

Phonologically conditioned allomorphy is possible because it never involves melody

Embick (2010) defends a modular approach (localism), against global alternatives (including OT) where phonologically conditioned allomorphy is used as evidence to show that there is no way allomorph selection could be computed just by itself, i.e. without appeal to phonological information. Embick argues that on modular standards nothing withstands morphological computation to take phonological information into account as long as the information spells out already-merged items. Modularity is violated only if at any given point in the derivation phonological exponents of items are appealed to that are not yet merged into the morpho-syntactic structure. Embick shows that the prohibition of look-ahead restricts the derivation in a useful way and makes (correct) predictions that the global alternative misses.

Embick's argument addresses the availability of phonological material at a given derivational stage, but leaves aside another hurdle for a truly modular analysis: the very fact that morphological computation is deaf for phonological vocabulary. Domain-specificity is a key notion of modularity: the input to every computational system is specific to this system and cannot be parsed by other systems. Communication among systems requires translation from one vocabulary into another (e.g. vocabulary insertion in the transition from morpho-syntax to phonology). Therefore *labial*, *occlusion* and so forth is not anything that morphological computation could make sense of, and hence phonologically conditioned allomorphy should not exist in the first place.

In this presentation I show that there is reason to believe that morphological computation actually never appeals to *labial*, *occlusion* and the like. This is because of an empirical generalization that has gone unnoticed thus far and exceeds the present focus on morphology: morpho-syntax and phonological melody (i.e. the area below the skeleton in an autosegmental representation) are incommunicado, in both directions (Scheer 2011: §660).

Zwicky & Pullum's (1986) claim that syntax is never impacted by any phonological property (phonology-free syntax) has been challenged empirically based on a large range of data, showing that intonation, stress, tree-geometric properties of the prosodic constituency, the size of lexical items (minimal word constraints), rhythm and tone may be a factor in syntactic computation. I show that all cases on record involve phonological properties that are located above the skeleton, and conclude that the correct generalization is *melody*-free syntax: items located below the skeleton, i.e. melodic primes (depending on the theory, binary or monovalent features, unary items such as GP-Elements), are invisible in syntax.

It is shown in a further step that the same is also true in the opposite direction: (morpho-)syntax can influence phonology only at and above the skeleton. There are no cases on record where the carrier of morpho-syntactic information in phonology would be, say, a feature [+labial]. All interface theories, structuralist and generative alike, implement this insight, if tacitly: carriers of morpho-syntactic information are held to be juncture phonemes, SPE-type diacritics (# and +) and more recently prosodic constituency – all are inserted at or above the skeleton.

The examination of other phenomena reveals the same watershed line: morphology (phonologically conditioned infixation and allomorphy), category-sensitive phonology, and (phonological) absolute agrammaticality are also melody-free. On the other hand, melody is unable to impact categories above the skeleton: cases where the computation of stress, tone or syllable structure reacts on the presence of absence of, say, labiality, are unheard of. Finally, so-called crazy rules in phonology (e.g. $l \rightarrow \text{f} / V_V$) are only ever melodically crazy: there is nothing like closed syllable lengthening or compensatory shortening.

In conclude by giving this overall landscape an interpretation in a modular perspective: phonology is made of two distinct computational systems, one taking melodic primes as an

input and returning melodic primes in a different arrangement (e.g. a palatalization), the other taking the linear order of segments and sonority as an input and computing syllable structure.

Phonologically-conditioned allomorphy only ever takes properties of the latter into account, whose vocabulary items are legible by morphological computation. In other words, what phonologists call phonology above the skeleton is better referred to as a specific instantiation of morpho-syntax, ontologically speaking.

References

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