

The Syllable Contact Law in Kyrgyz

In Kyrgyz (Turkic), the Syllable Contact Law can be observed from the fact that suffix onsets desonorize in response to the sonority of the preceding coda:

- (1) bala-lar aj-lar dʒer-ler qol-dor kyn-dør at-tar
 children months places hands days horses

Gouskova (2004) addresses the problem of how to formalize scales such as the sonority hierarchy into the framework of OT. She uses RELATIONAL CONSTRAINTS of the form ... *DIST=+1 \gg *DIST=0 \gg *DIST=-1 ..., which group together any pair of segments with the same sonority distance.

I present evidence against a core motivation behind the architecture in Gouskova (2004), stated as STRATAL INTEGRITY: “if two sequences are relationally equivalent (e.g. have the same sonority distance), they are expected to pattern as a class, all else being equal”. Although Gouskova motivated stratal integrity in part based on evidence from Kyrgyz, I present a more complete picture of the Kyrgyz paradigm as evidence against this.

Kyrgyz has two archiphonemes which can desonorize to abide by syllable contact: /l/ and /n/. Each behaves differently with respect to the point at which it desonorizes, as shown in Table 2. Adopting a Gouskova-style constraint hierarchy, a FAITH constraint for [l] must be placed between *DIST0 and *DIST-1, and for [n] between *DIST=-3 and *DIST=-4. Moreover, /m/ is oblivious to SYLLCON: it never desonorizes, not even following stops.

From the data, we observe that stratal integrity cannot hold between the two segments which may undergo desonorization: [jl] and *[rn] both have a sonority distance of -2. Moreover, we observe an even bigger problem when attempting to unify the behavior of the two segments: although [jl] is allowed with a sonority distance of -2, *[jn] is disallowed with a lesser sonority distance of -3, i.e. a greater sonority drop than [jl].

Thus, we see that a system which attempts to account for the entire data cannot rely on a metric purely using sonority distance between two consonants. Gouskova’s framework is powerful enough to account for the data, as long as IDENT constraints protecting specific segments are ranked independently of one another, thereby getting rid of STRATAL INTEGRITY inside the framework. However, it is worth considering alternative possibilities to account for the data. One option would be to adopt a constraint framework which makes reference to an onset segment – sonority distance value pairing, under which only a comparison between pairs which share the same C_2 is possible. Another option would be to incorporate the perceptual distance between the underlying segment and the possible desonorized form, although such an account introduces its own problems.

References:

- Gouskova, Maria. 2004. Relational hierarchies in Optimality Theory: the case of syllable contact. *Phonology* 21.02. 201-250.
- Hebert, Raymond & Nicholas Poppe. 1964. *Kirghiz manual*. The Hague: Mouton. Kensington, Maryland: Dunwoody Press.
- Jespersen, Otto. 1904. *Lehrbuch der Phonetik*. Leipzig & Berlin: Teubner.

Figures:

6 5 4 3 2 1
vowels > w/j > r > l > n/m/ŋ > obstruents

Table 1: Simplified sonority scale for Kyrgyz

stem ends in:	V	w/j	r	l	N	T
-PL	bala-lar	aj-lar	qar-lar	bal-dar	nan-dar	qiz-dar
-ACC	bala-ni	aj-di	qar-di	bal-di	nan-di	qiz-di
-1SG	bala-min	aj-min	qar-min	bal-min	nan-min	qiz-min
-LOC	bala-da	aj-da	qar-da	bal-da	nan-da	qiz-da
	‘child’	‘moon’	‘snow’	‘honey’	‘bread’	‘girl’

Table 2: Behavior of /l/, /n/, /m/, and /d/