

The Structure of OT Typologies: First Steps

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Theories impose a nonobvious order on reality, classifying the world's objects by defining for us what those objects are. An OT typology, simply by virtue of being OT, intrinsically classifies its languages in terms of shared and contrasting *ranking patterns*. For a given OT system *S*, consisting of a specification of *Gen_S* and *Con_S*, these patterns determine the classes of languages and linguistic structures that *S* recognizes as real.

It is the project of Alber & Prince (ms.) to exhaustively explicate the structure of a typology in terms of a set of its *properties*, each of which consists of set of mutually exclusive *attributes*, which are conditions on rankings. For example, a property "Foot Type" might resolve into two attributes [Iamb>>Trochee] and [Trochees>>Iamb], in an OT system which has those constraints. Or it might not! The roots of the project go back to Prince & Smolensky's analysis of the Basic Syllable Theory (ch. 6, p.116), whose intentions echo sporadically through the literature in the notion of a 'ranking schema' and appear explicitly in Magri 2012. The force of the Alber-Prince classification project comes in part from its systematicity: the commitment to reconstructing the *entire* typology from the list of such properties. To realize the project, it's necessary to learn what a property can be, formally, and how properties can relate to each other. By making a set of choices from the properties, guided by a specification of their allowed interactions, the entire set of grammars is generated. A proposed extensional grouping of languages is validated by being associated with an *attribute* (ranking condition) in the property structure of its typology.

Classification rests, almost inevitably, on three essential notions: nearness, symmetry, and exclusion. The relevant notion of *nearness* for the grammars of a typology comes from the study of permutations, with an twist or two induced by the way linear order determines selection of optima (Prince 2002, Prince, ms. Merchant & Prince, ms.). The relevant notion of symmetry (Alber & Prince, ms.) recognizes categories of constraints based on their interactions within properties (like Iamb and Trochee in 'Foot Type' above), so that we can go beyond nearness in defining a class of grammars. The relevant notion of exclusion ('mootness' of ranking contrasts) allows us to find clean structure that is not uniform across the entire set of grammars in a typology. These concepts will be worked out in the context of a stress typology from Alber & Prince, with enough complexity to reveal what's going on, but not enough to defy comprehension altogether. Those who are interested in getting some prior exposure might wish to watch my YouTube video "Metrical Theory as a Portal on Theory;" at OCP, I will attempt a different route through the same landscape.

References

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