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Keywords: Sound Change, Sign Languages, Regularity, Iconicity, Transmission

While research over the past century has introduced some complexity to the neogrammarian assertion that sound laws admit no exception (Labov 1981, Durie & Ross 1996), regular sound change, the key to comparative reconstruction, is widely taken to be a universal characteristic of human language change (Campbell 1998, Salmons 2021). Given that signed languages are human languages, the implicit inference is that they too must have some correlate to regular sound change. But, regular change—i.e., changes to the phonological forms of signs that consistently apply in contexts definable in phonological or phonetic terms—has never been identified in signed languages. As part of a project to identify regular change in signed languages, we have developed a database of basic vocabulary from 13 signed languages that are thought to constitute two sign families. Using this database, we find that many changes across signs in these languages are apparently irregular. In addition to summarizing these findings, here we will survey various social and linguistic factors that are unique to, or that are prominent in, signing communities and their languages and which, we argue, present obstacles to regularity in signed language change.

First, the demographic features of many signing communities likely play a role in signed language change. The vast majority of deaf children (over 90%; Mitchell & Karchmer 2004) are born to hearing, non-signing families; these children are typically not exposed to signed language from birth. Consequently, there may be a relatively low proportion of signers in a signing community who have natively acquired the community's language (Costello et al. 2008; but see Cheng et al. 2021), and the transmission of signed language may depend to a large extent on the presence of institutions, such as deaf schools (Singleton & Meier 2021). If regular change is linked to the type of incremental change that results from child language acquisition (Labov 2007), the relatively low proportion of native signers in some signing communities may affect whether sign change can be regular.

Second, iconic and indexical forms are more prevalent in signed languages than in spoken languages (Perniss et al. 2010). It has been argued that iconic and indexical forms may inhibit regular change in spoken languages (Kaufman 1994). Iconicity and indexicality make salient the connection between a sign's semantics and features of its form; thus, signers may seek to preserve the sign's form-meaning connection, which could block a regular change (Joseph 1987, Malkiel 1994). For example, Frishberg (1975) noted that a number of signs in American Sign Language (ASL), such as signs meaning 'like', 'feel', and 'love', were historically articulated near the heart—perhaps because of their metaphorical connection to the heart as the seat of emotions. In contemporary ASL, these signs are articulated at the center of the chest. However, this recurring change in ASL has not affected the indexical sign meaning 'heart', for which the specific articulation near the heart is indexically motivated.

Finally, signed languages are comparatively young languages; the oldest contemporary languages date to the eighteenth century (Power et al. 2020). Despite their relative youth, some signed languages have undergone numerous changes since the early twentieth century (Frishberg 1975, Supalla & Clark 2015). We argue for maintaining a clear conceptual distinction between changes due to conventionalization processes that affect signs in an emerging lexicon versus changes due to processes that affect fully conventionalized signs. We do not know whether changes to the forms of signs due to language emergence would be expected to exhibit regularity or not.

While the question of whether sign languages display a correlate to regular sound change remains open, given the obstacles to regularity outlined above, all of which appear to affect signed languages to a higher degree than spoken languages, we conclude that caution is in order when it comes to assumptions based on evidence from spoken languages about the role of regularity in signed language change.

## REFERENCES

- Campbell, Lyle. 1998. *Historical linguistics: An introduction*. MIT Press.
- Cheng, Laretta S. P., Danielle Burgess, Natasha Vernooij, Cecilia Solís-Barroso, Ashley McDermott, & Savithry Namboodiripad. 2021. The problematic concept of native speaker in psycholinguistics: Replacing vague and harmful terminology with inclusive and accurate measures. *Frontiers in Psychology* 12. 715843.
- Costello, Brendan, Javier Fernandez, & Alazne Landa. 2008. The non-(existent) native signer: Sign language research in a small deaf community. In R. M. de Quadros (ed.), *Sign Languages: Spinning and unraveling the past, present and future*, 77–94. Editora Arara Azul.
- Durie, Mark & Malcolm Ross (eds.). 1996. *The comparative method reviewed: Regularity and irregularity in sound change*. Oxford University Press.
- Frishberg, Nancy. 1975. Arbitrariness and iconicity: Historical change in American Sign Language. *Language* 51 (3). 696–719.
- Guerra Currie, Anne-Marie P., Richard P. Meier, & Keith Walters. 2004. A crosslinguistic examination of the lexicons of four signed languages. In Richard P. Meier, Kearsy Cormier, & David Quinto-Pozos (eds.), *Modality and structure in signed and spoken language*, 224–236. Cambridge University Press.
- Joseph, Brian D. 1987. On the use of iconic elements in etymological investigation: Some case studies from Greek. *Diachronica* 4 (1-2). 1–26.
- Kaufman, Terrence. 1994. Symbolism and change in the sound system of Huastec. In Leanna Hinton, Johanna Nichols, & John J. Ohala (eds.), *Sound symbolism*, 63–75. Cambridge University Press.
- Labov, William. 1981. Resolving the Neogrammarian controversy. *Language* 57. 267–308.
- Labov, William. 2007. Transmission and diffusion. *Language* 83 (2). 344–387.
- Labov William. 2020. The regularity of regular sound change. *Language* 96. 42–59.
- Malkiel, Yakov. 1994. Regular sound development, phonosymbolic orchestration, disambiguation of homonyms. In Leanna Hinton, Johanna Nichols, & John J. Ohala (eds.), *Sound symbolism*, 207–221. Cambridge University Press.
- Mitchell, Ross E. & Michael A. Karchmer. 2004. Chasing the mythical ten percent: Parental hearing status of deaf and hard of hearing students in the United States. *Sign Language Studies* 4. 138–163.
- Perniss, Pamela, Robin L. Thompson, & Gabriella Vigliocco. 2010. Iconicity as a general property of human language: Evidence from spoken and signed languages. *Frontiers in Psychology* 1. 1–15.
- Power, Justin M., Guido W. Grimm, & Johann Mattis-List. 2020. Evolutionary dynamics in the dispersal of sign languages. *Royal Society Open Science* 7. 1–15.
- Salmons, Joseph. 2021. *Sound change*. Edinburgh University Press.
- Singleton, Jenny L. & Richard P. Meier. 2021. Sign language acquisition in context. In Charlotte Enns, Jonathan Henner, & Lynn McQuarie (eds.), *Discussing bilingualism in deaf children: Essays in honor of Robert Hoffmeister*, 17–34. Routledge.
- Supalla, Ted & Patricia Clark. 2015. *Sign language archeology: Understanding the historical roots of American Sign Language*. Washington, D.C.: Gallaudet University Press.
- van der Hulst, Harry & Els van der Kooij. 2021. Sign language phonology: Theoretical perspectives. In Josep Quer, Roland Pfau, & Annika Herrmann (Eds.), *The Routledge handbook of theoretical and experimental sign language research*, 1–32. Routledge.