

## Scales and parameters in word prosody: Theory, typology, acquisition

Alexandre Vaxman

alexandre.vaxman@uconn.edu

My research connects phonological theory, typology and first language acquisition, with the goal to devise a grammar capable of accurately predicting actual cross-linguistic variation and the experimentally observed learning paths. In this talk, I present my work on syllable acquisition and accent assignment.

**Syllable acquisition.** I introduce a parametric model of syllable structure closely related to government-based approaches (KLV 1990; Kaye 1990; Charette 1991, van der Hulst 2006), which it slightly modifies, as they are not directly testable in acquisition. The parameters in the grammar constrain the application of relations and (dis)allow certain syllabic configurations depending on the language. Parameters are ordered on a “complexity scale” defined with reference to the complexity of syllabic representations which they control. I assume that the order of parameter setting is determined by this scale. One interesting prediction about the acquisition of surface syllable types derived from this hypothesis is that word-internal surface CVR. and VR. syllables are acquired by the child later than word-final surface CVC# and VC# (“R” stands for a sonorant; “.” and “#” for syllable and word boundaries, respectively). I report here on successful statistical testing using data automatically extracted from the Levelt-Fikkert corpora (annotated longitudinal corpora of spontaneous speech by 12 monolingual children acquiring Dutch) and discuss how the obtained results support my hypothesis. Note that the same model makes specific predictions with respect to cross-linguistic variation in syllable type that are, indeed, borne out by a well-documented syllable typology (Blevins 1995). Thus, the model achieves convergence between acquisitional and typological findings.

**Accentual theory.** It is desirable that a single grammar correctly and uniformly generate regular and exceptional word-accentual patterns both within a given accent system and across phonological systems, lexical accent systems and “mixed” systems (*i.e.* phonological weight-sensitive systems having some exceptionally behaving morphemes). In this talk, I will focus on exceptional affixes in lexical accent systems (accented dominant suffixes in Uzbek; Turkic) and in mixed systems (Eastern Literary Mari; Permic). Since morphemes, on a par with syllables, are able to attract/repel word accent, I propose that morphemes also have weight, albeit unpredictable (“diacritic weight”). Since “weight” is an ordinal variable (as evidenced by phonological weight scales) and diacritic weight is a type of weight in general, novel types of weight scales are predicted that order either diacritic weight alone (in lexical accent systems), or both syllable weight and diacritic weight (in mixed systems). Reference to such weight scales enables the parametric component of the grammar to correctly and uniformly assign word accent in all three types of systems (phonological, lexical and mixed). Further, the parameter system by itself accounts for phonological systems with a binary (heavy/light) distinction without over-, or undergenerating, due to dependency relations among certain parameters that appropriately reduce the parameter space. To illustrate, I will discuss one important dependency and show that it is strongly supported by tests against records in StressTyp (the largest-to-date typological database of stress patterns). The resulting theory of word accent will be compared to two well-known parametric theories: the Primary Accent First theory (van der Hulst 1996, 2010, 2012) from which it originally derives and the Simplified Grid Theory (Idsardi 1992, Halle & Idsardi 1995) whose straightforward formalism also facilitates such comparison.

**Prospects for future collaborations.** These include (but are not limited to) psycholinguistic studies of child speech production in order to independently test acquisitional predictions about child’s phonological knowledge and the study of prosodic prominence, in particular using MoDyCo’s corpora of French varieties, in order to establish a broader, empirically informed prosodic typology.