Gendered sound symbolism in Urdu names interacts with gender morphology

Introduction A recent turn in sound symbolism research suggests that names exhibit gendered sound symbolism, finding certain sounds, like sonorants, are associated with feminine names, and others with masculine names in English (Slater & Feinman 1985; Barry & Harper 1995; Pitcher et al. 2013) and cross-linguistically (Kang 2021; Ackermann & Zimmer 2021). While some argue this is evidence for universal, synesthetic sound symbolism (e.g. Cutler et al. 1990; Oelkers 2003), others maintain that these sound-meaning associations are conventionalized and language-specific (e.g. Hough 2000; see discussion in Nübling 2009).

Previous research found feminine names in Urdu not to have significantly more sonorants, while finding significantly fewer and heavier syllables in masculine names (Mohsin & Kang 2018).

To account for the confounding effects of feminine suffixes, previous studies have removed gendered suffixes (as in Kang 2021) or treated all final segments separately (as in Ackermann & Zimmer 2021), implicitly assuming that phonological cues for gender behave uniformly across all names. For example, if sonorants are feminine, feminine names both with and without feminine suffixes should have more sonorants than masculine names.

However, while phonological qualities may serve as cues for gender, a feminine suffix is decidedly a stronger one. Morphological gender markers could conceivably eliminate the communicative function of gendered sound symbolism (see Oelkers 2003). This study examines how gendered sound symbolism behaves in Urdu names with and without feminine suffixes.

Methods The 102 most popular boys' names and 101 most popular girls' names were collected from matriculation results in Gujranwala, Pakistan. They were coded for length in SYLLABLES; proportions of LIGHT SYLLABLES, SONORANTS, HIGH VOWELS, FRONT VOWELS, and PALATAL CONSONANTS; GENDER (F or M); and APPARENT MORPHOLOGY, which marks whether a name's ending resembles one of several feminine morphemes present in Urdu names.

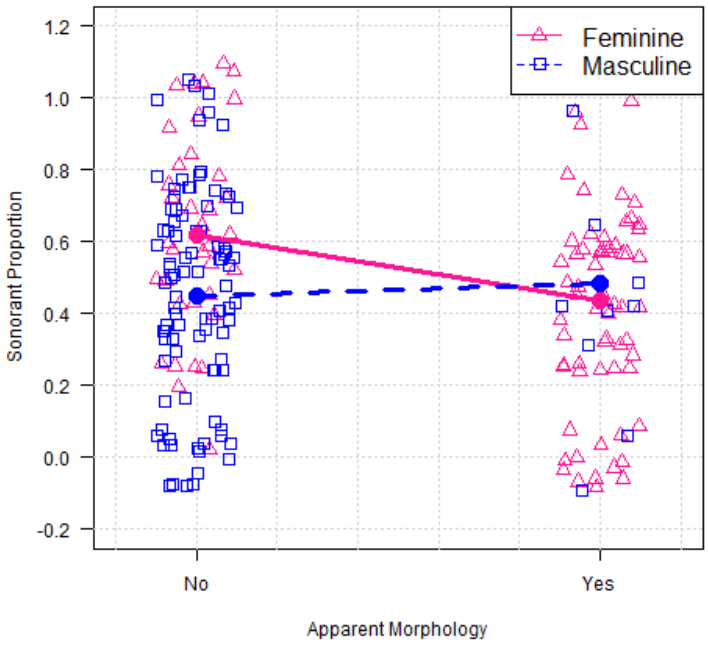
A binary logistic regression model was created in *R*, predicting GENDER from APPARENT MORPHOLOGY, all phonological variables, and their interactions. Insignificant predictors were procedurally eliminated using the Akaike Information Criterion.

Results & Discussion As Figure 1 shows, for names without APPARENT MORPHOLOGY, sonorant proportions are higher for feminine names than masculine names, as predicted. This is not true, however, of names with APPARENT MORPHOLOGY. The binary logistic regression model demonstrated that this is a significant difference ($p < 0.05$).

For names without feminine morphological markers, more sonorants makes a name more likely to be feminine ($p < 0.01$), which significantly differs from names with morphology ($p < 0.05$). A post-hoc chi-squared test shows no significant effect of SONORANTS in names with feminine morphology ($p = 0.664$), matching our prediction that morphology achieves the communicative function of gendered sound symbolism.

Our finding in Urdu names demonstrate that in the debate around universal, synesthetic sound symbolism, meaningful morphological markers present a challenging confound that can obscure active phonological cues, which future research must account for. This opens the door for cross-linguistic and empirical research methods to test the synchronicity and robustness of such results.

Figure 1: Relative average sonorant proportions by presence of morphology and gender.



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