

## Lexical and fixed word stress: Representation, Production and Perception

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The workshop aims at bringing together research on the phonetics and phonology of word-level stress in order to deepen our understanding of the role of stress in the production and perception of speech. Languages differ with respect to the representation and implementation of stress. Among the languages with word-level stress, two groups of languages are distinguished: (a) fixed stress languages, where stress is placed in a predictable position within the word, and (b) lexical stress languages, where stress is assigned in random positions within the word. In the first group of languages, stress always falls on the same syllable, on the basis of purely phonological principles (e.g., edgemost rules, feet, syllabic structure, vocalic peaks, etc.). The most common are the languages with initial stress followed by those with penult, final, pen-initial, and antepenult (see, e.g., Goedemans et al. 2015).

In the second group of languages (e.g., Greek, Bulgarian, Portuguese, Dutch), the position of primary stress is determined in the lexicon. The relative stress level of syllables can convey lexical distinctions, in the sense that there are minimal pairs that only differ in the location of stress. Moreover, morphemes may be endowed with a lexical mark which may affect the location of stress (van der Hulst 2014: 21). Such stress systems are considered morphologically determined and morphemes are categorized as being prosodically specified or not. The former bear stress information as part of their lexical representations. The principle that allows the communication between the phonological and the morpho-syntactic component and requires prosodic structure to be built on a par with morphological structure is known as *prosodic compositionality*. The relationships between the particular accentual specification of the morphemes could be hierarchically organized in term of headedness (Revithiadou 1999). The involvement of morphology in the stress processing was demonstrated in Neuroscience by EEG studies (e. g., Zora et al. 2016). Furthermore, the prosodically unspecified morphemes obtain stress through phonological principles (Revithiadou & Lengeris 2016). Actually, most languages display elements of both stress categories (lexical stress vs. fixed stress). For example, Greek is a language with lexical stress system and is characterized by a predictable pattern of three-syllable window at the right edge of the word. So, the two categories should be considered the two endpoints of a stress continuum along which different languages can be placed relative to each other (Gordon & van der Hulst 2020: 69).

Among the current theoretical approaches to the morphologically conditioned phonology is the theory of level/ stratal ordering (e.g. Kiparsky 1982) recast within Optimality Theory into Stratal OT (Kiparsky 2000, 2003, 2008; Bermúdez-Otero 2011). The Cophonology approach (which departs from the stratal ordering theory) associates morphological constructions or lexical classes with different constraint rankings. The constraints are general, but have different ranking across cophonologies (Inkelas & Zoll 2007, among others). In the indexed constraint approach, there is a single constraint ranking for the language, but the constraints

are indexed to individual morphological contexts and split into different indexed versions (McCarthy & Prince 1995, Itô & Mester 1999, Alderete 2001). Embick (2010) considered the different forms of Optimality Theory as a “Globalist’s” perspective and suggested an alternative “Localist” view considering the recent developments in Distributed Morphology and the Minimalist Program.

The difference between stressed and unstressed syllables is realized in several acoustic dimensions: duration, intensity, fundamental frequency (f<sub>0</sub>), and spectral properties of the (vocalic) unit (Fry 1958, Bolinger 1961, Lehiste 1970). Stressed syllables are longer and louder, and present more f<sub>0</sub> movement. Additionally, stressed vowels show increased vowel dispersion and magnitude of formant change. These differences are less pronounced in fixed stress languages (Suomi, Toivanen, Ylitalo, 2003, for Finnish; Dogil, 1999, for Polish). Compared with speakers of lexical stress languages, speakers of fixed stress languages have difficulties in distinguishing non-words that differ only in stress pattern (e.g., Dupoux et al. 1997, 2001, 2008; Peperkamp et al. 2010; Domahs et al. 2012).

Topics of interest include, but are not restricted to, the following: acoustic-phonetic correlates of word stress; word stress in speech perception; word stress in L2; effects of word stress on segments; phonotactics, and phonological processes; lexical stress and the vocabulary; prosody-morphology interface; relationship between morphologically governed stress and predictable metric tendencies.

The following questions and themes are of particular interest:

- How can one define the domain of word stress in morphologically determined stress systems?
- How do the properties of a complex form relate to the phonological representations of its parts?
- How can the variable prosodic behavior of multi-purpose suffixes be interpreted?
- What is the role of speaker specific differences in the morphology-phonology interface?
- How do central properties of stress systems, such as predictability of stress and metrical structure, are reflected in the prosodic processing of words?
- What crosslinguistic generalizations can be made regarding the predictability of stress and its acoustic manifestation?
- Is stress in the default position manifested phonetically in the same way as stress in a non-canonical, exceptional position?

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