NP extension: B&B phonotactics

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The aim of this special session will be to provide a thorough but concise overview of the main assumptions of the theory of Natural Phonology. This paper will report on an extension of the framework in the area of syllable phonology and phonotactics. In particular, it will present a universal model of phonotactics constructed within Beats-and-Binding Phonology (B&B Phonology, cf. Dziubalska-Kołaczyk 2002) – a syllable-less theory of phonology embedded in Natural Phonology. The thrust of the theory is the claim that intersegmental cohesion determines syllable structure, rather than being determined by it (if one insists on the notion of the "syllable" which is epiphenomenal here).

Phonotactic preferences in B&B phonotactics specify the universally required distances between segments within clusters which guarantee, if respected, preservation of clusters. Clusters, in order to survive, must be sustained by some force counteracting the overwhelming tendency to reduce towards CV's (CV preference). This force is a perceptual contrast defined as Net Auditory Distance Principle (NAD Principle) (cf. Dziubalska-Kołaczyk 2002, 2005, Dressler & Dziubalska-Kołaczyk 2006, Dziubalska-Kołaczyk & Krynicki 2008, Bertinetto et al. 2007). NAD is defined by the following formula: $NAD = |MOA| + |POA| + |Lx|$, whereby MOA, POA and Lx are the absolute values of differences in the Manner of Articulation, Place of Articulation and Voicing of the neighbouring sounds respectively.

The NAD Principle makes finer predictions than the ones based exclusively on sonority, for instance it shows that among stop+liquid initial clusters, prV and krV > trV, brV, grV > drV, etc. (> read as 'more preferred, better'). This universal principle leads to predictions about language-specific phonotactics, its acquisition and change.

For the purposes of B&B phonotactics, a phonotactic calculator has been developed (Dziubalska-Kołaczyk & Krynicki 2008). It allows for statistical analysis of phonetic dictionaries and phonetically annotated corpora from various languages. The calculator works on various lengths of clusters in all word positions and estimates them with respect to the universal phonotactic hypotheses formulated to define each cluster type in each position (cf. Dziubalska-Kołaczyk 2002). It provides fast feedback on the predictability value of those hypotheses.

The present paper will discuss and illustrate the above model with a variety of data.

Bibliography

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