Title - Evaluating brand names without vowels

Authors - Abhishek Pathak\textsuperscript{1} and Kosuke Motoki\textsuperscript{2}

Affiliations -
\textsuperscript{1}School of Business, University of Dundee, UK
\textsuperscript{2}Department of Food Science and Business, Miyagi University, Japan

Details of the corresponding author-
Abhishek Pathak, School of Business, University of Dundee, UK,
email - a.z.pathak@dundee.ac.uk; Phone- +44 (0)1382 384867

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Abstract
In recent years, a new trend has emerged where a growing number of firms have started using brand names without the vowels (e.g., Tumblr, Qzzr). However, to date research has not investigated how consumers evaluate such brand names. The current study aimed to explore the perception of vowel-less brand names among consumers. Across two studies, participants evaluated fictitious brand names of food products with and without the vowels (e.g., Ringner vs. Rngnr) on a number of attributes. Study 1 investigated the brand personality traits and Study 2 tested the fictitious brand names on traits specific to food brands (e.g., taste, healthfulness). The results of Study 1 demonstrate that brands with vowel-less (vs. voweled) names are perceived as more rugged whereas those with voweled (vs. vowel-less) brand names are perceived as more sincere, competent and sophisticated. The results of Study 2 demonstrate that food brands with vowel-less (vs. voweled) brand names are rated significantly lower in attributes of taste expectation, quality, expensiveness, willingness-to-pay, and healthfulness. Together, these findings reveal how the new trend of vowel-less brand names may influence consumers, especially in the context of food brands.
• Consumer evaluation of the vowel-less food brand names was explored
• Influence of the vowel-less (vs. voweled) names on the food brand personalities and attributes was investigated
• Vowel-less (vs. voweled) food brand names are perceived as more rugged
• Voweled (vs. vowel-less) food brand names are perceived as more sincere, competent, and sophisticated
• Vowel-less (vs. voweled) food brand names are negatively rated on the attributes of taste, quality, healthfulness and willingness-to-pay

Evaluating brand names without vowels

1. Introduction

Brand names are one of the most important assets of any brand and marketers keep innovating to create new and memorable brand names. Recently, a new trend has emerged where many brands have started dropping the vowels from their names (e.g., Tumblr, Flickr, Qzzr to name a few; see Figure 1). With the increasing penetration of social media in our lives, vowel-less words such as /omg/, /lol/, and /srsly/ are commonly found in the internet language. This trend mainly started due to the restriction of characters on many platforms (e.g., Twitter), or due to a need for faster typing speed (without distorting the message or the pronunciation of the word). It has now caught up with the food brands too (e.g., BLVD ice cream, SRSLY chocolate). Although this trend is gaining momentum and newer brands are adapting to quirky, vowel-less names, to date research has not investigated how consumers evaluate such names.
Brands have historically used linguistic tools to create memorable names [e.g., misspelled name (Frooty loops) or quirky names (Doughp for the cookie-dough firm)]. Scarcity of regular domain names has also led to this trend of vowel-less names (e.g., Flickr dropped the vowel /e/ from their domain name). In our view, dropping vowels from names is a risky practice as vowels are particularly pleasant and form an important part of language learning, linguistic expressions, emotions, and word-to-meaning translations. How do consumers evaluate vowel-less names? The current paper aims to explore this question, especially in the context of food brands.

Figure 1. Examples of brands with vowel-less names.
Source: https://www.cohocreative.com/the-disemvoweling-of-modern-brands/

2. Theoretical background

2.1. Research on vowels

Humans are known to express themselves by using linguistic and non-linguistic cues (e.g., facial expressions, postures). Linguistic expressions are mainly conveyed using vowels and consonants, which form the building blocks of speech across languages. While consonants carry the lexical information (e.g., /demos/ carries the meaning about ‘people’ as
in the words democracy, demographic), vowels convey the finer distinctions within speech (such as quality, expressions, sarcasm, collectively called as prosody) (Nespor, Peña, & Mehler, 2003). For example, the statement ‘he plays piano’, can be made factual or inquisitive by manipulating the place of stress in the sentence and the vowel length (both being the features of prosody).

Vowels are the most noticeable sounds (e.g., longer duration and energy) in syllables (e.g., Alku, Sivonen, Palomäki, & Tiitinen, 2001) and play an integral part in cognitive processes such as language acquisition (Nespor et al., 2003). In addition, vowels enhance expression and emotion (Beňuš & Rusko, 2009). Even in music, vowels play an important role and research suggests that vowels are the “minimum units of emotion” in musical language (Petrović, 2017).

A large body of research in cross-modal correspondences has now linked vowels with many brand/product attributes (e.g. size, food packaging). One of the most cited phenomena in the cross-modal research, the mil/mal effect (i.e., the association of front vowel /i/ with smallness) has largely been attributed to vowels. Research in the field of naming has shown that vowels and long vowels present in a name can enhance its pleasantness (e.g., sweet taste), softness, and euphonic appeal [e.g., names Meth (less pleasant) vs. Latha (more pleasant) (Whissell, 2001)]. Relevant to the current paper, vowels have also been linked to brand personalities (Pathak & Calvert, 2020) and food-related attributes (e.g., tastes) (e.g., Motoki et al., 2020, 2021).

2.2. Research on brand names

Brand name is one of the most powerful assets of any brand. Consultants use four types of linguistic devices to create memorable brand names (Lowrey, Shrum, & Dubitsky, 2003; McNeel, 2017) - phonetic (e.g., repetition of sounds as in Coca-Cola), semantic (e.g., the name ‘Lights out’ for sleeping pills is suggestive of a good night’s sleep), morphological
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(e.g., compound words such as ‘Nutri-grain’, ‘Jelly-Belly’) and orthographic (e.g., misspelled or vowel-less words such as BLVD ice cream) (McNeel, 2017). While discussion on the semantic, phonetic, and morphological linguistic practice is out of the scope of this paper, research on the orthographic methods, has often emphasized the importance of vowels in brand names (Lowrey et al., 2003; McNeel, 2017; Whissell, 2001).

Since technology is placing restrictions on the writing space (e.g., limited characters in Twitter), more usage of shortened words (and brand names) is seen (e.g., /lol/, /cu/, /srsly/). A word can be shortened by removing either the vowels or the consonants. However, after the removal of consonants, a word can hardly be recognized. For example, the word /seriously/ can be reliably understood even after the removal of vowels (i.e., /srsly/), but not so after the removal of consonants (i.e., eiouy). This may have led to the popular practice of misspelling words by removing vowels.

It is likely that the vowel-less (or unusually spelled) brand names (e.g., Srsly) attract attention and are considered informal/casual, and therefore enhance a brand’s recall (and at the same time save space/characters in the social media platforms). However, there is evidence to suggest that such names increase the cognitive effort and inhibit fluency (Lowrey et al., 2003; McNeel, 2017; Pogacar, Shrum, & Lowrey, 2018), leading to undesirable outcomes (e.g., negative brand image, dislike) and a reduced cross-modal congruency (McNeel, 2017; Pogacar et al., 2018). Not only brands, even people who have unconventionally spelled names [e.g., Diane (conventional) vs. Dyan (unconventional)] are perceived to be less ethical, less popular, less funny, and less successful (Mehrabian & Piercy, 1993). While unconventionally spelled names is an under-researched area of naming, research suggests that the names/words that are easier-to-pronounce are liked more by the consumers (Laham, Koval, & Alter, 2012).

2.3. Metacognitive experiences as information: feelings-as-information theory
We rely on the feeling-as-information theory as a theoretical foundation of our research. Feelings-as-information theory conceptualizes the role of subjective experiences (e.g., metacognitive experiences of ease and difficulty) in judgment, and it assumes that consumers attend to their feelings (e.g., processing fluency) as a source of information during the judgment (Schwarz, Jalbert, Noah, & Zhang, 2021). Metacognitive experiences of ease and difficulty ultimately influence the conclusions people draw from their thought processes and have been shown to affect a broad range of consumer judgments (e.g., liking, truthfulness, risk) (Schwarz et al., 2021 for a review). Specifically, fluent (vs. disfluent) stimuli lead to an inherently positive state and affect thereby leading to a wide variety of positive evaluations (e.g., liking, truthfulness, safety) (e.g., Schwarz et al., 2021 for a review). Relevant to the current paper, food products and pharmaceutical drugs with disfluent names have been shown to be perceived as riskier and with more side effects (e.g., Song & Schwarz, 2009; Schwarz et al., 2021 for a review). Considering the feelings-as-information theory as the foundation, vowel-less brand names might be evaluated disfluently and negatively (e.g., less tasty, more rugged).

Though there is literature available on the topic of misspelled words in consumer research, there is hardly any discussion on the vowel-less names. How consumers evaluate such names is still unknown. Relying on the feelings-as-information theory, the present research aimed to address this gap and investigated the perception of vowel-less brand names in the F & B sector. Across two studies, participants evaluated the fictitious brand names of food products with or without the vowels (e.g., Rngnr vs. Ringner). Study 1 investigated the brand personality traits of food brands having vowel-less (vs. voweled) brand names and Study 2 tested the attributes specific to food brands in general (e.g., taste, nutrition, healthfulness).

3. Pre-test to select hypothetical brand names (BNs)
Six hypothetical brand names of seven letters each were created (Flummer, Lintrum, Qingler, Revling, Ringner, Singler) and vowels were removed from them to create vowel-less BNs names of five letters each (Flmmr, Lntrm, Qnglr, Rvlng, Rngnr, Snglr). The pre-test had three parts. The first part of the pre-test was conducted to rule out any unintended pronunciation of the BNs other than the one hypothesised. For example, the vowel-less BN, ‘Blvd’ can be read as ‘Boulevard’ (intended pronunciation) as well as ‘Believed’ (unintended pronunciation). Participants were told that ‘nowadays there was a trend of shortening the brand names’ and that they would see a shortened brand name on the screen. They were then asked to guess the full BN of the vowel-less name displayed. In the second and third parts of the pre-test, participants rated the voweled BNs for pleasantness and familiarity on a Visual Analogue Scale (VAS) from 0-100, (0 = not at all familiar/pleasant to 100 = very familiar/pleasant).

After the pre-test, Ringner (vs. Rngnr) and Lintrum (vs. Lntrm) were selected for the subsequent studies, as these name-pairs were similar in both the pleasantness appeal and the familiarity.

4. Methods (common to both the studies)

All studies, including the pre-test were designed on Inquisit 6 software (millisecond.com) and participants were recruited from the USA using Amazon Mechanical Turk. The Institutional Review Board of a large northern university in the UK approved the research and respondents who consented to participate were paid for their time and effort. Each respondent was allowed to participate in only one study.

In Study 1, participants were told that they would see two hypothetical BNs, which referred to novel chips or chocolate brands to be launched in an international, non-English
speaking market. They then had to rate the BNs on brand personality traits (e.g., Pathak & Calvert, 2020). In Study 2, participants had to rate the same hypothetical BNs on food-related attributes (e.g., healthfulness, taste) (Schneider, & Francis, 2005). Both the studies aimed to recruit seventy participants; with a sample size of \( N \approx 70 \), the power to detect a medium-sized effect (\( \approx 0.22 \)) in a mixed Repeated-measures ANOVA was found to be \( 1 - \beta = 0.952 \) using G*Power 3.1.9.4.

5. **Study 1: Brand personality traits of vowel-less and voweled brand names.**

5.1 **Participants**

A total of 69 participants between the ages of 24 to 69 years completed the study (\( M_{Age} = 42.10 \) yrs., \( SD = 12.21 \), \( Males = 28 \), \( Females = 41 \)). Sixty-eight participants were native English speakers and one identified herself as a Vietnamese speaker. Out of the native English speakers, one could speak a second language (German).

5.2 **Procedure and design**

Participants were told that a company was looking for novel names for two of its brands of chocolates (chips was chosen as the food category for half the participants) for an international, non-English speaking market. They were told that they would see two new brand names on the screen, which the company had chosen. Participants then rated both the BNs (i.e., ‘Rngnr vs. Lintrum’ or ‘Lntrm vs. Ringner’) on fifteen brand personality traits (BPS traits) (e.g., Pathak & Calvert, 2020). The fifteen BPS traits corresponded to four BPS dimensions: ruggedness (reliable, intelligent, successful), sophistication (upper-class, charming), sincerity (down-to-earth, honest, wholesome, and cheerful), and excitement (daring, spirited, imaginative, up-to-date). The presentation of the vowel-less vs. voweled
BNs and the type of the food category (i.e. chips or chocolates) was counterbalanced between-participants. The presentation of the BPS traits was randomised within-participants. A practice block familiarised the participants with the procedure, where a well-known car brand was used.

5.3 Results

The average rating of all the fifteen BPS traits was taken to check for the outliers. Grubbs test revealed one significant outlier at 0.05 (Critical $Z = 3.25$) whose data were excluded from further analysis. Five univariate repeated measures ANOVA were conducted (one each for a BPS dimension), with the ratings of the BNs as the independent variable and the five BPS dimensions (sincerity, excitement, competence, sophistication, and ruggedness) as the dependent variables.

The results revealed that the BPS dimensions of sincerity, competence and sophistication were rated as significantly higher in the voweled (vs. vowel-less) BNs, whereas ruggedness was rated as significantly higher in the vowel-less (vs. voweled) BNs (see Figure 2 and Table 1). No difference was observed in the BPS dimension of excitement and no difference in the type of food category (i.e., between chips vs. chocolates) was observed for any of the BPS dimensions (Sincerity: $F (1,66) = 11.04, p = 0.001, \eta^2_p = 0.14; M_{Vowel-less} = 51.98, SD = 20.10; M_{Voweled} = 61.50, SD = 15.94;$ Competence: $F (1,66) = 22.77, p < 0.001, \eta^2_p = 0.26; M_{Vowel-less} = 56.11, SD = 22.15; M_{Voweled} = 69.53, SD = 17.01;$ Sophistication: $F (1,66) = 16.39, p < 0.001, \eta^2_p = 0.20; M_{Vowel-less} = 43.60, SD = 24.79; M_{Voweled} = 59.20, SD = 22.11;$ Ruggedness: $F (1,66) = 5.18, p = 0.026, \eta^2_p = 0.07; M_{Vowel-less} = 59.24, SD = 26.93; M_{Voweled} = 48.27, SD = 23.85;$ Excitement: $F (1,66) = 0.76, p = 0.39, M_{Vowel-less} = 58.04, SD = 20.89; M_{Voweled} = 60.80, SD = 16.89$).
The differences observed within each BPS dimension are reported below:

**Sincerity** Within the sincerity dimension, the voweled BNs were rated as significantly higher in the honest, wholesome, and cheerful traits, whereas no difference was observed in the down-to-earth trait (honest: $M_{\text{Vowel-less}} = 60.01$, $SD = 20.45$, $M_{\text{Voweled}} = 66.29$, $SD = 20.74$, $t(67) = 2.12$, $p = 0.037$, $d = 0.26$; wholesome: $M_{\text{Vowel-less}} = 47.01$, $SD = 24.07$, $M_{\text{Voweled}} = 58.93$, $SD = 20.41$, $t(67) = 3.34$, $p = 0.001$, $d = 0.40$; cheerful: $M_{\text{Vowel-less}} = 46.85$, $SD = 25.52$, $M_{\text{Voweled}} = 60.50$, $SD = 21.05$, $t(67) = 3.50$, $p = 0.001$, $d = 0.42$; down-to-earth: $M_{\text{Vowel-less}} = 54.06$, $SD = 29.19$, $M_{\text{Voweled}} = 60.29$, $SD = 20.05$, $t(67) = 1.36$, $p = 0.177$).

**Competence** Within the competence dimension, the voweled BNs were rated as significantly higher in all the three traits of reliable, intelligent, and successful (reliable: $M_{\text{Vowel-less}} = 59.22$, $SD = 24.03$, $M_{\text{Voweled}} = 70.90$, $SD = 17.25$, $t(67) = 3.45$, $p = 0.001$, $d = 0.42$; intelligent: $M_{\text{Vowel-less}} = 53.25$, $SD = 25.49$, $M_{\text{Voweled}} = 68.57$, $SD = 20.41$, $t(67) = 4.29$, $p < 0.001$, $d = 0.52$; successful: $M_{\text{Vowel-less}} = 55.87$, $SD = 24.87$, $M_{\text{Voweled}} = 69.12$, $SD = 21.20$, $t(67) = 4.17$, $p < 0.001$, $d = 0.51$).

**Sophistication** Within the sophistication dimension, the voweled BNs were rated as significantly higher in both the traits of upper class and charming (upper class: $M_{\text{Vowel-less}} = 43.23$, $SD = 27.50$, $M_{\text{Voweled}} = 57.57$, $SD = 26.73$, $t(67) = 2.95$, $p = 0.004$, $d = 0.36$; charming: $M_{\text{Vowel-less}} = 43.97$, $SD = 28.41$, $M_{\text{Voweled}} = 60.82$, $SD = 25.23$, $t(67) = 3.99$, $p < 0.001$, $d = 0.48$).

**Ruggedness** Within the ruggedness dimension, the vowel-less BNs were rated as significantly higher in the trait of ‘tough’ whereas no difference was observed in the trait of outdoorsy (tough: $M_{\text{Vowel-less}} = 61.59$, $SD = 29.90$, $M_{\text{Voweled}} = 48.82$, $SD = 28.11$, $t(67) = 2.59$, $p = 0.012$, $d = 0.31$; outdoorsy: $M_{\text{Vowel-less}} = 56.90$, $SD = 30.70$, $M_{\text{Voweled}} = 47.72$, $SD = 26.87$, $t(67) = 1.65$, $p = 0.103$).
**Excitement** Though the vowel-less and voweled BNs were not rated differently in the overall BPS dimension of excitement, within this dimension, the traits of spirited and up-to-date were rated higher for the voweled BNs (and marginally significant for up-to-date). The vowel-less BNs were rated as more daring (marginally significant), whereas no difference was observed in the trait of ‘imaginative’ (spirited: $M_{\text{Vowel-less}} = 53.88, SD = 24.92$, $M_{\text{Voweled}} = 63.75, SD = 20.39, t (67) = 2.75, p = 0.008, d = 0.33$; up-to-date: $M_{\text{Vowel-less}} = 56.90, SD = 26.39$, $M_{\text{Voweled}} = 64.69, SD = 24.01, t (67) = 2.00, p = 0.049, d = 0.24$; daring: $M_{\text{Vowel-less}} = 64.91, SD = 26.75$, $M_{\text{Voweled}} = 55.34, SD = 25.76, t (67) = 1.94, p = 0.057$; imaginative: $M_{\text{Vowel-less}} = 56.46, SD = 26.88$, $M_{\text{Voweled}} = 59.41, SD = 25.78, t (67) = 0.60, p = 0.54$).
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Figure 2. Study 1: Brand personality traits of vowel-less and voweled brand names.
Dotted line = Vowel-less BNs and Solid line = Voweled BNs; BPS dimensions: Vowel-less BNs are perceived as less sincere, less competent, less sophisticated and more rugged than the voweled BNs; BPS traits: Vowel-less BNs are perceived as less honest, less wholesome, less cheerful, less reliable, less intelligent, less successful, less upper class, less charming, less spirited, less up-to-date and tougher than the voweled BNs.

# < 0.05; **p < 0.01; * = 0.001; Error bars represent the SE of means
### Table 1. Results of Study 1: Brand personality traits of vowel-less and voweled brand names

<table>
<thead>
<tr>
<th>BPS traits</th>
<th>Vowel-less BNs</th>
<th>Voweled BNs</th>
<th>p-value (BPS traits)</th>
<th>BPS dimension</th>
<th>Vowel-less BNs</th>
<th>Voweled BNs</th>
<th>p-value (BPS dimensions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down-to-earth</td>
<td>54.06 (29.20)</td>
<td>60.29 (20.05)</td>
<td>n.s.</td>
<td>Sincerity</td>
<td>51.99 (20.10)</td>
<td>61.50 (15.95)</td>
<td>0.001</td>
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<tr>
<td>Honest</td>
<td>60.01 (20.45)</td>
<td>66.29 (20.70)</td>
<td>0.037</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Wholesome</td>
<td>47.01 (24.07)</td>
<td>58.93 (20.41)</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheerful</td>
<td>46.85 (25.52)</td>
<td>60.50 (21.05)</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliable</td>
<td>59.22 (24.03)</td>
<td>70.90 (17.25)</td>
<td>0.001</td>
<td>Competence</td>
<td>56.11 (22.15)</td>
<td>69.53 (17.01)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Intelligent</td>
<td>53.25 (25.49)</td>
<td>68.57 (20.41)</td>
<td>&lt; 0.001</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Successful</td>
<td>55.87 (24.87)</td>
<td>69.12 (21.20)</td>
<td>&lt; 0.001</td>
<td></td>
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<tr>
<td>Upper class</td>
<td>43.24 (27.50)</td>
<td>57.57 (26.73)</td>
<td>0.004</td>
<td>Sophistication</td>
<td>43.60 (24.79)</td>
<td>59.20 (22.11)</td>
<td>&lt; 0.001</td>
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<tr>
<td>Charming</td>
<td>43.97 (28.41)</td>
<td>60.82 (25.23)</td>
<td>&lt; 0.001</td>
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<td></td>
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<tr>
<td>Outdoorsy</td>
<td>56.90 (30.70)</td>
<td>47.72 (26.87)</td>
<td>n.s.</td>
<td>Ruggedness</td>
<td>59.24 (26.93)</td>
<td>48.27 (23.85)</td>
<td>0.026</td>
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<tr>
<td>Tough</td>
<td>61.59 (29.90)</td>
<td>48.82 (28.11)</td>
<td>0.012</td>
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<tr>
<td>Daring</td>
<td>64.91 (26.75)</td>
<td>55.34 (25.76)</td>
<td>0.057</td>
<td>Excitement</td>
<td>58.04 (20.89)</td>
<td>60.80 (16.89)</td>
<td>n.s.</td>
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<tr>
<td>Spirited</td>
<td>53.88 (24.92)</td>
<td>63.75 (20.39)</td>
<td>0.008</td>
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<tr>
<td>Imaginative</td>
<td>56.46 (26.88)</td>
<td>59.41 (25.78)</td>
<td>n.s.</td>
<td></td>
<td></td>
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<tr>
<td>Up-to-date</td>
<td>56.90 (26.39)</td>
<td>64.69 (24.02)</td>
<td>0.049</td>
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</tr>
</tbody>
</table>

**Note:** Figures in bold show significantly different results (p < .05). Values in parentheses indicate the SD.

- **Sophistication (BPS dimension) = Average means of the BPS traits (upper class and charming)***
- **Sincerity (BPS dimension) = Average means of the BPS traits (down-to-earth, honest, wholesome and cheerful)***
- **Competence (BPS dimension) = Average means of the BPS traits (reliable, intelligent and successful)***
- **Ruggedness (BPS dimension) = Average means of the BPS traits (outdoorsy and tough)***
- **Excitement (BPS dimension) = Average means of the BPS traits (daring, spirited, imaginative and up-to-date)***
6. Study 2: Perception of food-related attributes in vowel-less and voweled brand names.

While Study 1 explored the brand personality traits of vowel-less and voweled BNs, the aim of Study 2 was to explore attributes more related to food brands. The following nine food-related attributes were measured: ‘healthy, tasty, expensive, high-quality, willing-to-pay, environment friendly, local, nutritious and organic (Schneider & Francis, 2005). The procedure was similar to Study 1; in addition, participants were asked about the frequency of consumption of chips or chocolates (on a VAS from 0-100, 0 = very rarely to 100 = very frequently).

6.1 Participants

A total of 70 participants completed the study. One participant repeated the study, whose data were deleted ($M_{\text{Age}} = 44.03$ yrs., $SD = 14.03$, $Males = 33$, $Females = 36$, $Min-Max_{\text{Age}} = 22-72$ yrs.). Sixty-five participants were native English speakers and four identified themselves as non-native English speakers (one each of Marathi, Chinese, Indonesian and Tamil speakers). Among the native English speakers, six participants could speak a second language (three participants could speak Spanish, one each could speak Italian, French and German).

6.2 Results

The average rating of all the nine attributes was taken to check for outliers. Grubbs test revealed no significant outlier at 0.05 ($Critical Z = 3.25$). The data were analyzed in two ways—first, the average of the nine attributes was compared, and then the attributes were compared individually.

6.2.1 Average of nine food-related attributes

A mixed-ANOVA with the type of BN (vowel-less vs. voweled) as the within-participant factor and the frequency of consumption and the type of food category (chips or chocolate) as
between-participant factors revealed that the voweled BNs were rated as significantly higher than
the vowel-less BNs, $F_{(1, 61)} = 9.03, p = 0.004, \eta_p^2 = 0.13, M_{Vowel-less} = 43.30, SD = 16.57, M_{\text{Voweled}} = 52.33, SD = 15.97$; no effect of the food category (i.e. chips vs. chocolates; $F_{(1, 61)} < 1, p > .7$) was observed, although participants gave a higher rating to chocolates (when compared to
chips) for both the vowel-less and voweled BNs (Figure 3 and Table 2). To test the effect of
consumption, its ratings were segregated in four categories [1= 0-25 (low); 2= 26-50 (moderate);
3= 51-75 (high); 4=76-100 (very high)] and no effect of the frequency of consumption was
observed ($F_{(3, 61)} < 1, p > .9$). However, participants who were frequent consumers of chips or
chocolates, rated the BNs higher.

6.2.2 Individual food-related attributes

Paired $t$-tests revealed that voweled BNs were considered tasty, high-quality, expensive,
and healthy and participants were willing-to-pay more for these BNs than the vowel-less BNs
(tasty: $M_{Vowel-less} = 55.16, SD = 23.73, M_{\text{Voweled}} = 71.04, SD = 20.89, t_{(68)} = 4.20, p < 0.001, d = 0.51$; quality: $M_{Vowel-less} = 51.10, SD = 22.99, M_{\text{Voweled}} = 68.27, SD = 18.80, t_{(68)} = 4.91, p < 0.001, d = 0.59$; willingness-to-pay: $M_{Vowel-less} = 38.98, SD = 22.18, M_{\text{Voweled}} = 51.85, SD = 20.59, t_{(68)} = 3.95, p < 0.001, d = 0.48$; expensive: $M_{Vowel-less} = 46.68, SD = 23.46, M_{\text{Voweled}} = 60.74, SD = 20.59, t_{(68)} = 3.57, p = 0.001, d = 0.43$; healthy: $M_{Vowel-less} = 33.67, SD = 22.42, M_{\text{Voweled}} = 41.10, SD = 23.08, t_{(68)} = 2.31, p = 0.024, d = 0.28$)

No differences were observed for the attributes of ‘environment friendly, local, nutritious
and organic’ (environment friendly: $M_{Vowel-less} = 46.36, SD = 22.50, M_{\text{Voweled}} = 47.84, SD = 22.16, t_{(68)} = 0.411, p = 0.68$; local: $M_{Vowel-less} = 40.81, SD = 27.73, M_{\text{Voweled}} = 44.22, SD = 29.17, t_{(68)} = 0.88, p = 0.88$; nutritious: $M_{Vowel-less} = 34.39, SD = 22.71, M_{\text{Voweled}} = 39.32, SD = \ldots$
VOWEL-LESS BRAND NAMES

22.34, \( t(68) = 1.64, p = 0.10 \); organic: \( M_{\text{vowel-less}} = 42.52, SD = 24.53, M_{\text{vowled}} = 46.58, SD = 25.42, t(68) = 1.05, p = 0.29 \) (Figure 3 and Table 2).
VOWEL-LESS BRAND NAMES

Figure 3. Study 2: Perception of food-related attributes in vowel-less and voweled brand names.
Dotted line = Vowel-less BNs and Solid line = Voweled BNs;
(Vowel-less BNs were perceived as less expensive, less healthy, less tasty, and low in quality. Participants were also willing-to-pay less for the vowel-less BNs)
Table 2. Results of Study 2: Perception of food-related attributes in vowel-less and voweled brand names.

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Vowel-less BNs</th>
<th>Voweled BNs</th>
<th>t-value</th>
<th>p-value</th>
<th>η_p²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tasty</td>
<td>55.16 (23.73)</td>
<td>71.04 (20.89)</td>
<td>4.20</td>
<td>&lt; .001</td>
<td>0.51</td>
</tr>
<tr>
<td>High quality</td>
<td>51.10 (22.99)</td>
<td>68.27 (18.80)</td>
<td>4.91</td>
<td>&lt; .001</td>
<td>0.59</td>
</tr>
<tr>
<td>Expensive</td>
<td>46.68 (23.46)</td>
<td>60.74 (20.59)</td>
<td>3.57</td>
<td>.001</td>
<td>0.43</td>
</tr>
<tr>
<td>Healthy</td>
<td>33.67 (22.42)</td>
<td>41.10 (23.08)</td>
<td>2.31</td>
<td>.024</td>
<td>0.28</td>
</tr>
<tr>
<td>Willingness-to-pay</td>
<td>38.98 (22.18)</td>
<td>51.85 (20.59)</td>
<td>3.95</td>
<td>&lt; .001</td>
<td>0.48</td>
</tr>
<tr>
<td>Environment friendly</td>
<td>46.36 (22.50)</td>
<td>47.84 (22.16)</td>
<td>0.41</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Local</td>
<td>40.81 (27.73)</td>
<td>44.22 (29.17)</td>
<td>0.88</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Nutritious</td>
<td>34.39 (22.71)</td>
<td>39.32 (22.34)</td>
<td>1.64</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Organic</td>
<td>42.52 (24.53)</td>
<td>46.58 (25.42)</td>
<td>1.05</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>All the attributes combined</td>
<td>43.30 (16.57)</td>
<td>52.33 (15.97)</td>
<td>3.36</td>
<td>.001</td>
<td>0.40</td>
</tr>
</tbody>
</table>

Note: Figures in bold show significantly different results (p < .05). Values in parentheses indicate the SD.

7. General Discussion

The present research aimed to explore the perception of vowel-less food brand names among consumers. Study 1 investigated the role of vowel-less (vs. voweled) brand names on the brand personality traits of food brands and the results revealed that brands with vowel-less (vs. voweled) names were perceived as more rugged, less sincere, less competent, and less sophisticated. Study 2 investigated the role of vowel-less brand names on the perception of food-related attributes and the results of revealed that brands with vowel-less (vs. voweled) names were perceived as less tasty, lower in quality, less healthy, and cheaper. In addition, participants were willing-to-pay less for the brands having vowel-less (vs. voweled) names.

Differences in the processing fluency of BNs could be one explanation behind our findings. Previous research has shown that fluent brand names (i.e., easy-to-pronounce) lead to positive evaluations (e.g., purchase intention and taste expectancy) compared to disfluent names (Cho, 2019). Though to the best of our knowledge, research has so far not investigated the role of fluency of names in the BPS traits, metaphorical relations support our findings.
Disfluent names (e.g., misspelled or vowel-less names) are ‘hard-to-pronounce, and the difficulty of pronunciation might lead to an enhanced perception of hardness and ruggedness.

Previous research has demonstrated that variations in vowels (e.g., vowel length or its position in the mouth) in a food brand name can influence its evaluation and taste related expectation (e.g., Pathak, Calvert, & Lim, 2020; Pathak, Calvert, & Motoki, 2020; Motoki et al., 2020). Similarly, past research has highlighted the importance of vowels in enhancing the pleasantness (e.g., sweetness, softness) of a name (Whissell, 2001). This might explain the differences that we found in voweled (vs. vowel-less) brand names (i.e., more linkages with pleasant vs. unpleasant attributes). Our findings add new evidence to the literature on food brand naming and food-related attributes.

8. Limitations and future research

Firstly, the use of vowel-less words (e.g., /srsly/) is common in social media (e.g., Twitter), and vowel-less names are commonly seen in sectors other than the F & B (e.g., technology firms like ‘Flickr’). Our findings may likely differ if these brand names belong to a technology firm. Whether there are differences in the perception of vowel-less (vs. voweled) brand names for firms belonging to different sectors (e.g., technology vs. F & B), is yet to be seen. Future research can explore this question. Secondly, our participants were from a diverse spectrum of age groups. The use of vowel-less words seems more common among teenagers and younger age groups. Further research needs to investigate how participants’ age modulates our findings. Similarly, differences in the technology platforms or internet usage (e.g., time spent daily on social media) and how it affects the results can be explored by future research.
References


Footnote 1

See Appendix 1 for detailed results of the pre-test.

Appendix 1

Results of the pre-test

A total of 51 participants took part, $M_{\text{Age}} = 45.67$ yrs., $SD = 12.52$, $Males = 28$, $Females = 23$. Fifty participants were native English speakers and one identified herself as a mandarin speaker; out of the fifty native English speakers, one identified herself as a speaker of two other languages (Japanese and Spanish). Participants were able to pronounce the BNs in the expected/hypothesised line. There were minor variations in the spelling (e.g., flamer, flummer, flimmer), however, the created BNs followed a similar pattern, and no major difference in the pronunciation style (e.g., ‘Boulevard’ vs. ‘Believed’ for ‘Blvd’) was observed.

Pleasantness
BNs were found to be significantly different from each other in the pleasantness appeal, \( F(5, 250) = 14.35, p < 0.001, \eta^2_p = 0.22 \). Pairwise contrasts revealed three clusters of two BNs each, which were similar in pleasantness (Flummer and Qingler; \( M_{\text{Flummer}} = 44.78, SD = 25.71, M_{\text{Qingler}} = 45.29, SD = 24.15, \text{Mean difference} = 0.51, p = 0.90, F(1, 58) = 112.13, p < 0.001, \eta^2_p = 0.66 \); Lintrum and Ringner; \( M_{\text{Lintrum}} = 57.41, SD = 17.23, M_{\text{Ringner}} = 52.80, SD = 22.86, \text{Mean difference} = 4.61, p = 0.17 \); Revling and Singler; \( M_{\text{Revling}} = 63.43, SD = 20.09, M_{\text{Singler}} = 67.98, SD = 19.58, \text{Mean difference} = 4.55, p = 0.17 \).

**Familiarity**

BNs were found to be significantly different from each other in familiarity, \( F(4.18, 208.98) = 12.93, p < 0.001, \eta^2_p = 0.21 \). Pairwise contrasts revealed two clusters of two names each, which were similar in familiarity (Flummer and Qingler; \( M_{\text{Flummer}} = 26.06, SD = 24.31, M_{\text{Qingler}} = 24.71, SD = 23.93, \text{Mean difference} = 4.35, p = 0.25 \); Lintrum and Ringner; \( M_{\text{Lintrum}} = 33.96, SD = 27.37, M_{\text{Ringner}} = 33.61, SD = 27.50, \text{Mean difference} = 0.35, p = 0.92 \). The remaining two BNs, Revling and Singler were found to be significantly different from each other in familiarity, \( M_{\text{Revling}} = 38.29, SD = 29.74, M_{\text{Singler}} = 46.74, SD = 29.55, \text{Mean difference} = 8.45, p = 0.005 \).