

Motivating Sievers' Law in a Stratal OT Framework

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The most widely accepted version of Sievers' law as a PIE rule may be formulated as follows (cf. Mayrhofer 1986:164ff.): $\emptyset \rightarrow R_1 / V\{R, V\}C_R_1V(C_0)\#$ (where $R_1 = /y, w/$), such that $*tertyo\#$ and $*tētyo\# > *tertyo\#$ and $*tētyo\#$, respectively. Unexpectedly, words of the shape $*tekyo\#$ do not become $**tekiyo\#$ (cf. Ved. *mátsya*- 'fish'), and absolutes in $*-two-$ (Sanskrit *-tví:*, *-tvá:*, *-tvá:ya*) never undergo S' law: $*/ter + two/ > [tertwo]$, not expected $**[tertuwo]$. The standard formulation of S' law in PIE is given by Schindler (1977), who proposed that the rule in question be due to the following syllabifications: $*ter.tyo-$ and $*tē.tyo-$ but $*tekt.yo-$. S' law would thus be due to an avoidance of a complex onset C + R in word-medial position.

There are two problems with this analysis, however. First, other than Schindler's own formulation of S' law there is no evidence for the syllabification of $*tekyo-$ as $*tekt.yo-$, rendering his analysis completely circular. Moreover, we find that not only did PIE speakers prefer complex onsets over complex codas; they preferred complex onsets over *any* coda. For example, the root $*k̑won-$ 'dog', syllabifies as follows in the instrumental plural: $*/k̑wn + b̑is/$ 'dog (instrumental pl.)' \rightarrow $*/[k̑w̑nb̑is]$ 'dogs' not $*/[k̑unb̑is]$. Lastly, we have no reason to believe that a sequence of stop + R was disfavored in PIE, aside from Schindler's interpretation of S' law (and perhaps Lindeman's Law).

My contribution to this long-standing problem of PIE phonology originates in my dissertational work on PIE syllabification (Byrd 2009). I have reconstructed a PIE maximum syllable template (MaxST) to which I attribute numerous processes of syllable-driven vowel epenthesis (such as schwa secundum, $d̑̑̑̑més$ 'earth (gen.sg.)' $> d̑̑̑̑̑̑més$) and consonant deletion (such as CH.CC $>$ C.CC, $*d̑̑̑̑_2tres$ 'daughter (gen.sg.)' $> *d̑̑̑̑̑̑rés$). I reconstruct the MaxST as follows: CCVCC, where the coda may not violate the Sonority Sequencing Principle (SSP; see Clements 1990). This results in the following syllabification of the root shapes listed above: $*/tert/ \rightarrow *[tert]_{\sigma}$, $*/tēt/ \rightarrow *[tēt]_{\sigma}$, but $*/tekt/ \rightarrow *[tek]_{\sigma}t$, with an extrasyllabic C. If syllabified as proposed, the first

two types form a superheavy syllable, while the last does not, since the last C violates the SSP and cannot be syllabified (i.e. is extrasyllabic). This, I believe, provides us with the conditions for the original formulation of S' law -- the avoidance of a superheavy coda.

Unlike Schindler's explanation of S' law above, the avoidance of a superheavy coda is a typologically widespread phenomenon and is well attested elsewhere in Indo-European, in processes such as Schwebelablaut and the avoidance of compensatory lengthening in medial syllables (Byrd 2009). Attributing S's law to the avoidance of a superheavy coda will not only explain why /tektyo/ did not become [tektiyo], it will also explain why the absolutes in /ter + two/ did not become [tertuwo]; S's law never applies, because a superheavy coda never existed! I will present my findings using a Stratal OT framework (cf. Kiparsky 2000), which best captures the interaction of constraints at different phonological levels. Using Stratal OT I will show that S' law may ultimately be attributed to a reranking of the constraints *SUPERHEAVY ('Don't have a superheavy syllable') and IDENT(σ) ('Don't alter the syllabification of the base form') within the PIE grammar.

References

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