

On establishing the existence of word stress

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A language has word stress if a syllable-based culminative and obligatory prominence feature is part of the phonology of words (Hyman 2006). This definition excludes languages with a mora-based culminative and obligatory tone, like Kinga, languages with an obligatory phrase-based syllabic pitch accent, like French, and languages with non-obligatory syllable-based prominence, like Japanese.

A criterion not listed by Hyman is phonetic prominence. I will discuss data from a number of languages in which the relation between phonetic salience and stress is unexpected, confirming that phonetic salience measures do not define word stress.

In Ambonese Malay, a language without vowel quantity, minimal pairs like [barat] ‘West’ – [bāraat] ‘heavy’ suggest that the language has word stress, but it is hard to make a case for its existence. The salient peaks would appear to be best analyzed as due to phrase-boundary melodies that remain floating. This position will be argued for on the basis of a peak alignment study. Second, while the status of word stress in varieties of Tamazight is ambiguous at best, in the Zuara variety penultimate stress is a regular feature of words, even those that have a voiceless obstruent in the rime of the penultimate syllable, like [a.'sq.qad] ‘flail’. This position will be defended on the basis of acoustic measurements in questions and statements. Third, Standard Nigerian English has tonal structures which reflect the position of the word stress in British English. However, while other new varieties of English with tonal substrates, like Cantonese English, apparently lack word stress, Standard Nigerian English distinguishes words with initial and peninitial stress by means of duration as well as pitch. Its word prosodic structure will be argued for on the basis of acceptability judgements of sentential stimuli in which f_0 has been manipulated.

An operational definition of word stress may be provided by the ‘stress deafness’ paradigm of Peperkamp & Dupoux and colleagues: if listeners perform poorly on reproducing the presentation order of series of stimuli that minimally differ in the position of phonetic prominence ([minú] – [mínu], ...), the language doesn’t have word stress. We ran a ‘stress deafness’ experiment to see whether Persian, which has generally been described as having contrastive word stress or accent, passes the ‘stress’ criterion, using languages that uncontroversially have lexical stress or accent and languages that don’t as upper and lower baselines. The results suggest that the ‘stress deafness’ test discriminates between lexical and postlexical stress or accent, and that the reason that Persian listeners are ‘stress deaf’ is that their accent distinctions arise postlexically.