

Creating effective brand names with sound symbolic mappings

Zora Trninić

University of Novi Sad, Faculty of Economics in Subotica, Subotica, Serbia

<https://orcid.org/0000-0002-2857-5207>

Abstract

Background: The present study was designed to investigate the use of sound symbolic mappings in fictitious brand names. Sound symbolic mappings refer to the existence of a nonarbitrary relationship between individual sounds and associations of different attributes and concepts. Given that sounds have inherent meaning in them, brand names in line with the established symbolic effects could communicate tailored messages that are congruent with consumer expectations of a product.

Purpose: As perceived congruency between a product and its label is highly desirable in marketing, the study sets out to test the noted effects in brand names. It was aimed to confirm the strength of sound symbolic effects through greater preference for names with a symbolic fit with the product.

Study design/methodology/approach: Two product categories were chosen, and a set of fictitious brand names were created. The names differed only on the sounds purported to convey targeted symbolic associations of salient product characteristics. The participants were presented with a forced choice task consisting of paired name samples and a stated product category for each pair.

Finding/conclusions: The results confirmed the presence of sound symbolic effects as participants favoured the names with embedded symbolism. This leads to a conclusion that sound symbolism may be used to affect consumer choices based on brand name preference.

Limitations/future research: Even though the study included only two products and used forced choice tasks limited on name pairs, the findings clearly imply the potential of sound symbolic mappings in creating efficient brand names. Broadening the research to other products and the service sector would surely deliver intriguing results.

Keywords

Sound symbolism, linguistic iconicity, marketing, brand names, product-name congruency

Introduction

Creating a new brand or product name is an integral part of an elaborate set of marketing activities surrounding a new launch. It is a complex task that needs to be addressed with much consideration as choosing the “right” name may have a substantial effect on marketing related variables of recall, preference, and inference. (Preziosi & Coane, 2017; Lowrey, Shrum & Dubitsky, 2003). Any brand name is a form of linguistically coded marketing communication and as such is typically expected to deliver a twofold result: to carry on some salient information about the product and to

trigger recall (Preziosi & Coane, 2017). A linguistic field of phonetic symbolism appears to offer some practical guidelines to marketers when creating a name that would affect consumers in an intended way. The basic assumption that underlies the research within phonetic symbolism is that not only words, but mere sounds may convey meaning. Such a proposal breaks away from the traditional linguistic account that morphemes are the smallest meaningful units of language, and that individual sounds, even though they distinguish meaning in language, do not have a semantic component themselves. The idea of nonarbitrary relationship between sound and meaning dates all the way back

to Plato, and the debate on its validity has continued to modern times (Lowrey & Shrum, 2007). Although the proposal of a systematic sound-meaning relationship has been considered controversial at times, the accumulated body of scientific research has reported results that strongly support the theory (e.g., Sapir, 1929; Newman, 1933; French, 1977; Klink, 2000). Regarding marketers' practice, such linguistic insights could present a useful resource to consider when naming a brand. The intersection of linguistic and marketing research has already delivered intriguing results suggesting that brand names created in line with the established effects of sound symbolism may affect brand perception and liking to a degree that surpasses coincidence (Klink, 2000; Yorkston & Menon, 2004; Lowrey & Shrum, 2007).

1. Phonetic symbolism

Proponents of phonetic symbolism argue that distinct units of sound, i.e. phonemes, have inherent meaning, in the sense that individual sounds have been brought in connection with a number of different sensory perceptions (e.g., Newman, 1933; French, 1977). As research in the field has shown, this applies to both vowel and consonant sounds. Most notably, scientifically established associations conveyed by different sounds are those relating to the perceived size, shape, colour, and gender. However, these categories should be understood as broad dimensions since the respective perceptions typically lean toward one of the poles on an individual dimension. As a result, size related perceptions come down to associations of smaller or larger objects; shapes tend to divide into round or more angular objects; colours should be interpreted in terms of relative brightness or darkness; and gender as perceptions relating to more feminine or masculine associations.

An issue that needs to be addressed at this point is that although there have been attempts to provide scientific support of phonetic symbolism effects in words with already established meanings (e.g., Jespersen, 1922; Brown, 1958; Johnson, 1967; Winter & Perlman, 2021), uniformity of the effects across languages has not been confirmed. On the other hand, investigations based on participant responses to pronounceable letter strings with no actual meaning have continually reported results favouring the noted effects (e.g., Sapir, 1929; Newman, 1933; Folkins & Lenrow, 1966; Klink, 2000; Thompson & Estes, 2011; Preziosi & Coane,

2017). The reason for this could be that the use of nonwords leads the participants to rely on cues away from the confounds of word-meaning pairings of natural words. As an alternative, they base their inferences on physical properties of phonemes, typically from the articulatory (how they are made) and acoustic (how they are transmitted) perspective. These, for example, include the size of the oral cavity used in pronunciation or the frequency of vocalic resonance (Newman, 1933; Thompson & Estes, 2011).

Even though direct inferences made from individual phonemes are relatively vague perceptions, they evoke further entailments based on experience with the physical-social world. Accordingly, sounds that indicate smallness have also been identified to create associations of lesser weight, speed, lighter colours, thinness, weakness, coldness, and femininity (Klink, 2000).

Regarding the actual phonemes and their purported meanings, high front vowels such as /i/ or /e/, which are articulated with high position of the tongue within the mouth, high frequency of vocalic resonance as measured acoustically, and decreased size of the oral cavity during pronunciation, have been repeatedly associated with qualities of smallness, light weight, sharpness, speed, psychological closeness, and femininity. On the other hand, back vowels such as /a/, /o/, and /u/, which are articulated with low position of the tongue, lower pitch, and greater size of the oral cavity during pronunciation, have been brought in connection with concepts that are slow, dull, large, psychologically distant, and more masculine (Klink, 2000; Maglio, Rabaglia, Feder, Krehm & Trope, 2014; Winter & Perlman, 2021).

In the same vein, sound symbolic perceptions of shape, based on the shape of the mouth during production, suggest that 'large-sounding' vowels are also those associated with round shapes whereas 'small-sounding' vowels are typically linked to more angular shapes (Knoeferle, Li, Maggioni & Spence, 2017).

Another sound-meaning mapping reported on is that of dark versus bright symbolism (Newman, 1933; Klink, 2003; Hirata, Ukita & Kita, 2011). The results read that the vowels conveying associations of largeness also relate to the symbolic judgement of darkness, and that the vowels indicating smallness are also associated with lighter colours. The established pattern appears to be based on articulatory and frequency criteria and that the factor of size-of-mouth opening, relevant

on the size dimension, does not play a role in this case (Newman, 1933).

Consonants have been reported to produce similar effects. With regard to size judgements, dental consonants, which are articulated with the tongue against the upper teeth such as /t/, /d/ or /n/, seem to 'sound' smaller than labials, in which lips are the active articulator such as /p/, /b/ or /m/, which, in turn, are generally considered to have smaller referents than velar consonants, made with the back of the tongue against the soft palate such as /k/ or /g/ (Newman, 1933). Similarly, voiced consonants, those produced with the vibration of the vocal cords and hence having more acoustic body, are associated with larger objects, and their voiceless counterparts are typically perceived to have smaller referents (Monaghan & Fletcher, 2019). The quality of voicing has also proven to figure in relative judgements on the soft versus harsh dimension where the presence of vocal cord vibration is perceived as relating to harshness whereas the absence of it is considered to relate to the attribute of softness (Pathak, Calvert & Lim, 2020).

In scaling the relative darkness of consonants, the pattern appears to be reverse to the one found in vowels. The sequence from bright to dark this time starts with palatal consonants, which are large and bright, continues with labials, and lands on dentals, which are small but dark (Newman, 1933). The phonetic quality of voicing has also proven to factor in bright-to-dark judgements, where voiced consonants are perceived as darker than voiceless (Newman, 1933; Klink, 2000). Also, apart from being perceived as having smaller referents and of a lighter colour, voiceless consonants are generally considered to convey the attributes of sharpness and lesser potency (Lowrey & Shrum, 2007).

In terms of shape, voiceless plosives, sounds produced with a complete closure made by the articulators before the airstream is released from the mouth, and without vibration of the vocal cords as in /p/, /t/, and /k/, are frequently associated with angular shapes (Maurer, Pathman & Mondloch, 2006; Aveyard, 2012). In the same line, voiced bilabials /b/ and /m/ are commonly perceived to have round referents as well as certain other voiced consonants such as a nasal /n/ and a liquid /l/ (Maurer, Pathman & Mondloch, 2006; Nielsen & Rendall, 2013; Preziosi & Coane, 2017; Westbury, Hollis, Sidhu & Pexman, 2018). Even though vowels have also been identified to affect symbolic judgements of shape, the effect seems to be stronger for consonants (Nielsen & Rendall, 2013).

Along the research line of sharp versus round effects, it has been noted that sharp sounds are also associated with masculinity, while round sounds carry the connotations of femininity (Sidhu & Pexman, 2015; Monaghan & Fletcher, 2019).

Research in the field has also included the comparison of symbolic effects of plosives and fricatives. Fricatives are produced with only partial occlusion within the mouth, which causes friction of the air stream against the articulators and makes the release of the air from the mouth less sudden than with stop sounds. It has been shown that fricative sounds, such as /f/, /v/ or /s/, are symbolically judged as smaller, lighter, and faster than plosives (Klink, 2000).

2. Sound symbolic associations and brand names

Investigations on the utility of sound symbolism in brand naming have been an appealing research avenue for marketers due to obvious reasons. Given that individual sounds can convey meaning, brand names may be intentionally created to maximize the fit between a product's most salient characteristic(s) and its label. The noted congruence between product attributes and product name is desirable as it is generally considered to enhance brand perception and preference through differentiation and memorability. In other words, it may positively affect overall brand success (Preziosi & Coane, 2017; Jun & Lee, 2020).

As already noted, sound-meaning mappings apply best in artificial words where there is no interplay between a pre-existing semantic representation and an intended effect (Lowrey & Shrum, 2007). Therefore, most studies focusing on sound symbolic effects in brand names use artificial words as stimuli. A related important benefit of purposefully made-up words is that, due to their uniqueness, they may lead to stronger brand-name associations and better recall (Preziosi & Coane, 2017).

Research on product-name congruence based on phonetic symbolism offers other promising findings of practical interest to marketers. It has been shown that brand names with embedded sound symbolism are liked better and are positioned better in consumer minds (Klink, 2001; Yorkston & Menon, 2004). The noted effects in brand names have also been tested regarding the potential of certain vowels (front versus back), and consonants (plosives versus fricatives) to communicate different product characteristics. The results indicate that symbolic effects may hold for

a whole array of product attributes such as smallness, lightness (both relative to darkness and heaviness), mildness, thinness, bitterness, softness, speed, coldness, femininity, friendliness, weakness, prettiness, and sharpness (Klink, 2000; Jun & Lee, 2020).

Similar marketing related investigations have manipulated the symbolic effect of gender and brand name responses, probing into the possibility of directing phonetic symbolism toward target marketing (Klink, 2009; Wu, Klink & Guo, 2013). Findings of these studies are suggestive of women responding more favourably to brand names containing front vowels and men having more favourable responses to names with back vowels (Klink, 2009). The same variable was shown to factor in building brand personality when gender is considered a desirable element of the construct (Wu, Klink & Guo, 2013). The effect was seen in brand name preference when the name was created in congruency with the brand's targeted gender. Further manipulations of the gender dimension and its stereotypical extensions are seen in studies reporting that phonetic symbolism effects of back vowels may be used to create a *ruggedness* brand personality, and *sophistication* brand personality with front vowels in brand names (Klink & Athaide, 2012).

3. Methods

The present study was designed to test brand name preference based on sound symbolic effects. It was aimed to check for the effect of product-name congruency and gender-name congruency in brand names. For the purpose of the study, two types of products were chosen: body wash and razors. The reason for this choice of products was that they can be easily divided along the round versus sharp dimension according to their salient attributes. With relevance to the same dimension, research suggests that these polar adjectives are also typically brought in connection with other sensory perceptions, in the sense that sharp sounds are also perceived as hard and those that are round sounding are generally recognized as soft sounds (Aveyard, 2012). So, it was assumed that body wash would be associated with round and soft qualities and razors with sharp and hard qualities. Another reason that led the product selection was that neither of the items necessarily needs to be labelled as gender exclusive as they are typically used by both genders in a similar way and for similar reasons. As such, they may be considered

gender neutral and an adequate option to test the effect of gender congruency in brand names.

Study participants were 119 students (54 male and 65 female) at the Faculty of Economics in Subotica. They were introduced into the study under the scenario that a company is preparing a launch and that they are in the process of deciding on the names for two products. For each product, study participants were given three sets of fictitious brand names with each set consisting of two names. The task was to choose one name in each set they found more appropriate for the product. In the first pair of names to choose from, only the product was stated with no additional description, and in the second and third pair a description was added which read "specifically designed for you gender". For results calculation purposes, each participant was told to mark their gender.

Six fictitious names were created to test the targeted effects. In the first pair, for both products the options were *kutu* and *mubu*. The pair was composed to test the effect of product congruency. Accordingly, the consonants included in the first pair were either those associated with sharp (/k/ and /t/) or round shapes (/m/ and /b/). As the effects on this dimension are considered stronger for consonants, the vowel /u/ was decided on as it is not identified to figure in relative judgements of gender. Based on previous research, it was expected that the frequency of *kutu* would be higher for razors and that *mubu* would be a more favourable option for body wash with both genders. Two more pairs of names, a different pair for each product category, were made to test the additional effect of gender congruency.

For body wash, the naming options were *mebe* and *maba*. Both nonwords contained round sounding consonants /m/ and /b/ to ensure product congruency, and the vowels were chosen according to their symbolic associations of femininity (front vowel /e/) and masculinity (back vowel /a/). In previous studies, the most typical conveyers of female versus male relative judgements were the vowels /i/ and /o/ respectively, but to circumvent the possible perception of /i/ as a sharp and /o/ as a round sound, other front and back vowels (/e/ and /a/) were chosen instead. It was expected that females would favour the name with a front vowel and males the name with a back vowel.

For razors, product name options were *teke* and *taka*. This time, the conveyers of product congruency were sharp consonants /t/ and /k/ and the vowels /e/ and /a/ were chosen for the same reason as in body wash names. It was expected that

female participants would respond more favourably to the name with the vowel /e/ and males to the name containing the vowel /a/.

To calculate the results and compare them with the expectations listed above descriptive statistics was used to show proportions of participant choices; Cronbach’s alpha was used to check for internal consistency; χ^2 (chi-square) test was used to investigate difference between proportions (see more: Black, 2012); and for the implementation of χ^2 (chi-square) test with significance level of 0.05, statistical software IBM SPSS version 23 was used (see more: Davis, 2013).

4. Results

The study was designed to test brand name preference based on phonetic symbolism at two levels. The first step was to detect potential brand name preference depending on the perceived congruency between product characteristics and its name. Figure 1 shows descriptive statistics results relating to participant brand name preference depending on product category.

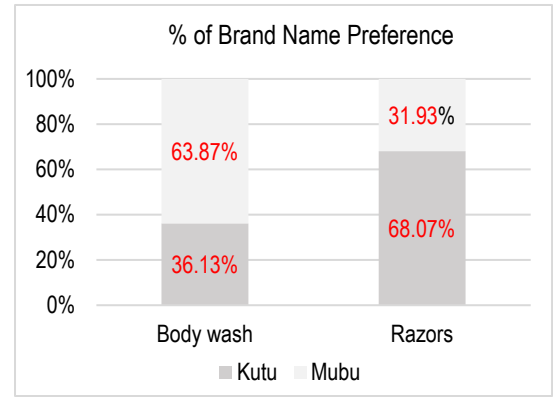


Figure 1 sharp vs round consonants for body wash and razors
Source: the author’s illustration

As can be seen in Figure 1, for both product categories, the name with embedded symbolism was preferred. The option with sharp sounding consonants /k/ and /t/ was a more favourable name for razors, and round sounding consonants /m/ and /b/ were the preferred option for body wash.

The result of Cronbach’s alpha was 0,780, which is a high value for alpha and does not imply that the measure is unidimensional.

To check for the statistical relevance of the obtained data, χ^2 (chi-square) test was applied. As expected, the results implicate that the effect of phonetic symbolism is statistically significant ($p < 0.05$) as shown in Table 1.

Table 1 Results of χ^2 (chi-square) for consonant-based preference

	Value	Df	Asymptotic Significance (2-sided) <i>p</i>	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	24.31	1	.000		
Continuity Correct.	23.04	1	.000		
Likelihood Ratio	24.74	1	.000		
Fisher's Exact Test				.000	.000

Source: the author’s calculation

In the second phase of the research, the sound symbolic effect of gender was aimed at. To test the intended effect, for each product category the consonants from the first phase were kept, to ensure product congruency, and vowels were manipulated to check for symbolic associations of femininity (the vowel /e/) and masculinity (the vowel /a/). To make the participants take a gendered perspective on the choice, a product description was added: ‘specifically designed for your gender’. Descriptive statistics for participant choices for a body wash name is given in Figure 2.

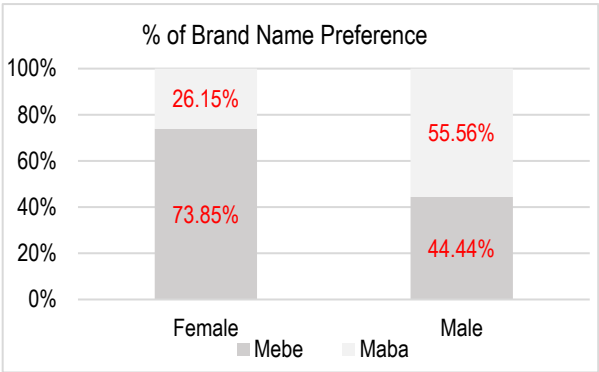


Figure 2 front vs back vowels for gender targeting body wash
Source: the author’s illustration

Research data presented in Figure 2 suggest that names of products that target a specific gender are preferred if there is a perceived gender congruency embedded. As the results show, both males and females opted for a body wash name that contained the vowel associated with their own gender more often than when the vowel conveyed connotations of the opposite gender. Interestingly, in the case of male participants, the choice of a body wash name with the gender congruent vowel was not as frequent as was the case in the group of females. A possible explanation for this could be that the

product category of body wash may be associated with attributes similar to those of stereotypical femininity, such as softness and tenderness. This would mean that some of the male choices were once again guided by product expectations, i.e. product congruency, in their relative symbolic judgements of the vowels included in brand names.

When Cronbach's alpha was used for this set, the obtained high value result (0.885) does not imply a unidimensional measure.

Statistical significance of the data was confirmed by χ^2 (chi-square) test, the results of which are given in Table 2. As suggested by the results, sound symbolic effects of gender in brand names may significantly affect brand name preference.

Table 2 Results of χ^2 (chi-square) for gendered vowel-based preference in body wash names

	Value	Df	Asymptotic Significance (2-sided) p	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10.67	1	.001		
Continuity Correct.	9.47	1	.002		
Likelihood Ratio	10.78	1	.001		
Fisher's Exact Test				.001	.001

Source: the author's calculation

The same approach in data collection was taken in the case of razors, the consonants symbolically suggestive of sharpness, /k/ and /t/, were retained while a front vowel /e/, and a back vowel /a/ were meant to symbolically signal gender. The additional description was used again. Descriptive statistics for this product category is given in Figure 3.

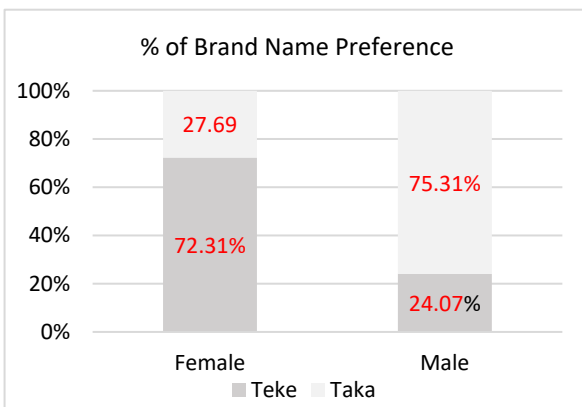


Figure 3 front vs back vowels for gender-targeting razors
Source: the author's illustration

Results given in Figure 3 imply that the participants favoured the product name containing the vowel that conveys sound symbolic congruency with their own gender. Female participants preferred the name with the front vowel /e/ and the males' preferred choice was the name with the back vowel /a/.

After Cronbach alpha was applied, another high value result (0,776) suggests that the measure was not unidimensional.

The results were once again checked for statistical validity by the means of χ^2 (chi-square) test. The results are given in Table 3 and are indicative of statistical significance with $p < 0.05$.

Table 3 Results of χ^2 (chi-square) for gendered vowel-based preference in razor names

	Value	df	Asymptotic Significance (2-sided) p	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	27.45	1	.000		
Continuity Correct.	25.55	1	.000		
Likelihood Ratio	28.64	1	.000		
Fisher's Exact Test				.000	.000

Source: the author's calculation

5. Discussion

The results calculated from the research data confirmed the presence of the effects of phonetic symbolism at all levels of the analysis. It may be assumed that the perceptions of congruency between salient product characteristics and sound symbolic meanings resulted in general preference for the names created in line with the established symbolic mappings. In the first part of the experiment, this was achieved using sharp sounding consonants /k/ and /t/ in product names for razors and round sounding consonants /b/ and /m/ in the names for body wash. A significant difference in proportion of participant choices between names with, and without embedded sound symbolism supports the use of symbolic effects on sharp versus round dimension to achieve product-name congruency and hence brand name preference. Similar results were obtained when gender was introduced as a prominent product attribute. Manipulation of vowels and their symbolic associations was used to lay the ground for the relative judgements of gender. The results imply that, for both products, the front vowel /e/

was perceived as congruent with the targeted female market segment, and the back vowel /a/ was perceived as congruent with the targeted male market segment. It may be stated that the congruence between the sound symbolic associations embedded in the preferred product names and the explicitly stated product gender was a significant factor in participant choices.

Conclusion

The study was conducted with an aim to test the purported effects of phonetic symbolism in brand names. The noted effects were investigated from the aspect of congruency between a brand name and product physical characteristics on the one hand, and brand name congruency with the product target gender on the other. The results confirm the presence of symbolic associations on both dimensions and their ability to guide consumer choices. Findings of this study are in line with other investigations of a similar design that used different products and different fictitious labels. A considerable interest in this line of research has been provoked by its potential for practical application. Provided that the choice of individual sounds may provoke symbolic associations of a whole range of physical attributes and abstract concepts, phonetic symbolism could be used as a basis for creation of effective brand names that affect brand perception, brand attitudes, and brand liking (Wu, Klink & Guo, 2013; Lowrey & Shrum, 2007). Given the magnitude of the mentioned variables, the possibilities of sound meaning mappings seem too important to ignore.

References

- Aveyard, M. E. (2012). Some consonants sound curvy: effects of sound symbolism on object recognition. *Memory & Cognition*, 40, 83-92. <https://doi.org/10.3758/s13421-011-0139-3>
- Brown, R. & Nutall, R. (1959). Method in phonetic symbolism experiments. *Journal of Abnormal and Social Psychology*, 59(3), 441-455. <https://doi.org/10.1037/h0045274>
- Folkins, C. & Lenrow, P. (1966). An investigation of the expressive values of graphemes. *The Psychological Record*, 16, 193-200. <https://doi.org/10.1007/BF03393659>
- French, P. L. (1977). Toward an explanation of phonetic symbolism. *Word*, 28(3), 305-322. <https://doi.org/10.1080/00437956.1977.11435647>
- Hirata, S. Ukita, J. & Kita, S. (2011). Implicit phonetic symbolism in voicing of consonants and visual lightness using Garner's speeded classification task. *Perceptual and Motor Skills*, 113(3):929-940. <https://doi.org/10.2466/15.21.28.PMS.113.6.929-940>
- Jespersen, O. (1922). Language: its nature, development, and origin. London: Allen & Unwin.
- Jun, Y., & Lee, H. (2020). Multisensory congruence in brand identity: evidence from the global automotive market. *Archives of Design Research*, 33(4), 19-41. <https://doi.org/10.15187/adr.2020.11.33.4.19>
- Klink, R. (2000). Creating brand names with meaning: the use of sound symbolism. *Marketing Letters* 11, 5-20. <https://doi.org/10.1023/A:1008184423824>
- Klink, R. (2001). Creating meaningful new brand names: a study of semantics and sound symbolism. *Journal of Marketing Theory and Practice*, 9, 27-34. <https://doi.org/10.1080/10696679.2001.11501889>
- Klink, R. (2009). Gender differences in new brand name response. *Marketing Letters*, 20, 313-326. <https://doi.org/10.1007/s11002-008-9066-x>
- Klink, R. & Athaide, G. (2012). Creating brand personality with brand names. *Marketing Letters*, 23, 109-117. <https://doi.org/10.1007/s11002-011-9140-7>
- Knoeferle, K., Li, J., Maggioni, E. & Spence, C. (2017). What drives sound symbolism? Different acoustic cues underlie sound-size and sound-shape mappings. *Scientific Reports*, 7, 55-62. <https://doi.org/10.1038/s41598-017-05965-y>
- Lowrey, T. M., Shrum, L. J., & Dubitsky, T. M. (2003). The relation between brand-name linguistic characteristics and brand-name memory. *Journal of Advertising*, 32(3), 7-17. <https://doi.org/10.1080/00913367.2003.10639137>
- Lowrey, T. M. & Shrum, L. J. (2007). Phonetic symbolism and brand name preference. *Journal of Consumer Research*, 34, 406-414. <https://doi.org/10.1086/518530>
- Maglio, S. J., Rabaglia, C. D., Feder, M. A., Krehm, M., & Trope, Y. (2014). Vowel sounds in words affect mental construal and shift preferences for targets. *Journal of Experimental Psychology: General*, 143(3), 1082-1096. <https://doi.org/10.1037/a0035543>
- Maurer, D., Pathman, T., & Mondloch, C. J. (2006). The shape of boubas: Sound-shape correspondences in toddlers and adults. *Developmental Science*, 9, 316-322. <https://doi.org/10.1111/j.1467-7687.2006.00495.x>
- Monaghan, P. & Fletcher, M. (2019). Do sound symbolism effects for written words relate to individual phonemes or to phoneme features? *Language and Cognition*, 11(2), 235-55. <https://doi.org/10.1017/langcog.2019.20>
- Newman, S. S. (1933). Further experiments in phonetic symbolism. *The American Journal of Psychology*, 45, 53-75. <https://doi.org/10.2307/1414186>
- Nielsen, A. K. S., & Rendall, D. (2013). Parsing the role of consonants versus vowels in the classic Takete-Maluma phenomenon. *Canadian Journal of Experimental Psychology/Revue canadienne de psychologie expérimentale*, 67(2), 153-163. <https://doi.org/10.1037/a0030553>
- Pathak, A., Calvert, G. A., & Lim, L. (2020). Harsh voices, sound branding: How voiced consonants in a brand's name can alter its perceived attributes. *Psychology and Marketing*, 37(6), 837-847. <https://doi.org/10.1002/mar.21346>

- Preziosi, M. A., Coane, J.H. (2017). Remembering that big things sound big: sound symbolism and associative memory. *Cogn. Research* 2, 10.
<https://doi.org/10.1186/s41235-016-0047-y>
- Sapir, E. (1929). A study in phonetic symbolism. *Journal of Experimental Psychology*, 12(3), 225–239.
<https://doi.org/10.1037/h0070931>
- Sidhu, D. M. & Pexman, P. M. (2015). What's in a name? Sound symbolism and gender in first names. *PLoS ONE* 10(5): e0126809.
<https://doi.org/10.1371/journal.pone.0126809>
- Thompson, P. D. & Estes, Z. (2011). Sound symbolic naming of novel objects is a graded function. *Quarterly Journal of Experimental Psychology*, 64(12), 2392–2404.
<https://doi.org/10.1080/17470218.2011.605898>
- Winter, B. & Perlman, M. (2021). Size sound symbolism in the English lexicon. *Glossa: A Journal of General Linguistics* 6(1), 79.
<https://doi.org/10.5334/gjgl.1646>
- Westbury, C., Hollis, G., Sidhu, D. M., & Pexman, P. M. (2018). Weighing up the evidence for sound symbolism: Distributional properties predict cue strength. *Journal of Memory and Language*, 99, 122–150.
<https://doi.org/10.1016/j.jml.2017.09.006>
- Wu, L., Klink, R. & Guo, J. (2013). Creating gender brand personality with brand names: the effects of phonetic symbolism. *Journal of Marketing Theory and Practice*, 21, 319–329.
<https://doi.org/10.2753/MTP1069-6679210306>

✉ Correspondence

Zora Trninić

University of Novi Sad, Faculty of Economics in Subotica,
Subotica, Serbia
Segedinski put 9-11, 24000, Subotica, Serbia
E-mail: zora.trninic@ef.uns.ac.rs