

Evidence for the sonority scale in Kazakh
Jonathan North Washington, linguistics; jonwashi@indiana.edu

Certain phonological processes in Kazakh lend support to the reality of the sonority scale. By examining these processes, this paper constructs an empirically driven model of the sonority scale in Kazakh. The resulting sonority scale is not atypical, but the methods used to derive it may indicate advantageous ways of working with sonority-related processes. Complicating factors which create interesting difficulties for an OT analysis are dealt with, and a constraint ranking which accounts for all of these processes is proposed. Additionally, historical evidence suggests that the proposed constraints have undergone reranking throughout the language's history.

One phonological process in Kazakh of interest to sonority studies is a process whereby sonorants at the left edge of regular suffixes desonorize when preceded by a consonant of equal or higher sonority. For example, the nominal plural *-LAr/* surfaces with an initial [l] after vowels, glides, and /r/, but with an initial [d] after laterals, nasals, and obstruents. This process presumably exists to ensure falling sonority across a syllable boundary—an exemplary case of the Syllable Contact Law (Murray and Vennemann, 1983) at play. One complicating factor, however—missed or explained in unsatisfactory ways by other analyses—is that while /m/ desonorizes to [b] only after nasals and obstruents, /n/ desonorizes to [d] after any consonant.

The present study assumes that the difference in behavior between /n/ and /m/ in Kazakh is due to the relatively low ranking of ID constraints (such as ID[son], ID[nas], etc.) in relation to a hierarchy of constraints which prevents segments of high sonority from occurring as onsets (i.e., *ONSET/V » ... » *ONSET/Obs). In such an approach, /n/ is subject to the *ONSET constraints, whereas /m/ may be immune due to its higher markedness. Additional historical evidence that Kazakh has long shown a dispreference for word-initial sonorants supports this proposal. Examining the data this way allows the sonority hierarchy in Kazakh to be delineated into something like vowels > glides, rhotics > laterals > nasals > obstruents.

Furthermore, a small handful of previously unexamined complex codas are allowed in Kazakh. There are many limitations on what two consonants may occur together in a coda, including that they must be homorganic, and that the first one must be a sonorant. Interestingly, the second consonant may only be a voiceless stop. Using a split margin approach (Baertsch, 2002), this suggests that voiceless stops must have peripheral sonority. In other words, not only sonorants, but also fricatives and voiced consonants must have higher sonority than voiceless stops in Kazakh. However, fricatives and voiced sonorants cannot be further delineated. While this does not mean they have equal sonority in Kazakh, these unrelated classes nonetheless pattern together. Clements's (1990) approach to sonority, where it is viewed as a compounding of perceptual cues related to "salience," may, however, be used to equate the level of sonority of these classes in Kazakh.

Using evidence from several phonological processes in Kazakh, a picture of the sonority scale comes into focus. While the resulting sonority scale appears rather ordinary, its existence gives credence to certain approaches of analyzing syllable contact phenomena, syllable margins, and other sonority-related phenomena.

References

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