The iconicity of cross-linguistic phonesthetics

Speech sounds enable us to produce spoken language through double articulation, but they can also carry iconic associations to specific meanings intrinsically, thereby speeding up linguistic transmission. However, all language users also have preferences for the sounds they hear. These preferences can result from connotations to meanings that one might find unpleasant, as well as from the pure acoustics of the sounds. Famously, J. R. R. Tolkien's constructed language for the elves, *Quenya*, was designed to sound beautiful, whereas the language of the orcs, *Black Speech*, was designed to sound unpleasant. Similarly, the *Klingon* language in Star Trek was constructed to appear dissimilar to existing natural languages, in other words, strange.

In this study, we investigated whether there are universal phonesthetic judgments regarding the sound of languages. We collected 2,125 recordings of 228 languages from 43 language families, each consisting of 5 to 11 speakers. We then asked 820 native speakers of English, Chinese, or Semitic languages to rate how much they liked the sound of these languages. The results showed that recordings of languages perceived as familiar, even when misidentified, and breathy female voices were judged as more pleasant. Overall, there was little consensus among raters regarding which languages sounded more beautiful. However, there was some cross-cultural concordance in phonesthetic judgments among the English, Chinese, and Semitic raters at the group level. Regarding the tested phonetic features, the only preference was for non-tonal languages. Thus, it appears that some population-level phonesthetic preferences exist, but personal preferences and perceived resemblance to other culturally branded beautiful or ugly languages play a significant role in these judgments.

However, these subtle population-level patterns are analogous to iconic patterns on global and diachronic scales (Blasi et al., 2016; Erben Johansson et al., 2020; Joo, 2020; Wichmann et al., 2010) and enable iconicity to be used as a crucial strategy for meaning-making and word formation. Furthermore, associations between speech sounds and various semantic parameters, such as shape, size, and color, are considered iconic (Monaghan & Fletcher, 2019). However, should associations between sounds (or languages) and pleasantness be considered phonesthetic, iconic, or both? Studies have shown that specific speech sounds have been found to elicit higher affective arousal (Aryani et al., 2018, 2020), creating a possible bridge between phonesthetic and iconic associations. Thus, the results of the present study can also be discussed in an iconic context, exploring how phonesthetic associations can relate to iconic associations.

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