

The Sound Symbolism of Names

David M. Sidhu and Penny M. Pexman 

Department of Psychology, University of Calgary

Abstract

A wealth of research demonstrates that certain language sounds seem to go better with certain kinds of targets (i.e., sound-symbolic associations). The most well-known example is the *maluma-takete effect*, in which nonwords such as *maluma* are judged as good matches for round shapes, whereas nonwords such as *takete* are judged as good matches for sharp shapes. Most of this research involves nonwords, but recent work has shown that sound symbolism has implications for real first names. On the basis of a name's sound, individuals tend to pair the name with particular shapes and indicate that they prefer people with congruent pairings of name sound and face shape. Individuals also associate different kinds of personalities with given names on the basis of the sounds the names contain. Thus, sound symbolism is not limited to nonwords and can emerge even with words that have existing associations. Sound-symbolic associations may also occur with more abstract properties (e.g., personality traits). Thus, this work provides insight about mechanisms underlying sound-symbolic association.

Keywords

sound symbolism, names, bouba-kiki effect, personality, crossmodal correspondences

“What’s in a name? That which we call a rose by any other name would smell as sweet,” opines the eponymous heroine of *Romeo and Juliet* (Shakespeare, 1597/1969; II, ii, 43–44). Juliet’s sentiment is that the name of a thing does not affect the interpretation of its qualities. This is related to the stance that words have arbitrary relationships with their referents. In this view, there is nothing about the word *cat* that makes it a good match for its meaning; it would work just as well to call cats *dogs*. As Ferdinand de Saussure (1916) argued, because words have entirely arbitrary relationships with their referents, we have no solid ground on which to discuss the appropriateness of one word versus another for a given meaning.

Nevertheless, people seem to intuitively sense that some language sounds (i.e., *phonemes*, the smallest units of sound in language) are better suited to certain kinds of things. This hints at the existence of a phenomenon known as *sound symbolism*: the finding that certain phonemes seem inherently better suited to go along with certain kinds of qualities. For instance, if shown the shapes in Figure 1 and asked which is the *maluma* and which the *takete*, approximately 90% of people (Styles & Gawne, 2017) find *maluma* a better match for the rounded shape and *takete* a better match for the sharp shape (the *maluma-takete effect*; Köhler, 1929).

The *maluma-takete effect* extends beyond these two nonwords. In general, consonant phonemes such as /l/, /m/, and /n/ (i.e., sonorants) as well as /b/, /d/, and /g/ (i.e., voiced stops) seem to be associated with round shapes, whereas /p/, /t/, and /k/ (i.e., voiceless stops) seem to be associated with sharp shapes. This phenomenon has been demonstrated across ages (e.g., Pejovic & Molnar, 2017), languages, and cultures (e.g., Bremner et al., 2013). *Maluma-takete* is just one of several demonstrated sound-symbolic effects (see Lockwood & Dingemans, 2015). Another is the *mil-mal effect*, an association between high-front vowels, such as /i/ (as in *heed*), and small shapes and between low-back vowels, such as /α/ (as in *hawed*), and large shapes. Work on sound symbolism has recently increased in popularity, although, as we have noted previously (Sidhu & Pexman, 2018), there has been less progress on identifying its underlying mechanism.

While the majority of sound-symbolism studies have used nonwords as stimuli, it is important to consider whether the sound-symbolic associations of phonemes

Corresponding Author:

Penny M. Pexman, University of Calgary, Department of Psychology,
 2500 University Dr. NW, Calgary, Alberta T2N 1N4 Canada
 E-mail: pexman@ucalgary.ca

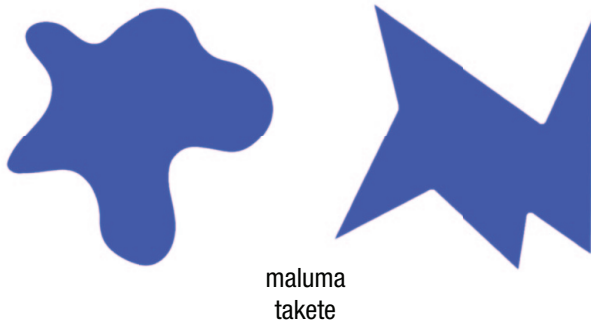


Fig. 1. An illustration of the kinds of shapes studied in the *maluma-takete effect*, which refers to individuals' tendency to judge the nonword *maluma* as a better match for the rounded shape on the left and the nonword *takete* as a better match for the sharp shape on the right.

can also have an effect when phonemes appear in real words to test the relevance of sound symbolism to real language processing and to begin to address underlying theoretical questions. There are reasons to expect that sound symbolism will have no effect, or a smaller effect, with real words. For instance, some models of word processing suggest that reading a nonword involves a greater amount of phonological processing than reading a real word (e.g., Coltheart, Rastle, Perry, Langdon, & Ziegler, 2001). One might expect that this allows phonological sound symbolism to play a larger role in the processing of nonwords than in the processing of real words. In addition, the semantics activated while processing a real word could interfere with the perceptual or semantic features that become activated via sound symbolism. This could also lead to the prediction that sound-symbolic effects will be attenuated for real words. However, this is a difficult prediction to test, as typical sound-symbolism matching tasks are problematic with existing words. For example, it would be difficult to judge which of the shapes in Figure 1 is a *mole* and which is a *tick*. As an intermediary step, researchers have explored this question using existing first names, which are assumed to be read via the lexical route (Yasuda, Beckmann, & Nakamura, 2000). Although names do not have a defined meaning, it has been proposed that they activate identity-specific semantics and, in turn, general semantics (Valentine, Brennen, & Brédart, 1996). Thus, we can use them to examine whether the sound-symbolic associations of phonemes can have an effect even when words have associated information.

In addition, other features of names make them ideal for the study of sound symbolism and its theoretical basis. Names can be associated with both concrete (e.g., appearance) and abstract (e.g., personality) information, allowing the exploration of a variety of associations. Although the majority of research on sound symbolism

has focused on perceptual features, recent work has suggested that phonemes may also be associated with higher-order abstract properties (see Auracher, 2017; Tzeng, Nygaard, & Namy, 2017). Names provide a means to examine the role of such properties in sound-symbolic associations.

Name–Shape Sound Symbolism

In a recent study, we explored whether the *maluma-takete effect* emerged with real names. We selected first names that contained either round-sounding (e.g., *Molly* or *Bob*) or sharp-sounding (e.g., *Kate* or *Kirk*) consonants (Sidhu & Pexman, 2015). These names were presented to participants one at a time, along with a pair of silhouettes: one with a rounded outline and one with a sharp outline (see Fig. 2). The participants' task was to choose the silhouette that the name best suited. We found that participants were more likely to pair names containing round-sounding consonants with the round-edged silhouette and sharp-sounding consonants with the sharp-edged silhouette. Thus, the sound-symbolic associations of phonemes can have an effect even in the context of words with associated information. We called this the *Bob-Kirk effect*. Note, however, that congruent pairings were observed only on roughly 60% of trials, a lower percentage than is typically observed with nonwords; for instance, in another study (Sidhu & Pexman, 2017), we found congruent pairings on roughly 75% of trials using a similar paradigm. This suggests an attenuation of sound symbolism when real words are used.

In a follow-up study, we demonstrated that this effect extended to the sounds in French names, which influenced judgments made by both French- and English-speaking



Fig. 2. An illustration of the *Bob-Kirk effect*. When shown silhouettes such as these, participants were more likely to associate the one on the left with round-sounding names, such as *Molly* or *Bob*, and the one on the right with sharp-sounding names, such as *Kate* or *Kirk* (Sidhu & Pexman, 2015).

populations (Sidhu, Pexman, & Saint-Aubin, 2016). We further explored more precisely which quality of the names participants were pairing with the silhouettes: The effect persisted with either the auditory or the visual presentation of the names and did not depend on the visual appearance of the letters because it emerged with both a curvy and a right-angled font. These findings argue against the alternate explanation that sound-symbolic effects depend mostly on the shapes of letters, such as a curvy “b” and jagged “k” (Cuskley, Simner, & Kirby, 2017), and thus contribute to our broader understanding of sound symbolism.

Other research has demonstrated that the Bob-Kirk effect is not limited to silhouettes and that it also applies to face shape. Barton and Halberstadt (2018) examined cartoon and real faces that were categorized as either round or angular. Across several studies, participants rated names containing round-sounding vowels as more fitting for round faces and sharp-sounding vowels as more fitting for angular faces. In addition, individuals actually preferred faces paired with congruent sound-symbolic names. A final experiment provided some preliminary evidence that this congruence might also influence real-world judgments. Barton and Halberstadt examined the results of U.S. Senate elections from 2000 to 2008 and used participant ratings to determine a face–name congruence score for each candidate. Candidates with congruent names obtained a higher percentage of the vote.

Importantly, evidence from one study suggests that not all sound-symbolic associations will generalize to names. We recently presented participants with names that had either large-sounding vowels (e.g., *Omar* and *Hope*) or small-sounding vowels (e.g., *Rick* and *Tina*; Sidhu & Pexman, 2019). For each name, participants were asked which of two alien silhouettes (one large and one small) the name best fit. We found no effect of name phonology but a strong effect of gender. Our interpretation was that associated information (i.e., gender) was a strong cue to size and thus precluded effects of phonology. This is further evidence of existing information attenuating sound symbolism. This attenuation may depend on the relevance of associated information to the decision at hand. There are also likely to be times when associated information overrides phonology altogether (e.g., a name such as *Adolf* that is tied to an infamous exemplar).

Name–Personality Sound Symbolism

There is also evidence that the sound of a name can be associated with more abstract qualities, in particular, with personality traits. Note that many descriptions of the shapes associated with *maluma* and *takete* can be

used metaphorically as descriptions of personality (e.g., soft, sharp). We examined whether round- versus sharp-sounding names would be associated with metaphorically round and sharp personality traits (Sidhu & Pexman, 2015). We first asked participants to generate personality traits to describe someone with either a “round and curvy” personality or a “sharp and spiky” personality and then chose the most commonly generated traits. The round and curvy personality elicited traits such as *easygoing* and *friendly*, whereas the sharp and spiky personality elicited traits such as *determined* and *rigid*. A separate group of participants was then shown a pair of names, one with round-sounding consonants and one with sharp-sounding consonants, along with a single personality trait. We asked these participants to imagine these were names of people they had never met and to judge—on the basis of the names—who would be more likely to possess the presented trait. Participants thought that round-sounding names were better suited to people who possess traits indicative of a round and curvy personality and that sharp-sounding names were better suited to people who possess traits indicative of a sharp and spiky personality.

These results add to a growing literature suggesting that phonemes can be associated with higher-order abstract properties (Auracher, 2017; Tzeng et al., 2017). We have shown not only that phonemes are associated with abstract personality traits but also that associated traits clustered around abstract or metaphorical properties of a “round personality” and a “sharp personality.” This provides clues about a potential mechanism underlying sound symbolism, namely that phonemes are associated with properties sharing some higher-order feature (Sidhu & Pexman, 2018).

Sound Symbolism in Naming Choices

The popular names of today can be traced back to a variety of origins (e.g., words for occupations or objects). A large amount of research on the frequency distribution of names has identified several systematic trends (e.g., Galbi, 2002; Li, 2012). Sound symbolism may play a role in some of these, for instance, in the frequency with which phonemes appear in male versus female names. Pitcher, Mesoudi, and McElligott (2013) found that female names were more likely to contain vowels associated with small things and male names were more likely to contain vowels associated with large things. They theorized that parents might be drawn to names with associations that are seen as desirable within a society for individuals of a given gender. Indeed, Bruning, Polinko, Zerbst, and Buckingham (2000) found that participants rated job success as more

likely for males with names rated as sounding more masculine and more likely for females with names rated as sounding more feminine.

There is also evidence that the naming of fictional characters might be influenced by sound symbolism, perhaps reflecting authors' efforts to create characters with congruent names. For instance, Kawahara, Noto, and Kumagai (2018) found that the number of voiced stops (sounds symbolically associated with large sizes; Newman, 1933) in Pokémon names was positively related to the size, weight, and strength of the characters. Other researchers have discussed instances of sound symbolism in the naming of characters in J. R. R. Tolkien's *The Lord of the Rings*. For instance, Smith (2006) notes how well the sound of the name *Tom Bombadil* fits its "jolly, rumbustious owner" (p. 5). Given associations between round-sounding names and traits such as easygoing and friendly (Sidhu & Pexman, 2015), one might speculate that this appropriateness stems from the sonorants and voiced stops in the name.

Future Directions

In the existing research on name sound symbolism, participants have very little basis for judgments except the names presented. There is a need for research examining whether the effects of sound symbolism demonstrated in the lab translate to more real-world scenarios. Such studies could begin with situations in which individuals have only a little information beyond a person's name, as in online communication or resume evaluation. Indeed, Maglio and Feder (2017) found that after reading a vignette about eating at a restaurant, participants said that they would provide a larger tip to waiters who had a name with a front versus back vowel. It was argued that the association of front vowels with smallness created a sense of "closeness" between the participant and the fictional waiter.

Future research should also examine the generalizability of name sound symbolism. One might take a "megastudy" approach (e.g., Westbury, Hollis, Sidhu, & Pexman, 2018) and examine a large set of names that vary freely on numerous phonological dimensions. Previous work has shown that sound symbolism with nonwords can be a graded effect, depending on the proportion of sound-symbolic phonemes present (e.g., Thompson & Estes, 2011). Few names are entirely round or sharp sounding (e.g., *Mike* has both round- and sharp-sounding consonants), and so they provide a test bed for examining the effects of competing sound-symbolic and semantic cues. In addition, certain parts of a name may carry more weight (e.g., the diminutive /i/ at a name's end may be more important than an /i/ at the beginning). Finally, it would be interesting

to examine how different sound-symbolic effects coexist in a single name.

Conclusion

The maluma-takete effect emerges in real words when names are associated with different shapes on the basis of the phonemes they contain. However, there are important differences in how sound symbolism operates in existing words and in nonwords. In names, existing information can attenuate the effects of sound symbolism. In addition, names are associated with abstract personality traits sharing a metaphorical property, suggesting a role for higher-order properties in sound symbolism. Thus, name sound symbolism has proven to be a fruitful avenue by which to understand the phenomenon of sound symbolism, with the potential for more discoveries in the future. It seems that there is indeed much in a name; it is possible that if *Rose* were to go by another name, she may not seem as sweet.


Recommended Reading

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Action Editor

Randall W. Engle served as action editor for this article.

ORCID iD

Penny M. Pexman  <https://orcid.org/0000-0001-7130-0973>

Declaration of Conflicting Interests

The author(s) declared that there were no conflicts of interest with respect to the authorship or the publication of this article.

Funding

This work was supported by the Natural Sciences and Engineering Research Council of Canada through a graduate scholarship to D. M. Sidhu and a discovery grant to P. M. Pexman and by Alberta Innovates: Health Solutions in the form of a graduate scholarship to D. M. Sidhu.

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