a possible grammar. A constraint must be evaluated, not only for its usefulness in

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solving a particular problem, but for the predictions made by ranking it above other constraints.

When PARSE-σ is ranked above the anti-deletion constraint MAX, it motivates an unattested pattern of stray syllable erasure. If there is a constraint penalizing every unparsed syllable, a simple way of satisfying it is to delete unparseable syllables.

(4) MAX
Every segment of the input has a correspondent in the output.

(5a) stray syllable erasure

/CVCVCV/	PARSE-σ	MAX
a. (CV́.CV).CV	*!	
b. → (CV́.CV)		**

(5b)

/CVCVCVCV/	PARSE-σ	MAX
a. → (CV́.CV).(CV́.CV)		
b. (CV́.CV).CV	*!	**

The ranking PARSE-σ >> MAX produces an 'even-parity language', where every word has an even number of syllables or morae, whichever unit feet are computed over in that language. In hypothetical examples, I will use bisyllabic feet.

(6) (hypothetical even parity language)
a. /CVCV/ → (CV́.CV)
b. /CVCVCV/ → (CV́.CV)
c. /CVCVCVCV/ → (CV́.CV).(CV́.CV)
d. /CVCVCVCVCV/ → (CV́.CV).(CV́.CV) etc.

Another type of even-parity language will result if PARSE-σ is ranked above DEP.

(7) DEP
Every segment of the output has a correspondent in the input.

This type of language will epenthesize to every odd-parity word.

Thus, if PARSE-σ exists it is an inescapable prediction that there will be languages that repair unfootable syllables by violating faithfulness. The expected repairs are similar to those used when input segments cannot be syllabified according to the syllable-structure constraints active in a language: the unsyllabifiable segments are deleted, or else material is epenthesized to create a well-formed syllable. The only way to avoid such predictions would be to stipulate a ranking PARSE-σ >> FAITH, a move inimical to OT.

These repairs don't seem to happen at the foot level, however. Even-parity languages of either the epenthesizing or deleting type are unattested. This suggests that unparsed syllables are not actually marked per se, contrary to PARSE-σ. Whatever pressure is behind iterative footing is only concerned with creating a maximal parse of syllables into binary feet, not an exhaustive parse.

2. MAX-*Position*

I propose that PARSE-σ should be abandoned. The pressure behind iterative footing and a number of other foot-related phenomena is better captured by the MAX-*Position* family of constraints (Beckman 1998: 211-254). These constraints favor maximal packing of input material into prominent output positions, such as onsets, root-initial syllables, and heads of feet. An example is MAX-FOOTHEAD-μ:

(8) MAX-FOOTHEAD-μ (adapted from Beckman's MAX-σ́)
Every segment of the input has a correspondent that is a mora-bearing member of a foot head in the output. (Assign one violation for each input segment that is not in a foot head and bearing a mora in the output.)

A foot head is the strong syllable of a disyllabic foot, or the only syllable in a monosyllabic foot. In most languages, foot heads are stressed, although I assume that in some they may lack phonetic correlates.

The original motivation for this constraint comes from languages that maximize the number of segments parsed by each foot head, often at the cost of marked syllabification. For example, some dialects of Gaelic are reported to have VC.V syllabification. (Børgstrom 1937, 1940, Oftedal 1956 in his discussion of the "phonemic syllable", Holmer 1962, Dilworth 1972). The evidence for this syllabification includes the fact that speakers find it easier to pause after, rather than before, the intervocalic C. (A contrasting V.CV syllabification is found before epenthetic vowels.) This syllabification creates a sequence of heavy syllables, each of which can be a foot head if the foot type is mora-counting.

(9) Barra Gaelic

a. ár.an ‘bread’

b. bɔ́d.əx ‘old man’

c. Lák.əx.əγ ‘to weaken’ (Børgstrom 1937)

proposed structure: (Lák).(əx).(əγ)

Syllabifying the intervocalic C as a coda violates NOCODA and ONSET, but lets the C be realized in a prominent position (a foot head).

(10) Barra Gaelic (mora-bearing segments in foot heads underlined)

/ Lakəxəγ/	MAX-FOOTHEAD-μ	ONSET	NO CODA
a. → (L<u>ák</u>).(<u>əx</u>).(<u>ə</u>γ)	L	**	***
b. (L<u>á</u>.kə).(x<u>ə</u>γ)	L, k!, ə, x		*

Beckman 1998:217 presents a similar analysis of ambisyllabicity in English, Dutch, Efik and Ibibio, showing that the desire to pack as much material as possible into privileged prosodic positions is a well-attested cross-linguistic phenomenon. Its purpose seems to be to give as much perceptual salience as possible to as much underlying material as possible, thus aiding the recoverability of the input.

3. Consequences of a MAX-*Position* approach

3.1. Iterative footing

Like PARSE-σ, MAX-FOOTHEAD-μ favors iterative footing. The more feet in a word, the more foot heads, and hence the more underlying segments can have correspondents in foot heads. MAX-FOOTHEAD-μ interacts with ALL FEET LEFT to produce the iterative / non-iterative distinction in the same way that PARSE-σ does.

(11) (hypothetical language; mora-bearing segments in foot heads underlined)

/basedifo/	MAX-FOOTHEAD-μ	ALL FEET LEFT
a.→ (b<u>á</u>.se).(d<u>í</u>.fo)	b, s, e, d, f, o	*
b. (b<u>á</u>.se).di.fo	b, s, e, d, i, f!, o	

The purpose of iterative footing is different in the two approaches, however. PARSE-σ is a constraint on well-formed output structures, concerned with preventing structures where each syllable is not dominated by a foot. MAX-FOOTHEAD-μ is concerned with making underlying material salient. In a broad view, these goals may turn out to be similar (certain output structures may be preferred because they most saliently organize underlying material), but the immediate goals of the two constraints differ.

One manifestation of this difference is that MAX-FOOTHEAD-μ does *not* motivate stray syllable erasure, like PARSE-σ. Formally, this is because violations are calculated over input segments, not output segments. Any input segment that does not end up in a foot head incurs a violation, whether it has been deleted or realized in a stray syllable. So there is no advantage to deleting it: that would not improve performance on MAX-FOOTHEAD-μ and only gratuitously violate MAX, as shown in (12).

(12) (hypothetical language)

/basedi/	MAX-FOOTHEAD-μ	MAX
a. → (bá̲.se).di	b, s, e, d, i	
b. (bá̲.se)	b, s, e, d, i	*!*

Intuitively, the reason there is no stray syllable erasure is that such a process would not make the input more recoverable. Eliminating a stray syllable does not enhance the prominence of the other syllables.

The problem of overpredicting parity-conditioned epenthesis remains. I will have little to say about it here, except to note that it is a problem with both the PARSE-σ and MAX-*Position* approaches. I will concentrate on cases where the predictions of MAX-*Position* and PARSE-σ differ.

3.2. Rhythmic deletion

A type of deletion that it has been claimed PARSE-σ does motivate is the rhythmic deletion pattern of Southeastern Tepehuan. This pattern can also be accounted for using two MAX-*Position* constraints: MAX-FOOTHEAD-μ and MAX-MAINFOOTHEAD-μ.

SE Tepehuan (Willett 1982), an Uto-Aztecan language spoken in Mexico, deletes every odd-numbered vowel in a sequence of CV strings, creating closed syllables: /CV CV CV CV/ → [(CVC).(CVC)].

(13) a. /maa-m**a**tuʃ**i**dʲaʔ/ → máam.tuʃ.dʲaʔ 'will teach'
b. /tii-t**i**roviɲ/ → tiít.ro.piɲ 'ropes'

Kager (1999) argues that PARSE-σ motivates this deletion, as a method of minimizing the amount of unfooted material. This analysis assumes that SE Tepehuan has non-iterative footing, constructing only one iamb at the left edge of each word. PARSE-σ would prefer to delete *all* material outside of this initial foot, because it is all unparsed. But since PARSE-σ only outranks MAX-VOWEL, and not MAX-CONSONANT, it can only reduce the number of unfooted syllables as much as vowel deletion will allow.

(14)a. MAX-VOWEL
Every vowel in the input has a correspondent in the output.

b. MAX-CONSONANT
Every consonant in the input has a correspondent in the output.

(15) SE Tepehuan: a PARSE-σ analysis

/ maa-m**a**tuʃ**i**dʲaʔ/	ALL FEET LEFT	MAX-C	PARSE-σ	MAX-V
a. → (máam).tuʃ.dʲaʔ			**	**
b. (máa).ma.tu.ʃi.dʲaʔ			***!*	
c. (máam)		*!***		****
d. (máa).(ma.tu).(ʃi.dʲaʔ)	*!*			

In short, rhythmic deletion is a strategy for minimally violating a requirement that all words consist of exactly one foot: a pressure produced by the combination of high-ranked PARSE-σ and ALL FEET LEFT.

Under a MAX-*Position* approach, the motivation for the deletion is different. First, I assume that SE Tepehuan does have iterative footing, so that the structure of *máam.tuʃ.dʲaʔ* is *(máam).(tuʃ).(dʲaʔ)*. This assumption is controversial, since Tepehuan lacks secondary stress to indicate the presence of additional feet. However, it has been shown in other analyses (see, for example, McCarthy's (1979) analysis of stress placement in Cairene Arabic, or discussion in Hayes 1995:67, 119) that there is sometimes compelling reason to assume iterative footing in the absence of secondary stress. The heads of the feet may lack the usual phonetic correlates, but foot structure is detectable through other phenomena.

Under the assumption that footing is iterative, the SE Tepehuan pattern is revealed to be very similar to the Barra Gaelic pattern discussed in (9), repeated below, where V́C.V syllabification occurred after a foot head.

(16)

Barra Gaelic	/Lakəxəɣ/	→	(Lák).(əx).(əɣ)	'to weaken'
Tepehuan	/maa-m**a**tuʃ**i**dʲaʔ/	→	(máam).(tuʃ).(dʲaʔ)	'will teach'

Like Scots Gaelic, SE Tepehuan prefers to make an intervocalic consonant the coda of a foot head rather than the onset of a syllable that's not a foot head, as in candidate b) below. But unlike Scots Gaelic, SE Tepehuan does not allow onsetless syllables to surface, as in candidate c). Instead, it eliminates them by vowel deletion.

(17) SE Tepehuan (mora-bearing segments in foot heads underlined- feet are iambic)

/ maa-m**a**tuʃ**i**d^{j}aʔ/	MAX-FOOTHEAD-μ	ONSET	MAX
a. → (máam).(tuʃ).(d^{j}aʔ)	m, a, a, t, d^j, i		**
b. (máa).(ma.tu).(ʃi.d^{j}aʔ)	m, m, a, t, ʃ, i, d^j!		
c. (máam).(a.tuʃ).(i.d^{j}aʔ)	m, a, a, t, i, d^j	*!*	

SE Tepehuan also reveals a distinction between the level of prominence of the main foot head and other foot heads. The main foot head is always made as heavy as possible, sometimes at the expense of packing material into secondary foot heads. Thus, a constraint referring to the head of the main foot is needed:

(18) MAX-MAINFOOTHEAD

Every segment of the input has a correspondent in the output that is a member of the head of the main foot.

The interaction of MAX-MAINFOOTHEAD and MAX-FOOTHEAD-μ is seen in the output chosen for /tii-tirovin/. While candidate b) **(tíi).(ti.ro).(pin)* would have the most segments in foot heads overall, as MAX-FOOTHEAD-μ prefers, candidate c) (*tíit).(ro.pin*) is selected by high-ranked MAX-MAINFOOTHEAD, due to its heavier main foot head.

(19) SE Tepehuan (mora-bearing segments in foot heads underlined)

/tii-tirovin/	MAX-MAINFOOTHEAD	MAX-FOOTHEAD-μ	DEP
a. → (tíit).(ro.pin)	i, r, o, v, i, n	***	*
b. (tii).(ti.ro).(pin)	t, i, r, o, v, i, n!	**	

The goal of this grammar can be summed up as follows: pack as much material as possible into the main foot head, then pack as much as possible into the moraic positions of the other foot heads.

As a final note, the MAX-FOOTHEAD-μ approach also explains a gap in SE Tepehuan's foot inventory. Although iambic, the language has no feet consisting of two light syllables. This is because LĹ feet always fare worse than H́ on MAX-FOOTHEAD-μ:

(20) (mora-bearing segments in foot heads underlined)

/CVCV/	MAX-FOOTHEAD-μ	MAX
a. → (CV́C)	*	*
b. (CV.CV́)	*!**	

Since an H foot can be always be produced from a CVCV sequence through vowel deletion, which SE Tepehuan allows, there is no reason for LĹ feet to surface. In some analyses, this restriction has had to be stipulated by an additional constraint, but here it falls out of the same ranking that drives deletion.

Given that both PARSE-σ and MAX-*Position* can predict the rhythmic deletion pattern, is there a reason to prefer one analysis over the other? I believe there is. The MAX-*Position* approach better ties this pattern to a known group of patterns: the various languages summarized in Beckman 1998 that maximize the codas of prominent syllables. SE Tepehuan emerges as a minimal variant on, for example, Scots Gaelic. Under a PARSE-σ analysis, SE Tepehuan is a minimal variant on non-existent language types. One such type already discussed is even-parity languages, which would result if ALL FEET LEFT were demoted below PARSE-σ in the grammar in (15). In fact, every candidate in tableau (15) would be chosen as the output under some possible ranking of the constraints. We expect to find languages where every word consists of exactly one foot, like candidate c). The only possible instance of this I know of is the type of language where every word is a monosyllable- but since monosyllables are only a subset of possible foot shapes, it is not clear that this restriction is foot-based. A more convincing case would be a language that allowed a variety of word shapes, but only ones that are canonical feet. This does not exist to my knowledge. In short, the fuller range of languages predicted by this constraint inventory is missing.

3.3. Even parity through allomorphy

Eliminating the prediction that even-parity might be achieved through deletion is one of the most important differences between MAX-*Position* and PARSE-σ. MAX-*Position* does, however, predict that even-parity could be produced in another way: through allomorphy. A pattern like this occurs in the Australian language Yidin^{y} (Dixon 1977), where allomorphs are chosen in a way that consistently produces even parity outputs. This pattern can be selected by a new constraint, MAX-FOOT.

I will adopt the theory of allomorphy under which allomorphs are represented as multiple inputs (Hudson 1974, Hooper 1976). A morpheme may have two or more lexically listed forms, which the grammar must choose between. For example, the Yidin^y genitive suffix for vowel-final stems has the two forms -*ni* and -*n*. When that morpheme is called for in an input, both forms are considered simultaneously. If the nominal root is odd-syllabled, -*ni* is selected; if it is even-syllabled, -*n* is selected. Hence the output always has an even number of syllables.

(21) a. /bun^{y}a + $\begin{bmatrix} \text{ni} \\ \text{n} \end{bmatrix}$/ → bun^{y}á**n** 'woman – GENITIVE'

b. /gudaga + $\begin{bmatrix} \text{ni} \\ \text{n} \end{bmatrix}$/ → gúdagá**ni** 'dog – GENITIVE'

In OT formalism, two input strings are entered in the same tableau, as in (23) below. For the genitive of 'woman', the two inputs are *bun^{y}an* and *bun^{y}ani*. The two inputs are labeled with indices 1 and 2 for reference. The candidate set is doubled, and each candidate is assigned an index 1 or 2 as well. When a candidate is evaluated by MAX or DEP, it is only compared to the input that bears the same index. Hence, *bun^{y}an*$_1$ and *bun^{y}ani*$_2$ are both faithful candidates-- faithful to different inputs.

The choice between –*n* and –*ni* in the forms in (21) can be decided by the constraint MAX-FOOT:

(22) MAX-FOOT

Every segment of the input has a correspondent in the output that is a member of a foot.

Independent evidence for feet themselves being prominent positions comes from English ambisyllabicity patterns. Part of Beckman 1998's evidence for MAX-σ́ is the fact that English intervocalic consonants are ambisyllabic after stressed syllables, which is a way of letting more input segments have correspondents in prominent syllables. In my dialect, consonants are also ambisyllabic after feet if the following syllable is unstressed, as in *Jupi<u>t</u>er* or *ambisyllabici<u>t</u>y*. This indicates that there is a similar pressure to pack underlying segments into feet.

(23) shows how MAX-FOOT always chooses the allomorph that produces a fully footed output. (Stress in Yidin^y is usually iambic in odd-syllabled words and trochaic in even-syllabled words, except that certain suffixes trigger an iambic pattern in even-syllabled words. All feet are bisyllabic. In the following examples, I will simply mark the expected stress

without comment.)

(23a) Yidin^y allomorphy: even-parity base

/ bun^{y}a + n /$_1$, / bun^{y}a + ni/$_2$	MAX-FOOT	MAX	DEP
a. → (bu.n^{y}á:n)$_1$			
b. (bu.n^{y}á:n)$_2$	i!	*	
c. (bu.n^{y}á).ni$_1$	n!		*
d. (bu.n^{y}á).ni$_2$	n!, i		

(23b) Yidin^y allomorphy: odd-parity base

/gudaga + n/$_1$, /gudaga + ni/$_2$	MAX-FOOT	MAX	DEP
a. (gu.dá).gan$_1$	g!, a, n		
b. (gu.dá).gan$_2$	g!, a, n, i	*	
c. (gú.da).(gá.ni)$_1$			*!
d. → (gú.da).(gá.ni)$_2$			

Significantly, this ability to enforce even-parity outputs is dependent on there being more than one input to choose from. Like MAX-FOOTHEAD-μ, MAX-FOOT would not favor deleting underlying material to create even-parity words. (See (12)). But it does prefer even-parity outputs over odd-parity *when no faithfulness violations are involved*. A faithful odd-parity output necessarily violates MAX-FOOT; a faithful even-parity output does not.

(24) MAX-FOOT violations

a.	/CVCVCVCV/	→	(CV́.CV).(CV́.CV)	0
b.	/CVCVCVCVCV/	→	(CV́.CV).(CV́.CV).CV	2

The production of even-parity through allomorphy is extensive in Yidin^y. Ten affixes have alternate forms for attaching to odd and even parity bases, always with the result of an even-parity output.

(25) examples of alternating affixes: (-: means the preceding vowel lengthens)

base: even-syllabled	odd-syllabled	
-:l	-ln^{y}u	l-conjugation past
-ln^{y}unda	-ln^{y}u:n	l-conjugation dative subordinate
-:	-la	loc.–allative–instr. V-final stems
-:n^y	-n^{y}a	accusative

There are also about 80 nominal roots that have both 2- and 3-syllable allomorphs. The 2-syllable forms always appear when the root is unaffixed, as predicted by MAX-FOOT (because they are the even-parity forms).

(26)	reducing roots		non-reducing roots	
	gad^{y}ara ~ gad^{y}ar	'possum'	gud^{y}ara	'broom'
	bigunu ~ bigun	'shield'	dyudulu	'brown pigeon'
	wayili ~ wayil	'red bream'	galgali	'curlew'

These alternations have sometimes been described as phonological deletion, but this analysis is problematic because it fails to explain the many exceptions to the proposed deletion rule: some affixes do not alternate, some reduce more than is necessary, and many 3-syllable roots have no 2-syllable form.

So 'stray syllable erasure' is allowed when it isn't really erasure: when an 'erased' version of a morpheme is listed in the lexicon. This distinction between the patterns enforceable by deletion and allomorphy is predicted by MAX-*Position*, but not by PARSE-σ. PARSE-σ would produce even parity through either method.

3.4. Stress avoiding epenthetic material

In the cases discussed above, MAX-*Position* constraints influenced syllabification and faithfulness around prominent positions whose location was determined by other constraints. However, MAX-*Position* can also influence the placement of stress, directly conflicting with alignment and foot form constraints. One strategy for maximizing the amount of underlying material in prominent positions is to assign prominence to positions that already contain the most underlying material. If there is a choice of where to place a foot or foot head (due to alignment constraints or foot type constraints being low ranked), MAX-*Position* constraints will prefer to place it where it can contain the most *underlying* segments.

One result of this is robustly attested: many languages avoid stressing epenthetic material (Broselow 1982). For example, Dakota normally stresses the second syllable of the word (Shaw 1976, Alderete 1999). But if the second syllable contains an epenthetic vowel, stress falls initially.

(27)	a.	/č^{h}ikte/	→	č^{h}ikté	'I kill you'	(normal 2nd σ stress)
	b.	/ček/	→	čék**a**	'stagger'	(exceptional stress)

This is precisely the pattern that MAX-*Position* prefers. Second syllable stress would result in the most prominent position being wasted on epenthetic material, so a dispreferred stress pattern is chosen in order to maximize the prominence of underlying material.

(28) Dakota (epenthetic V in bold, moraic members of foot heads underlined)

/ček/	MAX-FOOTHEAD-μ	Stress placement constraints
a. → (čé̲.k**a**)	č, k	*
b. (če.k**á̲**)	č, e, k!	

This exceptional stress serves MAX-FOOTHEAD-μ's purpose of aiding the recoverability of the input. Since the epenthetic material plays no role in distinguishing between lexical entries, it does not need to be salient.

A prediction of this approach is that epenthetic vowels may affect stress differently depending on whether they bear moras or not. Imagine a language in which there is one mora per syllable, and it may be attached either to the nucleus or coda:

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(29)  μ      μ       μ
      |      |       |
     CV     CVC     CVC
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In this language, there should be an avoidance of stressing CV syllables that contain an epenthetic vowel, but not of stressing CVC syllables that contain an epenthetic vowel. In the latter, the underlying coda can bear the mora so that MAX-FOOTHEAD-μ is minimally violated.

In fact, this describes part of the complex pattern of stress / epenthesis interaction in Mohawk (Michelson 1988, 1989). Normally, every penultimate syllable is stressed. This indicates that the language has right-aligned syllabic trochees. Under the assumption that feet are bimoraic, each syllable must contain one mora, whether it is CV or CVC.

(30) normal Mohawk stress

a. ka.ti.(rút.haʔ) 'I pull it'
b. wa.kas.(hé:.tu) 'I have counted it'
c. ka.kʌʔ.ro.(ké:.was) 'I am dusting'

Epenthesis disrupts this system. CV syllables that contain the epenthetic vowel *e* are not counted for stress purposes.

(31) open epenthetic syllables not stressable:

a. /ʌ-k-r-ʌ-ʔ/ → ʌ́.*ke*.rʌʔ 'I'll put it in a container'

b. /t-ʌ-k-ahsutr-ʌ-ʔ/ → tʌ.kah.sú.t*e*.rʌʔ ‘I will splice it’

But CVC syllables *are* stressable when they contain an epenthetic vowel.

(32) closed epenthetic syllables stressable:

a. /s-k-ahkt-s/ → (skáh.k*e*ts) ‘I got back’

b. /wak-nyak-s/ → wa.(k*é*n.yaks) ‘I get married’

Under a MAX-*Position* analysis, this is because there is an underlying C available to bear the sole mora of the syllable. The moraic position would have to be wasted on an epenthetic V in a CV syllable, but it is occupied by underlying material in a CVC one.

While a full analysis of Mohawk stress is beyond the scope of this paper, it should be noted that the difference in stress patterns caused by closed and open epenthetic syllables is predicted by MAX-FOOTHEAD-μ.

4. Conclusion

In conclusion, removing PARSE-σ from the constraint set and relying instead on MAX-*Position* constraints will lead to several significant improvements in predictions. It will still motivate iterative footing and rhythmic deletion, both of which have been cited as evidence for PARSE-σ, and also explain why stress tends to avoid epenthetic material. It will further explain why full footing may be achieved through allomorphy but not through deletion, a fine distinction not captured by any other approach that I know of.

In this way, it ties together a number of phenomena involving the interaction of prosody and faithfulness, ascribing to them a single basic motivation. The intuition expressed by this approach is that higher prosodic structure exists to give prominence to underlying material. Since underlying material is what distinguishes one lexical item from another, giving it prominence has the function of aiding in the recovery of the lexical entry. Several commonplace facts about prosody proceed naturally from this assumption. The underlying segments will be more salient if there is more than one stress per word, so we expect to see iterative footing. The lexical entry will be easier to recover if the most prominent positions are not wasted on epenthetic material, which plays no role in distinguishing between lexical items. Hence, we expect to see stress avoid epenthetic material. All else being equal, it is easier to recover a word that has a minimal amount of non-prominent material, i.e. a fully footed word. In allomorphy, where there is more than one underlying form available, the fully footable input will be preferred. But when there is only one underlying form, there is no advantage to deleting underlying material; clearly this cannot make the word more recoverable. Thus there is no reason to expect a process of 'stray syllable erasure' akin to the erasure of stray segments.

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