

Towards a phonological functional sequence

Government Phonology (GP) had always strived to be syntax-like, Pöchtrager (2006) being (possibly) the latest major attempt to bring phonology closer to contemporary syntax. However, the hierarchical structures it introduced follow (at least in broad strokes) the X' system of Government and Binding Theory rather than any of more recent, minimalist theories of phrasal structure. It is not surprising, then, that the number of proposed phrasal categories (two: O(nset) and N(ucleus)) is more in line with the GB approach than with the numbers we have become familiar with since the recent explosion of syntactic cartography. In this (admittedly programmatic) talk, I'd like to hint at several advantages that assuming that segments (specifically, consonants) are built around a functional sequence might bring to phonology.

Starting with a theory-internal issue, notice that various restrictions proposed within so-called GP 2 are decidedly unsyntactic. One example is counting the number of layers to (roughly) determine the manner of articulation (Pöchtrager 2006: §2) or the definition of an obstruent via the notion of a mainland node in Živanović (2018). Both suffer from the same issue, the inability to explicitly refer to the functional head responsible for (let's call it) obstruency, an issue that obviously disappears if we introduce the functional sequence, which (among other things) names nodes. In a similar vein, we can get rid of the dubious (and ubiquitous) referral to the two parts of the adjunction structure (the “upper” and the “lower” head).

Next, elimination of |A|, |H| and |ʔ| has led to proliferation of melodically empty segments (the consonantal list includes, for example, at least under some versions of the Element Theory, [k], [t], [n] and [s]), which are therefore distinguished solely by their structure. However, several of such segments might be considered the simplest possible, i.e. zero-layered and unannotated. Three candidates come to mind: [ʍ]/[ɣ] (cf. Pöchtrager 2006: p. 91), [ɹ] and [h] (or maybe [ʔ]). However, a system with a single head (xO) provides (counting adjunction as a layer) only one zero-layered structure. Assuming the existence of a functional sequence with three distinct heads, let's call them simply c_1 , c_2 and c_3 , obviously generates just as many zero-layered structures. Let us thus assume that (unannotated) c_1 , c_2 and c_3 correspond to [ʍ], [ɹ] and [h], respectively, and that, furthermore, three is in fact the number of heads in the consonantal functional sequence. Further assume $c_1 < c_2 < c_3$, reading $a < b$ as b must dominate a in the functional spine of a segment (if both are present).

It has long been clear that not all elements are born equal. This had, of course, been one of the GP 2 arguments for abandoning several of them. There are also asymmetries among the remaining elements: |U|, |I| and |L|. The functional sequence approach offers an elegant way of encoding the asymmetry, by assuming that each element is licensed (in some, as of yet unspecified, manner) by a certain functional head — note that the length of the proposed functional sequence matches the number of elements in GP 2. It is becoming clear that |L| is destined to occur in the highest position (see e.g. Liu and Kula 2017; Kaye and Pöchtrager 2017). For |I| and |U|, the decision is less obvious. Given the well-known fact that |I| is more susceptible to spreading (see

e.g. Pöchtrager 2010), it seems sensible to assume that it occurs higher than |U|. The proposed hierarchy is thus |U| < |I| < |L|; in other words, |U|, |I| and |L| are licensed by c_1 , c_2 and c_3 , respectively.

A simple case where these assumptions do some work. Assume that glides [w] and [j] are zero-layered annotated structures: specifically, [w] is an |U|-annotated c_1 and [j] is an |I|-annotated c_2 . Furthermore assume, in line with a common GP 1 analysis of [w] as a headless |U| and [v] as a headed |U|, that [v] contains both c_1 and c_2 (and is |U|-annotated). Then the prohibition against lexical (but not derived) [w] in Slovene can be stated simply as a prohibition against c_1 as the top node.

Associating elements with specific functional projections might go some way towards predicting which places of articulation are available for which manner of articulations. For example, note that (under certain assumptions about the Element Theory) stops are either melodically empty or contain |U| (the only exception is [c]; however, it is unclear whether [c] should be considered a stop or an affricate), which might be explained if stops required some sort of a “break” (perhaps a certain movement) in the structure just above c_1 . Analogous structures with a break above c_2 might be affricates; assuming fricatives contain no such break, they can span the entire spectrum of places of articulation.

Even more clearly, if a manner of articulation does not require a certain projection, the prediction is that a segment of the given manner cannot be annotated by the element licensed by this projection. An obvious case are sonorants (other than nasals), which I assume do not contain the |L|-licensor, c_3 , which explains why they cannot be actively (as opposed to spontaneously) voiced. Another such case might be laterals, which seem to lack places of articulation requiring element |U|, indicating the absence of c_1 (and thus providing a hint to its interpretation). Finally, taps and trills might be the manners of articulation without c_2 , as they seem to lack places of articulation requiring element |I|.

As remarked above, the proposal is rather programmatic. Much work remains to be done. The general idea is to adopt (but hopefully not adapt) a specific syntactic theory and use it to tie together the above hints into an explicit and coherent theory. However, there is a lot of offer on the syntactic market, so the choice is hard . . .

References

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