

# Is [stress] in PrWd DTEs or heads?\*

Paul de Lacy  
Rutgers, The State University of New Jersey  
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## 1. Introduction

This note is about the proposal in de Lacy (2019) that there is a privative feature [stress] and no underlying prosodic structure.

A part of the theory is that an output segment that bears the feature [stress] must be a PrWd Designated Terminal Element (DTE) – i.e. the head root node of the head mora of the head syllable of the head foot of a PrWd. An alternative is to require that the segment that bears the feature [stress] must be part of the PrWd’s head syllable (the head syllable of the head foot), and not necessarily be inside the head mora, or be the head root node of the head mora.

These two options make a variety of different typological predictions to do with contrastive syllabification. At the moment, I do not know which predictions are attested, so the goal of this note is to simply point them out in the hope that future empirical discoveries will resolve the issue.

## 2. The difference

The DTE option requires a root node with the feature [stress] to be the DTE of a PrWd. For example, with faithful preservation of [stress], /a’ña/ will surface as [a.ˈñ.a], where the underlying /n/ ends up in the head of a syllable (i.e. it is a syllabic [n]).

The head-σ option requires that a [stress] root node must appear inside the PrWd head syllable, even if it is in the onset or coda of such a syllable. For example, /a’ña/ could map to [a.(ˈña)] – here, the [n] is not the PrWd DTE, but it is in the onset of the PrWd’s head syllable.

## 3. Stress-sensitive contrastive syllabification

The DTE option allows contrastive syllabification in the context of a main-stressed syllable. For example, it is possible to generate a surface contrast between [ˈai.] and [a.ˈi.], as shown below.

(1) *Surface VV~V.V contrast, Part 1*

/ái/	IDENT[stress]	ONSET
(a) ˈái.		*
(b) ˈá.i.		**!
(c) .a.í.	*!	**

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\* This article should have been part of de Lacy (2019). Unfortunately, I had already sent the proofs back to the editor when I thought of this problem, and in any case it would have made the original paper too long.

(2) *Surface VV~V.V contrast, Part 2*

/aí/	IDENT[stress]	ONSET
(a) . <sup>1</sup> ai.	*!	*
<sup>☞</sup> (b) .a. <sup>1</sup> i.		**

In contrast, the head- $\sigma$  option does not necessarily generate this difference as it allows the candidate [.<sup>1</sup>aí.], where the [i] bears [stress] but is not the PrWd DTE. As seen in the tableau below, [.<sup>1</sup>aí.] incurs a proper subset of the violations of [.a.<sup>1</sup>i.], so will always beat it.

(3) *Surface VV~V.V contrast, head- $\sigma$  option*

/aí/	IDENT[stress]	ONSET
(a) . <sup>1</sup> ai.	*!	*
<sup>☞</sup> (b) .a. <sup>1</sup> i.		**!
(c) . <sup>1</sup> aí.		*

Of course, the validity of this result depends on CON's other constraints. If there are constraints that favor [.a.<sup>1</sup>i.] over [.<sup>1</sup>aí.] but not [.<sup>1</sup>a.i.] over [.<sup>1</sup>ái.], then contrastive syllabification will not be possible. So, a constraint such as \*DIPHTHONG is fine because it favors both the non-diphthongs [.a.<sup>1</sup>i.] and [.<sup>1</sup>a.i.] over the diphthongs [.<sup>1</sup>aí.] and [.<sup>1</sup>ái.].

I do not know of a convincing case of contrastive diphthongs. One that comes to mind is the difference between *Ida* and *Aida* in my own speech (an idiolect of New Zealand English): in fairly narrow transcription [<sup>1</sup>?aɪ.dɪ] *Ida* vs. [ʔe:.<sup>1</sup>i.dɪ] *Aida*. Unfortunately, if syllable head [i] is phonologically long, then even the broad difference would be actually [<sup>1</sup>?aɪ.dɪ] vs. [ʔa.<sup>1</sup>i:.dɪ], suggesting at its broadest an underlying contrast of /aɪdɪ/ vs. /ai:dɪ/ rather than /aɪdɪ/ vs. /aídi/.

A similar issue occurs with consonants: with the DTE theory, it is possible for /a<sup>1</sup>na/ → [a.<sup>1</sup>n.a] but /ana/ → [a.na]. On the other hand, it is not possible to ensure that there is a contrast between coda and onset syllabification: there is no way to get mappings which result in a surface contrast between [V.CV] and [VC.V] because neither of these forms have C in the PrWd DTE position.

On yet another hand, with the head- $\sigma$  option, there is a stress-conditioned onset-coda syllabification contrast where /a<sup>1</sup>na/ → [(<sup>1</sup>a<sup>1</sup>n)a], but /ana/ → [(<sup>1</sup>a.na)]. In this case, there is a default initial trochee; the /<sup>1</sup>n/ syllabifies with the preceding stressed syllable, but the /n/ syllabifies with the following coda. Recall that the candidate [(<sup>1</sup>ta.<sup>1</sup>na)] is impossible because the [<sup>1</sup>n] is not in a head syllable.

(4) *Surface coda~onset contrast, head- $\sigma$  option*

/ta <sup>1</sup> na/	IDENT[stress]	ONSET	STRESS-TO-WEIGHT
<sup>☞</sup> (a) ( <sup>1</sup> ta <sup>1</sup> n).a		*	
(b) ( <sup>1</sup> ta.na)	*!		*

  

/tana/	IDENT[stress]	ONSET	STRESS-TO-WEIGHT
(a) ( <sup>1</sup> ta <sup>1</sup> n).a		*!	
<sup>☞</sup> (b) ( <sup>1</sup> ta.na)			*

This case is somewhat curious because on the surface it would appear that head syllables sometimes attract consonants into their codas, and sometimes do not, depending on the lexical item. In other words, in [VCV], the syllable affiliation of C is unpredictable and depends on the lexical item involved. I do not know whether such cases exist. I suspect they would be difficult to detect.

On the other hand, the head- $\sigma$  theory cannot produce a contrast between a syllabic consonant and a non-syllabic consonant. For example, /ná/ and /na/ will both map to a form where the [n] is an onset: i.e. [(<sup>h</sup>na)]/[(<sup>h</sup>na)] – ONSET will ensure this, and IDENT[stress] will treat both candidates in the same way. In contrast, the DTE option could allow /ná/ → [<sup>h</sup>na] vs. /na/ → [.<sup>h</sup>na.]. For this language, the surface generalization is that there is a contrast between syllabic consonants and non-syllabic consonants. I do not know if such a case exists.

## 4. Summary

There are a variety of options worth pursuing for where the feature [stress] must appear in the output. Two explored here are that (a) a root node with [stress] must appear in a PrWd DTE, and (b) a root node with [stress] must appear in the PrWd's head syllable. There are other options, too, but these seem the most promising to me.

Both options have consequences for contrastive syllabification. For the DTE option, there can be contrastive diphthongs vs. vowel hiatus in a stress context. There can also be contrastive syllabic consonants and non-syllabic consonants. These are not possible for the head- $\sigma$  option, appropriately constrained. Even so, the head- $\sigma$  option allows contrastive coda/onset syllabification in the context of a stressed syllable.

Hopefully, future discoveries will decide between these two options, or point to another solution.

## References

de Lacy, Paul (to appear). The feature [stress]. In Harrison Adeniyi, Olyesye Adesola, Francis Egbokhare, Eno-Abasi Urua (eds.) *Festschrift for Akinbiyi Akinlabi*, pp. 86-101. <https://www.pauldelacy.net>