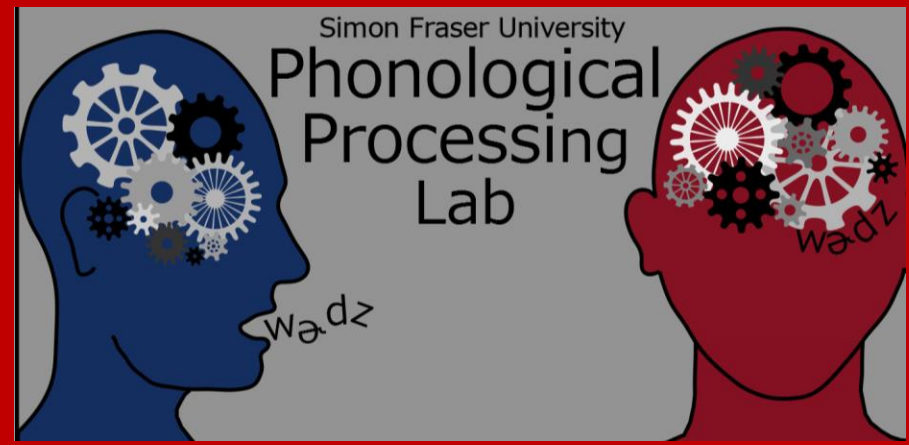


# Introducing the Cross-Linguistic S-Cluster Inventory Database



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## Background

S-clusters are often unique compared with non-s clusters:

- More likely to violate SSP (e.g. /s/+stop)
- More likely to violate minimal distance restriction (e.g., /s/+nasal in English, MD = 2)

How should we determine markedness relationships among s-clusters?

- SSP & MD? What else matters?
- Need a typological study

Initial typological research on relationships of s-clusters suggests sonority may not be constructive way to study s-clusters (Morelli, 1998)

Our goals:

- To build a shareable database of cross-linguistic s-cluster inventories
- To investigate the cross-linguistic typology of s-clusters (and other clusters)

## The Database

Built in Microsoft Access

- Valuable for ease of inputting, viewing, searching data
- Database will soon be available online

231 languages from UPSID database (Maddieson, 1984)

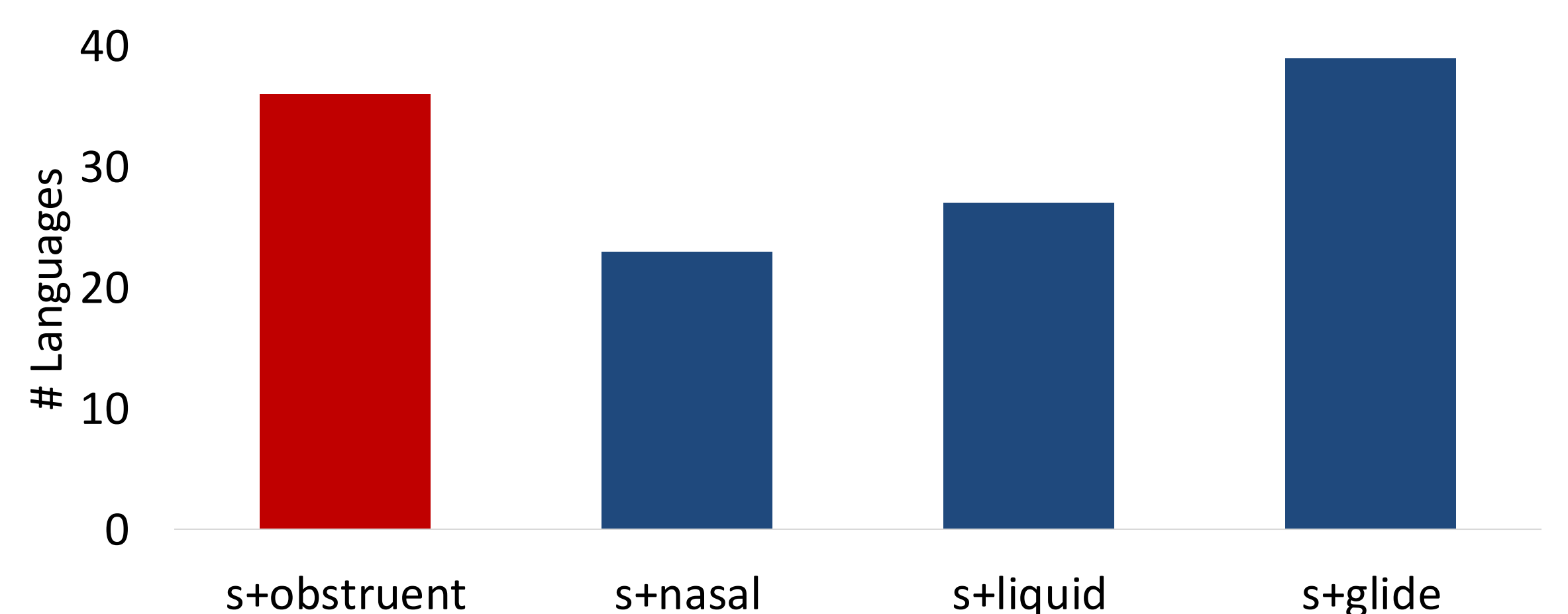
- Original singleton info included in database
- Word-initial clusters by type

The screenshot shows a 'View Language' window for 'Adzera'. It includes fields for Language Name, Number, Reference, and Input Source. There are sections for 'General Information on Clusters' with checkboxes for 'No Initial Clusters', 'S-clusters', and 'Non S-clusters'. An 'Initial Clusters' list shows 'pr mpr br mbr tr ntr tsr ntsr dr dzr kr nkr gr mr fr sr kw gkw gw ngw nw'. Below are sections for 'Singletons' (Stops, Fricative/Affricates, Nasals, Approximants) and 'S-Clusters' (S+obstruent, S+nasal, S+liquid, S+glide) with checkboxes for various combinations. A 'Notes' field contains 'only s-cluster is [sr]'. The interface includes navigation buttons and a search bar.

## Typology

62 languages in database have some s-cluster

- /s/+glide and /s/+obstruent clusters most common
- /s/+nasal clusters least common
- Every language with an /s/+nasal cluster also has an /s/+obstruent cluster



30 languages have s-cluster inventories counter to SSP or MD

- Marked-leaning inventories (e.g., Tsou has /s/+obstruent and /s/+nasal clusters only)
- Gapped inventories (e.g., French lacks /s/+liquid clusters only)

Must also take singleton inventories into account

- E.g., languages that lack liquids lack /s/+liquid clusters

## Conclusions & Future Directions

- Some generalizations based on the Sonority Sequencing Principle and Minimal Sonority Distance seem to hold
- But markedness of s-clusters does not rely on SSP and MD exclusively
- Additional in-depth analysis of inventories required
- Database coming soon to an internet near you at [www.sfu.ca/phono](http://www.sfu.ca/phono)

## Selected References

Barlow, J. 2001. The structure of /s/-sequences: Evidence from a disordered system. *JCL* 28: 291-324.  
Boyd, J. 2006. On the representational status of s-clusters. *San Diego Linguistic Papers* 2: 39-84.  
Clements, G.N. 1990. The role of the sonority cycle in core syllabification. In J. Kingston & M. Beckman, eds., *Papers in Laboratory Phonology 1*, 283-333. Cambridge, MA, CUP.  
Davis, S. 1990. Italian onset structure and the distribution of *il* and *lo*. *Linguistics* 28: 43-55.  
de Lacy, P. 2002. The formal expression of markedness, University of Massachusetts, Amherst.

Maddieson, I. 1984. *Patterns of Sounds*. Cambridge, Cambridge University Press.  
Morelli, F. 1998. Markedness relations and implicational universals in the typology of onset obstruent clusters. *Proceedings of NELS 28*, 107-20. UMass Amherst, GSLA.  
Selkirk, E.O. 1982. The syllable. In H. van der Hulst & N. Smith, eds., *The Structure of Phonological Representations*, 337-83. Dordrecht, Netherlands, Foris.  
Selkirk, E.O. 1984. On the major class features and syllable theory. In M. Aronoff & R. Oerhle, eds., *Language Sound Structure*, 107-136. Cambridge, MA: MIT Press.