# Syllable typology and syllable-based typologies: findings from the extremes of phonotactic complexity

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Cross-linguistic studies of phonotactics often emphasize implicational generalizations regarding the sequencing of consonants with respect to properties of phonation, place of articulation, manner of articulation, and/or sonority (Greenberg 1965/1978, Morelli 1999, Kreitman 2008, Parker 2012). However, such studies are typically limited to biconsonantal clusters. Thus languages with more complex syllable patterns, as well as those in which consonant sequences do not occur — roughly 14% and 13% of languages, respectively — tend to be underrepresented in typological generalizations about phonotactics. Meanwhile, the property of syllable structure complexity features prominently in many holistic typologies of language. This is the case for typologies centered around phonological holism (cf. Isačenko 1939/1940, Dauer 1983, Auer 1993, Schiering 2007) and those which additionally consider morphosyntactic and semantic properties (cf. Skalička 1979, Fenk-Oczlon & Fenk 2005, 2008). In this talk I present findings which contribute to our understanding of both the typology of complex phonotactics and the interactions between syllable structure complexity and different components of linguistic structure.

In Easterday (2017) I investigated associations between syllable complexity and various linguistic properties in a diversified sample of 100 languages representing four degrees of syllable/phonotactic complexity: Simple, Moderately Complex, and Complex, as defined by Maddieson (2006), and an additional category of Highly Complex. While some associations show a trend across the four categories, the syllable patterns of languages at the extreme ends of the complexity cline, in particular, tend to co-occur with specific sets of phonological and morphosyntactic properties. Languages with Simple phonotactic patterns — that is, canonical syllable structures of (C)V or CV — are characterized by small consonant phoneme inventories, particular kinds of consonant contrasts, low rates of vowel reduction, high rates of consonant allophony, and lower average morpheme/word ratios. Languages with Highly Complex phonotactic patterns — defined as word-marginal sequences of three obstruents or four or more consonants — are characterized by large consonant phoneme inventories, particular kinds of consonant contrasts, high rates of vowel reduction, high rates of morphologically complex clusters, and higher average morpheme/word ratios. The languages in this category also show a great deal of consistency in the reported acoustic properties of their consonant sequences and the distributional properties of consonants within sequences and sequences within syllables. Furthermore, the phonological and morphological properties associated with the category as a whole are more likely to occur in languages in which Highly Complex phonotactic patterns are frequent and relatively unrestricted. These findings suggest that the languages in this category constitute a particularly coherent linguistic type defined by segmental and morphological properties, as well as dynamic processes of sound change, in addition to phonotactic patterns.

Although the data presented here is primarily concerned with the extreme ends of the syllable complexity cline, the results bear relevance for phonotactic typology more generally. In particular, the findings here elaborate upon the properties of high phonotactic complexity and support the idea that syllable patterns can be important defining characteristics of holistic language types.

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