

A Modern Analysis of The RUKI Sound Law
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The RUKI Sound Law has remained something of a problem in historical phonology for over a hundred years (Whitney 1889, Zwicky 1970, Allen 1973, Venneman 1974, Longerich 1998). In that time many attempts have been made to make sense of that strange process whereby /s/→[ʃ]/[r u k i]_ in Sanskrit. A solid phonetic analysis has been put forward by Longerich (1998), and several phonological explanations have been proposed under older models (Allen 1973, Kiparsky 1981) but as of yet there is no phonological explanation developed using twenty-first century techniques and theories. By using a fusion of Harmonic Serialism (McCarthy 2016), a serial-derivational variant of Optimality Theory, and Clements & Hume (1995)-style feature geometry, and following the analysis proposed in Allen (1973), I provide such a modern analysis. Following from Allen (1973), I argue that RUKI is not a single rule, but rather the neutralization of an earlier general place-assimilation process.

As regards the members of the RUKI set, this analysis proposes four separate developments, listed below:

- (1) ṛṣ→ṛʃ
- (2) iṣ→iṣʲ→iç→iʃ
- (3) kṣ→kx→kʃ
- (4) uṣ→uṣʲ→ux→uʃ

Assuming, based on Allen (1973), that the original Sanskrit /s/ was underlyingly placeless, as it was the only fricative in the system at the time, then the above derivational paths neatly solve RUKI. Four separate instances of place-assimilation led to four separate outputs. The K path was later neutralized to the retroflex output, while UI both underwent reanalysis before neutralizing. This reanalysis stage is an incorporation of theories of language acquisition into the analysis, arguing that, rather than there being a directly phonological explanation for the transition from secondarily-articulated dental fricative to fully place-assimilated fricative, the explanation is lexical. Young speakers would be forced to decide between two analyses of the data: either the segments in question are dental fricatives with secondary articulation, or they have velar or palatal place, respectively. The latter is the simpler analysis, and consequently would become baked into the UR, rather than continuing to be derived.

This analysis is driven by HavePlace>>NoLink, with an eventual reranking to HavePlace>>*x, *ç>>NoLink. HavePlace drives the initial place-assimilation, as Sanskrit *s is assumed to be underlyingly placeless. This was proposed by Allen (1973), on the grounds that languages with only one fricative usually only regard frication itself as salient. HavePlace outranking NoLink motivates the fricative to attach to the preceding PLACE node, leading to the four outputs shown above. With this principle in mind, I provide an analysis of RUKI which does not require the assumption of a [+high] specification on Sanskrit /r/ (Allen 1973, Kiparsky 1981). It furthermore provides the first assessment of RUKI in a constraint-based model, providing new insights into both the development of language over time, and how constraint-based models can contribute to that research. By including a stage of reanalysis in the derivation, it also works towards fully integrating an I-Language conception into historical analysis, acknowledging that language does not in itself really change much: rather, it is transmitted imperfectly from generation to generation, leading to changes which do not necessarily have phonological grounding, though they have phonological effects.

References

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