Rich Representations: A Tonal View on Lexical Exceptionality

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In this talk, I will make a case for the claim that many phonological alternations which are apparently lexically restricted are simply the consequence of two well-established cornerstones of phonological theory: Underlying representations that are potentially fully neutralized in output representations and the rich phonological representations, made available by standard Autosegmental Phonology (Leben 1973, Williams 1976, Goldsmith 1976). Basing my argument on tonal morphophonology, I will also show that this provides an especially rich empirical testing ground for theoretical approaches to lexically specific phonology (in the following: LSP).

The Basic Approach: Imagine two morphemes in the same language L, M_1 and M_2, which in a specific phonological context C_1 (say utterance finally) are realized by an identical tone pattern, say all low such as [màtà] and [pàtà], but have a different tonal shape in an other context C_1 (say utterance-internally), where M_1 is still low ([màtà], but M_2 is high ([pátá]). Underlying representations provide the straightforward explanation for this pattern under the assumption that M_2 is underlyingly high, but subject to a process of final lowering. Crucially, autosegmental representations dramatically multiply the set of potential underlying forms. To cite just a few possibilities, a form like [màtà] might have two underlying low tones linked independently to the morpheme's syllables, one underlying L linked to both, or no underlying tone at all, where the output Ls are provided by default. An implicit research strategy of much work in Classical Autosegmental Morphophonology that I will continue here is the assumption that this representational richness is not an embarrassment of the theory but rather a natural explanation for the fact that apparently similar morphemes exhibit a high degree of different behaviors, or in other words, lexically specific phonology. A case in point would be a morpheme M_3 in L which is [ràtà] utterance-finally, but assimilates tonally to a following word if utterance-internal, captured naturally by underlying tonal underspecification.

Putting Rich Representations to the Test: I will assume that there are three crucial touchstones for approaches to lexical conditioning, and show that the Rich Representation (RR) approach has interesting advantages over competing approaches.

- **Locality:** Lexically specific processes typically apply in narrowly defined locality domains (intuitively: close to their lexical trigger). While classical Construction Phonology (CP Inkelas 1998) and Indexed constraint (IC) accounts (Pater 2007) of LSP make simple testable locality restrictions, these are likely to be too coarsely grained, witnessed by the proliferation of recent proposals to substantially weaken them (see Sande and Jenks 2018 for CP, and Jurgec and Bjorkman 2018 for IC). I will show that a RR account makes more differentiated predictions, where locality effects fall out directly from phonological locality, and apparent violations of locality (e.g. categories of lexical morphology influencing phrase-level phonology) reflect the fact that phonological material (hence also rich representations) may persist across grammatical levels, and exhibit long-distance effects typical of autosegments and especially tone.

- **The Internal Structure of Exceptionality:** LSP patterns in a given language are typically not independent from each other: morphemes which are exceptional for one process often also follow suit for other processes. In more complex cases, lexical items form hierarchies of exceptionality, where lexical specificity for one process implies special behavior for another process, but not vice versa. I will argue, based on classical data from

Kikuyu (Clements 1984) and Margi (Pulleyblank 1986) that RR not only allows for an elegant modeling of this structure, but also often provides principled explanations for them not available in IC and CP accounts. Thus in Kikuyu a floating L tone accounts both for downstep in one context and the shielding of H-tones from phrase-final lowering, both effects expected from a L-tone.

- **The Demarcation of phonological and morphological operations:** In RR just as in Inkelas-style CP there is a fuzzy boundary between non-concatenative morphology and LSP. I will show that in contrast to CP, RR in tonal morphophonology allows to maintain the standard assumption that phonological processes are restricted to minimize markedness and morphological operations to the addition of phonological material.

Facing the Abstractness Challenge: RR approaches to LSP often face the objection that they introduce excessive and opportunistic abstractness into underlying representations posing problems for learnability and obviated by more "surface-oriented" approaches such as IC and CP. Here, I will argue that standard aspects of RR in tone are to the contrary, typically close to surface phonetics and the observed facts: Floating tones of a specific pitch are not per se more or less abstract than segments of a specific pitch, and tonal underspecification of segmental material ideally simply corresponds to the fact that this material shows unstable tone in different environments.

Extending the Coverage: A major methodological asset of RR is that it ties the possible typology of LSP to the theoretical modeling of phonological representations themselves, allowing for progress in both areas in tandem. I will illustrate this with examples from a central research area in tonal representation, the question whether single tones such as Low and High are decomposed in more basic features for melody and register (Yip 1989, Hyman 1993, McPherson 2017). I will show that the assumption of tonal sub-features using the system of Snider (1999) allows for a more fine-grained modeling of lexical exceptionality in tone corresponding closely to observed patterns with data from Konni (Cahill 1999), Tenyidie (Meyase 2016), Gã (Paster 2003), Kikuyu (Clements 1984) and Margi (Pulleyblank 1986).

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