What's in a Name?
The effect of sound symbolism on perception of facial attractiveness

Amy Perfors (perfors@mit.edu)
Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology
77 Massachusetts Ave, Rm NE20-388, Cambridge, MA 02139

Introduction

The Saussurean assumption that there is nothing inherent in the relation between a sound pattern and a concept is taken for granted in most of cognitive science. Though the notion that sound-meaning pairings are arbitrary is rarely challenged, there is some evidence indicating that this conjecture may not be wholly true. Sapir (1929) first suggested that cross-linguistically, front and back vowels are robustly associated with specific connotations: front vowels like [i] and [ɪ] are perceived as "smaller" than back vowels like [u]. Other researchers have further explored this idea, documenting that the same association occurs in many languages and cultures (e.g. Ultan 1978; Jakobson 1937). A non-arbitrary sound-meaning relation has also been suggested of some consonants: for instance, Kelly, Leben, and Cohen (2003) suggest that obstruents like [g], [b], and [k] are perceived to be 'hard' and masculine, while sonorants like [l], [n], and [r] are 'soft' and feminine.

Most of these findings, though intriguing, rely on asking subjects what connotations they associate with certain sounds. To date, there is little research that rigorously uses implicit and unconscious measures to study whether sound symbolism is a psychologically real and robust phenomenon. This work does so.

Method and Results

24 photos of men and women paired with names of varying phonology and gender connotation were rated for attractiveness on a 10-point numerical scale on the website *hotornot.com*. Each photo consisted of a frontal shot taken in a naturalistic background; names were saliently located in the upper corner of each photograph. Each photograph was posted multiple times (though never simultaneously) with names that differed systematically in gender connotation, vowel type, and consonant type. As a control, each name was ranked on a 7-point Likert scale by 14 English-speaking subjects based on how much they "liked" it, in general as well as when considered specifically for a male or a female.

Results indicated that phonology played a significant role in perception of facial attractiveness. (see Figure 1). For men, pictures matched with names with front vowels were consistently perceived as more attractive than pictures with back vowels; for women the relation went in the opposite direction (p<0.01). Consonants played a smaller but still significant role, but only for women (p=0.01).
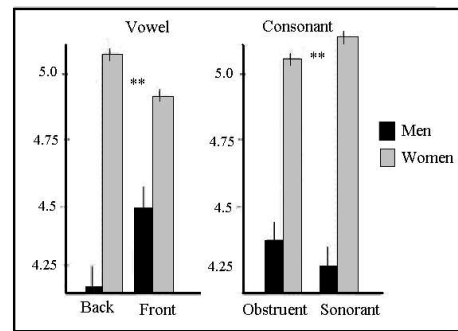

Figure 1: Effect of consonant / vowel type on attractiveness.

Interestingly, names with back vowels were liked less than names with front vowels, but only when the name was considered a guy's name – when the exact same name was considered for a girl, there was no effect of vowel type. (Males: 'back' mean 3.10, 'front' mean 3.59, F=6.52, t=3.627, p<0.001; Females: 'back' mean 2.86, 'front' mean 2.93, F=2.748, t=-0.502, p=0.604). This suggests that although some of the effect of sound symbolism on facial attractiveness may be mediated by how much a name is liked, it cannot be the full story.

Conclusion

This research argues against the Saussurean notion that word-referent associations are completely arbitrary pairings. It suggests that at least under some circumstances, there is a systematic and significant link between some sounds in a language and the semantic associations belonging to words with those sounds.

Acknowledgements

References

Jakobson, R. (1937) *Lectures on sound and meaning.* MIT Press: Cambridge, MA

Kelly, B., Leben, W., & Cohen, R. (2003) The meanings of consonants. *Lexicon Branding, Inc.*

Sapir, E. (1929) A study in experimental symbolism. *Journal of Experimental Psychology,* 12:225-239.

Ultan, R. (1978) Size symbolism. In Greenberg, J. (ed) *Universals of Human Language*, vol. 2. Stanford, CA: Stanford University Press.