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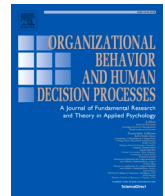
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Is this product easy to control? Liabilities of using difficult-to-pronounce product names

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ABSTRACT

This research studied difficult-to-pronounce product names which are prevalent in certain product categories. In study 1, consumers tried golf balls that varied in name pronounceability but were otherwise identical and, despite direct experience, concluded balls with difficult versus easy-to-pronounce names were less controllable and less preferable. In study 2, consumers were asked to look for a dog that was highly (less highly) controllable for an urban (rural) setting, and the dog with the difficult-to-pronounce name was viewed as less controllable because it seemed less familiar and was less preferred for the urban setting. Study 3 verified the effects of difficult-to-pronounce names on familiarity and controllability perceptions and found preference effects among those with high trait desire for control. Study 4 documented the prevalence of difficult-to-pronounce names on a popular ecommerce site for tires. Overall, our findings indicate managers should avoid using difficult-to-pronounce product names when consumers strongly desire product controllability.

1. Introduction

Naming products is a critical marketing task (Lowrey, Shrum, & Dubitsky, 2003; Park, MacInnis, & Eisingerich, 2016; Topolinski, 2017). Numerous marketing research companies specialize in naming products, charging \$7,500 to more than \$75,000 per name (Tungsten Branding, 2018). To protect product names, companies register them with the United States Patent and Trademark Office (USPTO, 2018) which receives more than 250,000 new trademark applications each year (Herrman, 2020; Gabler, 2015). Marketers do not choose product names arbitrarily; they recognize that names convey important product information and influence consumer preferences (Baxter, Llicic, & Kulczynski, 2017; Baxter, Llicic, Kulczynski, & Lowrey, 2017; Brucks, Zeithaml, & Naylor, 2000; Chen, Newell, Kou, Zhang, & Li, 2017; Lowrey & Shrum, 2007; Teas & Agarwal, 2000). Product names also affect brand building because of being prominently featured in advertising and promotions (Park et al., 2016), and some names are more memorable than others (Fetscherin, Diamantopoulos, Chan, & Abbott, 2015; Lowrey et al., 2003).

An intriguing characteristic of product names is that they often vary substantially on pronounceability (Cho, 2015; Dohle & Siegrist, 2014; Fetscherin et al., 2015; Topolinski, 2017). Numerous companies have

inadvertently or purposefully chosen names that are difficult to pronounce, e.g., Hyundai's electric car is called Ioniq (Hyundai, 2018) and Casio's mobile phone is called G'zOne (Casio, 2018). A company may choose a product name that is highly unique (Traynor, 2010), or relevant to its history (Chen et al., 2017; Park et al., 2016) or invent a name by combining parts of different words, e.g., the drug Viagra was named by combining vigorous and Niagara (Gabler, 2015). Companies often try to create unique names to avoid disapproval of their trademark applications because of the proposed name being too similar to an existing trademarked name (Herrman, 2020; Gabler, 2015) but, as a result, the final product name could be difficult to pronounce (Baxter et al., 2017). Amazon has actually encouraged the use of unique product names (Herrman, 2020), and sells fishing reels with names such as Sougayilang, Akataka, and Pflueger (Amazon, 2020).

The ubiquity of difficult-to-pronounce names is also the result of firms marketing their products globally, often retaining the same product names when they market in countries where different languages are spoken (Fetscherin et al., 2015; Herrman, 2020). These global companies may choose to retain their original product names, rather than choosing more fluent local names, for economies of scale or message consistency in global brand building (Chen et al., 2017; Huang & Chan, 1997). Examples of global product names that may be difficult-to-

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pronounce in certain countries include InBev's Stella Artois (2020) and Volkswagen's Touareg (2020).

There could be some potential benefits to choosing difficult-to-pronounce product names, based on research on other disfluent stimuli. Difficult-to-read text may induce deeper processing (Alter & Oppenheimer, 2007), greater attention (Motyka, Suri, Grewal, & Kohli, 2016), better comprehension (Corley, MacGregor, & Donaldson, 2007), and/or more abstract attributions (Alter & Oppenheimer, 2008). However, other research indicates there may be liabilities to using difficult-to-pronounce product names (Cho, 2015; Laham, Koval, & Alter, 2012). Investors tend to disfavor initial public offerings of stocks whose ticker symbols are difficult rather than easy to pronounce (Alter & Oppenheimer, 2006). When product names are less pronounceable, consumers may make negative attributions, e.g., they may perceive difficult-to-pronounce food additives and amusement park rides as riskier (Song & Schwarz, 2009) and difficult-to-pronounce pharmaceutical drugs as more hazardous (Cho, 2015; Dohle and Siegrist, 2013) albeit more advanced (Cho, 2015).

We conduct controlled experiments to study numerous difficult-to-pronounce product names, some of which are used by global companies when marketing their products in the USA. Across four studies, involving both real and fictitious product names, we consistently find that difficult-to-pronounce product names pose potential liabilities to marketers. Consumers naively infer that products with difficult versus easy to pronounce names are more difficult to control, even if the products are identical and consumers have the opportunity to use them, and this negatively affects their product preference when product controllability is desirable. Moreover, we find that name pronounceability affects controllability perceptions regardless of whether control is desirable and thereby affects preference. This suggests that processing ease does not solely affect controllability perceptions via low-level positive affect (Schwarz, 2004; Winkielman, Schwarz, Fazendeiro, & Reber, 2003); rather, we find that consumers consistently and naively infer products with difficult-to-pronounce names are less familiar, which leads to the perception of poor product controllability, and this in turn lowers product preference when consumers desire control.

Our findings are important because extensive research indicates controllability is a uniquely important perception for human functioning and survival (Bandura, 1977; Leotti, Iyengar, & Ochsner, 2010). When consumers do not perceive themselves as effective control agents, their mental and physical well-being suffer (Skinner, 1996) and their stress increases (Mineka & Hendersen, 1985; Thompson, 1981). The present research provides initial evidence that the ubiquitous metacognitive experience of processing ease (Alter & Oppenheimer, 2009), elicited by product name pronounceability, affects controllability perceptions. Our findings extend seminal research on the illusion of control (Langer, 1975) and offer managerial guidance on product naming when consumers desire high control. Such guidance is timely given that consumers' desire for control increases during periods of uncertainty in the environment (e.g., store stockouts; Fitzsimons, 2000), economy (e.g., financial crises; Blair, 2020), or health-related outcomes (e.g., COVID-19; Galoni, Carpenter, & Rao, 2020).

2. Conceptual framework

2.1. Pronounceability and processing ease

Product name pronounceability elicits the metacognitive experience of fluency (Dohle and Siegrist, 2013; Song & Schwarz, 2009), that is, the subjective experience of ease in processing (Alter & Oppenheimer, 2009). The experience of processing ease is thought to elicit low-level positive affect (Schwarz, 2004; Winkielman et al., 2003) and has even been found to activate the smile muscle (Winkielman & Cacioppo, 2001). The low-level positive affect elicited by processing ease has therefore been found to enhance subsequent evaluations, resulting in higher consumer preference for products with easier rather than more

difficult to pronounce product names, including pharmaceuticals (Cho, 2015; Dohle and Siegrist, 2013), investments (Alter & Oppenheimer, 2006; Blair, 2020), and food additives (Song & Schwarz, 2009).

Moreover, extensive research has shown that familiarity is naively inferred from processing ease. The processing ease-familiarity inference is often ecologically valid, e.g., when people are more familiar with a stimulus, such as when they read a target word twice (e.g., shoe-shoe), it becomes easier to process (Landwehr, Golla, & Reber, 2017; Whittlesea, 1993). Prior exposure, however, is not necessary to induce processing ease (Alter & Oppenheimer, 2008; Kostyk, Leonhardt, & Niculescu, 2019; Pocheptsova, Labroo, & Dhar, 2010; Reber & Schwarz, 1999). As a result, inferring familiarity from processing ease is considered naïve because processing ease can result from factors other than prior exposure (Blair, 2020; Pocheptsova et al., 2010; Schwarz, 2004; Weaver, Garcia, Schwarz, & Miller, 2007; Whittlesea & Williams, 2000). Numerous factors unrelated to exposure or repetition have been found to increase processing ease and, in turn, perceived familiarity including word pronounceability (Dohle and Siegrist, 2013; Song & Schwarz, 2009), font readability (Alter & Oppenheimer, 2008), visual similarity (Labroo, Dhar, & Schwarz, 2008; Whittlesea, 1993), and semantic similarity (Labroo et al., 2008; Lee & Labroo, 2004; Whittlesea, 1993). For example, despite no prior exposure or actual familiarity with various fictitious food additive names, Song and Schwarz (2009) found that those with easier to pronounce names (e.g., Magnalroxate) were rated as more familiar than those with more difficult to pronounce names (e.g., Hnegripitrom).

Because processing ease signals familiarity, it can affect subsequent judgments in much the same way as would actual familiarity or prior exposure. Researchers have examined what people infer specifically from processing-ease induced familiarity, and many inferences have been documented in different contexts (Brinol, Petty, & Tormala, 2006; Koriati & Levy-Sadot, 2001; Labroo & Kim, 2009; Pocheptsova et al., 2010; Unkelbach, 2006). Some inferences are closely related to familiarity, e.g., prevalent (Weaver et al., 2007) or mundane (Pocheptsova et al., 2010), while other inferences are more peripheral, e.g., dull (Song & Schwarz, 2009), truthful (Kostyk, Leonhardt, & Niculescu, 2017; Reber & Schwarz, 1999), or valid (Skurnik, Yoon, Park, & Schwarz, 2005).

2.2. Product controllability perceptions

In the present research we investigate whether processing ease, by enhancing perceptions of familiarity, elicits another peripheral and naïve inference: the inference of product controllability. Product controllability refers to the belief that one can effectively manage a given product to achieve desired results (Thompson, Hamilton, & Rust, 2005; Chin, Diehl, & Norman, 1988; Skinner, 1996). There has been a lack of research on product controllability perceptions, despite perceived control being a primary human motivation and having a rich history in the psychological and biological literatures (Leotti et al., 2010). Clinical studies, animal studies, and neuroimaging indicate that the perception of control over objects and events is a uniquely important perception for human functioning and survival (Leotti et al., 2010).

Perceiving oneself as an effective control agent is correlated with mental and physical well-being (Skinner, 1996), adaptive coping (Bandura, 1977), effortful goal pursuit (Zhang & Fishbach, 2010) and positive health outcomes (Wallston, Stein, & Smith, 1994); while a perceived lack of control is related to stress (Mineka & Hendersen, 1985; Thompson, 1981), depression (Dykstra & Dollinger, 1990) and feelings of helplessness (Leotti et al., 2010). Marketers have found that perceived control relates to satisfaction with service experiences (Hui & Bateson, 1991) and a willingness to adopt novel technologies and patronize unique retail environments (Faraji-Rad, Melumad, & Johar, 2016; Lee & Allaway, 2002). However, research has not addressed whether controllability perceptions might be influenced by the ubiquitous metacognitive experience of processing ease.

2.3. Familiarity and the illusion of control

We posit that processing ease, elicited by product name pronounceability, may increase product controllability perceptions by enhancing perceived familiarity with a product. Seminal research on the illusion of control (Langer, 1975) found that actual familiarity or prior exposure enhanced controllability perceptions. People were less willing to exchange lottery tickets (Langer, 1975) and wagered more money in a card game (Bouts & Van Avermaet, 1992; Burger, 1986) when the tickets or cards had familiar symbols or designs which they had seen before. In other research, people perceived they had greater control over the outcome of a gamble if they imagined themselves gambling (Burger, 1986; Dykstra & Dollinger, 1990) or spent more time with the gambling apparatus (Langer, 1975). Though largely in the context of actual gambling, these findings suggest that processing ease itself could enhance controllability perceptions, because of consumers naively inferring greater familiarity with easy-to-process stimuli.

Evidence of a relationship between processing ease and controllability perceptions would provide insight into a primary motivation associated with consumer preference—the desire for control (Faraji-Rad et al., 2016), and further demonstrate the non-normative nature of perceived control (Leotti et al., 2010; Skinner, 1996) and the robustness of metacognition on perception (Alter & Oppenheimer, 2009). Also, through the manipulation of processing ease using novel stimuli (e.g., fictitious names; Whittlesea & Williams, 2000), the effect of perceived familiarity on controllability perceptions can be isolated from other factors that are often associated with familiarity such as exposure, liking, or expertise, which may have unintentionally influenced prior effects of familiarity on controllability perceptions (Bouts & Van Avermaet, 1992; Burger, 1986; Dykstra & Dollinger, 1990; Langer, 1975).

2.4. Naïve belief or hedonic marking?

An investigation of the effects of processing ease on familiarity, controllability, and preference must also consider whether observed effects are explained by processing ease eliciting low-level positive affect that heightens evaluations in general, i.e., the hedonic marking hypothesis (Schwarz, 2004); or whether, as we propose, evaluations are the result of consumers naively inferring familiarity and thus controllability (e.g., Langer, 1975) from the experience of processing ease. Support for the hedonic marking hypothesis would require that processing ease result in more positive evaluations (i.e., familiarity, controllability, and preference) regardless of usage goals or individual traits that make product controllability more or less desirable. Conversely, our naïve belief account predicts that, given lower desire for product control, while processing ease should still positively affect familiarity and controllability perceptions, there should be no effect on product preference (Song & Schwarz, 2009). In other words, if processing ease mediates via the naïve inference of controllability rather than via positive affect, processing ease should only increase product preference given high desire for control (Schwarz, 2004; Song & Schwarz, 2009).

Our proposition that desire for control moderates the effects of processing ease on preference aligns with recent research identifying other moderators of the effects of processing ease on preference (Brinol et al., 2006; Lee & Labroo, 2004; Leonhardt, Catlin, & Pirouz, 2015; Unkelbach, 2006). When an easy-to-read font made a chocolate seem familiar and thus mundane, preference declined among people who believed chocolate was for special occasions (Pocheptsova et al., 2010). Similarly, when consumers were seeking an exciting amusement park ride, rides with easy-to-pronounce names were perceived as familiar and boring, while rides with difficult-to-pronounce names were perceived as unfamiliar and exciting and thus preferred (Song & Schwarz, 2009). Hence, while there is most often a processing ease to preference association, sometimes this reverses to a processing ease to non-preference association, depending on how consumers use the naïve belief elicited

by their experience of processing ease (Labroo & Kim, 2009; Nielsen & Escalas, 2010). Accordingly, we propose that easy-to-pronounce product names will positively affect preference, through heightened familiarity and controllability perceptions, when product control is highly desirable; however, we do not expect easy-to-pronounce product names to affect preference, despite heightened familiarity and controllability perceptions, when product control is not highly desired.

2.5. When is controllability more or less desirable?

While control over products, people, or events is generally desirable (Leotti et al., 2010), there exist situational and individual differences that should attenuate consumers' desire for control. Consumers are less likely to be concerned about product controllability when they expect to have little or no interaction with a product, e.g., with artwork, furniture, or basic utilities (Cutright & Samper, 2014; Skinner, 1996), or when product controllability is seen as conflicting with a more desirable product attribute such as adventure, high-performance or excitement (e.g., Song & Schwarz, 2009). With sports equipment, there is often a trade-off between high performance and controllability, e.g., Trek advertises their low-performance entry-level bike the Wahoo as “easy for your little one to control” and their high-performance professional bike the Session as “It's built for one reason: going as fast as freakin' possible down hills.” (Trek, 2020). Hence, controllability can be a more or less important product attribute depending on the usage goal, and desire for control should moderate the effect of product name pronounceability on product preference. Specifically, we expect that when consumers seek highly controllable products, they will prefer those with easy-to-pronounce names because of perceiving them as more familiar and controllable. However, in other situations, e.g., when seeking products that are inherently less controllable due to a conflicting attribute such as aggressiveness or speed, we do not expect a preference for products with easy-to-pronounce names conveying familiarity and controllability.

The desire for product controllability is also likely to differ across individuals, as consumers vary in their desire to exert control (Faraji-Rad et al., 2016). The desire for control is especially prevalent among specific consumer segments such as political conservatives (Fernandes & Mandel, 2014) and younger consumers (Woodward & Wallston, 1987), and it has been found to affect consumer preference for product assortment (Inesi, Botti, Dubois, Rucker, & Galinsky, 2011), high effort products (Cutright & Samper, 2014) and new products (Faraji-Rad et al., 2016). Hence trait desire for control should moderate the effect of product name pronounceability on preference. When consumers see products with difficult-to-pronounce names and infer the products are less controllable, consumers with high desire for control should be the most negatively affected in terms of preference. However, consumers' desire for control should not necessarily affect their inferences that products with difficult-to-pronounce names are less familiar and less controllable. Thus, we predict that all consumers should perceive products with difficult-to-pronounce names as less familiar and controllable; but only the higher desire for control consumers should show downstream effects on product preference. In sum, we tested the following causal model: Products with difficult rather than easy to pronounce names will be perceived as less familiar and thus less controllable, and this will reduce product preference when control is highly desirable due to the product usage goal or an enduring consumer trait (Fig. 1).

Data for all studies are available at: https://osf.io/wmcdh/?view_only=115e93ca7cf84aec8bebcf58900fb76e.

2.6. Study 1. Golf ball product use study

2.6.1. Overview

In Study 1, we used a realistic product use setting to test our conceptual model. We asked: When typical consumers use products in a naturalistic setting, will they perceive the products with difficult-to-

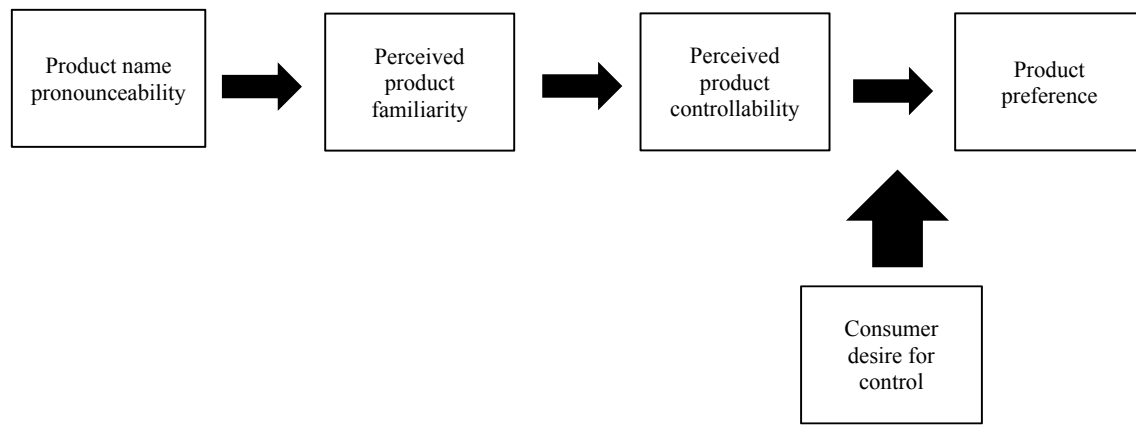


Fig. 1. Conceptual Framework.

pronounce names as more difficult to control, and will this affect their product preference? The setting we studied was a putting green and the product was golf balls. We purchased identical golf balls and professionally printed either difficult or easy-to-pronounce names on them. Participants used the golf balls on a practice putting green, indicated their preference for each ball, and then rated each ball on controllability and name pronounceability.

2.6.2. Pretest of product names

For a product name pretest, we recruited 31 participants from MTurk (mean age = 34.48). Our goal was to choose four golf ball names, two replicates for each condition (difficult and easy to pronounce) so we could examine effect replicability. We sought fictitious names, that were not even words in the English language to ensure they lacked any actual familiarity, so we pretested names used by Song and Schwarz (2009). Participants rated each name, presented individually and in random order, with 1 = very difficult to pronounce and 7 = very easy to pronounce (Alter & Oppenheimer, 2006; Laham et al., 2012; Song & Schwarz, 2009). We decided to focus on the 7-letter names to avoid confounds with length and selected the two that were hardest to pronounce (Weayaya $M = 2.29$ and Machakw $M = 1.90$) and the two that were easiest to pronounce (Melvern $M = 5.16$ and Chatima $M = 4.23$) for our main study.

To check our name selection, we conducted a repeated measures ANOVA with manipulated product name pronounceability, replicate name, and their two-way interaction as repeated-measures predictor variables, and rated product name pronounceability as the dependent variable. As expected, we found a main effect for manipulated name pronounceability in that the difficult versus easy-to-pronounce names were rated lower on pronounceability ($F(1, 30) = 130.08, p < .001, M = 2.10$ versus 4.69), with no two-way interaction between manipulated name pronounceability and replicate name ($F(1, 30) = 2.50, p = .12$).

2.6.3. Main study methods

Stimuli. Golf balls of identical make and color were purchased from the online retailer GolfBalls.com with custom printing to realistically place the product names on the balls. Each participant saw four identical golf balls but with different product names printed on them, with Weayaya and Machakw being the difficult-to-pronounce names and Melvern and Chatima being the easy-to-pronounce names, based on our pretest results.

Procedure. A two factor within-subjects design was used with two manipulated levels of name pronounceability crossed with two manipulated levels of replicate name. Participants ($N = 91$) were recruited from a large university to take part in exchange for being entered into a lottery to win a \$100 gift card. Each participant was given the four stimulus golf balls and told that the balls were from the same manufacturer who was conducting marketing research on consumers'

opinions of them. Participants were asked to try out each of the four golf balls by touching them and hitting them with a golf club on a practice putting green. The green consisted of artificial turf and several holes to hit balls into, from a distance of about five feet (see appendix). Golfers commonly practice on such putting greens and large sporting goods retailers often provide them in their stores for customers to try out golf products.

Measures. After trying out the golf balls, participants were asked to respond to a brief survey which they accessed on a mobile device. Participants indicated their purchase intent for each golf ball (1 = not at all likely to purchase, 7 = very likely to purchase), then the controllability of each golf ball (1 = difficult to control, 7 = easy to control), and finally the pronounceability of the name printed on each golf ball as a within-study manipulation check (1 = very difficult to pronounce, 7 = very easy to pronounce). Participants also answered "How important is it that a ball is easy to control when playing golf (1 = not at all important, 7 = very important), to test our assumption that controllability was a desired attribute in this product category. Finally, participants reported their age and gender and whether fluent in English.

2.6.4. Main study results

Descriptive statistics. The participants in the main study 1 ($N = 91$) had a mean age of 22.22 years ($SD = 2.28$), 57.1% were male, and all were fluent in English. Participants indicated that it was important that a golf ball be easy to control, with an average rating of 6.20 on a 7-point scale, which was significantly higher than the scale midpoint of 3.50 ($t(90) = 21.38, p < .001$). This finding confirmed that controllability was a highly desired attribute in golf balls.

Manipulation check. Our manipulation of product name pronounceability was verified using a repeated measures ANOVA with manipulated product name pronounceability, manipulated replicate name, and their two-way interaction as repeated-measures predictor variables, and rated product name pronounceability as the dependent variable. As expected, there was a main effect for manipulated difficult versus easy-to-pronounce name on rated pronounceability ($F(1, 90) = 200.21, p < .001, M = 2.59$ versus $M = 5.31$). Both difficult-to-pronounce names (Machakw $M = 2.36$ and Weayaya $M = 2.82$) were rated harder to pronounce than the easy-to-pronounce names (Chatima $M = 4.98$ and Melvern $M = 5.65$). There was a name pronounceability by replicate name two-way interaction ($F(1, 90) = 22.50, p < .001$), but pairwise comparisons verified that each difficult versus easy-to-pronounce name was significantly harder to pronounce. The smallest difference, between Weayaya and Chatima, was still highly significant ($t(90) = 119.54, p < .001$).

Controllability. Product controllability perceptions were analyzed the same. As posited, there was a main effect for difficult versus easy-to-pronounce product name on perceptions of product controllability: $F(1, 90) = 5.37, p = .023, M = 4.40$ versus $M = 4.67$, effect size (partial eta

squared) = 0.06. Perceived as less controllable were both products with difficult-to-pronounce names (Machakw $M = 4.43$ and Weayaya $M = 4.37$) as compared to those with easy-to-pronounce names (Chatima $M = 4.60$ and Melvern $M = 4.73$). There was no two-way interaction between name pronounceability and replicate name on controllability perceptions ($F(1, 90) = 0.12, p = .73$). See Fig. 2.

Preference. Purchase intentions were also analyzed the same. As predicted, there was a main effect for the difficult versus easy-to-pronounce name on product preference: $F(1, 90) = 11.78, p = .001, M = 4.12$ versus $M = 4.59$, effect size = 0.12). Preference was lower for both products with the difficult-to-pronounce names (Machakw $M = 4.13$ and Weayaya $M = 4.11$) as compared to those with the easy-to-pronounce names (Chatima $M = 4.47$ and Melvern $M = 4.71$). There was no two-way interaction for name pronounceability by replicate name on product preference ($F(1, 90) = 1.22, p = .27$).

Mediation. In terms of mediation, we posited that product name pronounceability would affect product preference through product controllability perceptions. We tested this prediction using the repeated measures macro MEMORE Version 2.1 for SPSS, Model 1, with 5000 resamples (Montoya & Hayes, 2017), aggregating across the replicate product names because the results were consistent across names as indicated by no interaction (moderation) involving this replicate factor. The repeated measures outcome was product preference, and the repeated measures mediator was perceived controllability. As posited, there was an indirect effect of name pronounceability on preference through controllability perceptions ($b = 0.15, 95\% \text{ CI } [0.03, 0.28]$) indicating controllability perceptions mediated the effect.

Importance of Controllability as Moderator. In a post hoc repeated measures analysis, we tested whether the importance of product controllability, as a measured product-related variable, had moderated the effect of name pronounceability on preference. We found no significant moderation by importance of product controllability in this study ($F(1, 89) = 2.19, p = .14$). We speculated this was due to insufficient variation on this moderator given that the vast majority of participants felt it was very important that golf balls be easy to control. Therefore, we manipulated desire for control in Study 2 and measured trait desire for control in Study 3.

2.6.5. Discussion

In study 1, we allowed consumers to physically touch and hit four

golf balls, two with difficult-to-pronounce names and two with easy-to-pronounce names, but the balls were otherwise identical. Then we measured preference for each ball and perceptions of the controllability of each ball. In line with our theorizing, preference was lower for the golf balls with the difficult-to-pronounce names because they were perceived as less controllable than those with the easy-to-pronounce names, and controllability was a highly desired attribute. These effects were not influenced by the specific names used. The results indicate that difficult-to-pronounce names can signal that products are less controllable and make them less preferred, even when there is physical evidence to the contrary from direct product experience in a naturalistic setting.

2.7. Study 2. Dog study with manipulation of desire for control

2.7.1. Overview

In Study 2, we manipulated product name pronounceability and consumers' desire for control over the product, and then measured product preference and perceptions of product name familiarity and product controllability. The product studied was a pet dog, and two different scenarios were used to manipulate desire for control over the dog. In the higher desire for control scenario, participants were told they sought a calm and obedient dog to live in a crowded urban apartment; while in the lower desire for control scenario, participants were told they sought a wild and feisty dog to live on a remote rural property. The dog's name was manipulated to be either the difficult-to-pronounce Baxtiod, or the easy-to-pronounce Belland. These names were also used by Whittlesea and Williams (2000) because they are fictitious names, not even words in the English language, so they lacked any actual familiarity. Each name consisted of 7 letters to avoid a confound with length.

We tested our full causal model. We posited that in the higher desire for control or urban scenario, a dog with a name that was difficult (versus easy) to pronounce would be less preferred because the name would seem less familiar and thus the dog would seem less controllable. In the lower desire for control or rural scenario, while the difficult-to-pronounce dog name would still seem less familiar and the dog less controllable, this would not affect preference. We did not expect a reversal in preference when desire for control was lower, because there is virtually always some need or desire for control (Bandura, 1977; Skinner, 1996), e.g., owners of pet dogs clearly need at least some control over their dogs. Therefore, a difficult-to-pronounce product

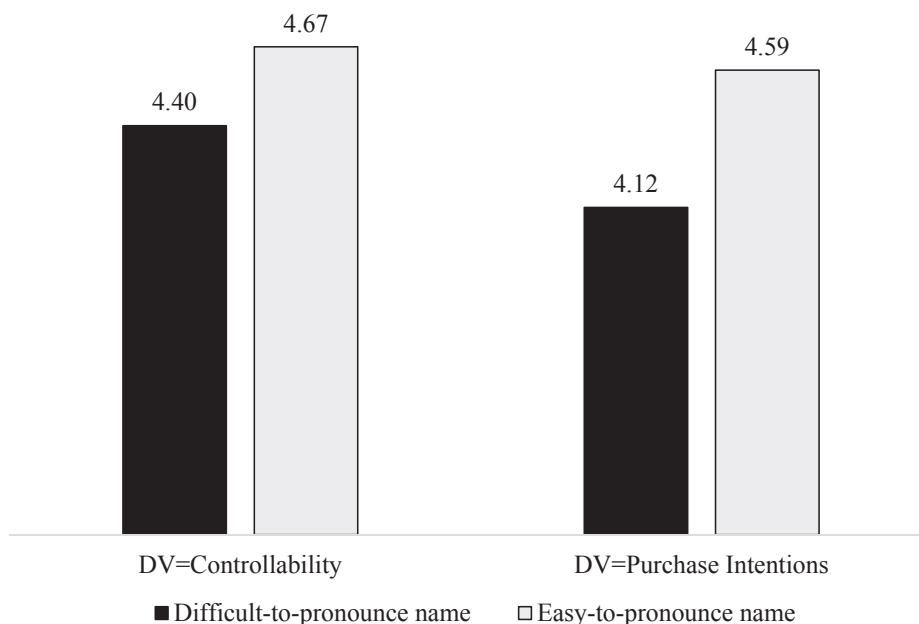


Fig. 2. Golf Ball Study Results on Controllability Perceptions and Preference. Note — Difficult to pronounce versus easy to pronounce names, p 's < 0.05.

name conveying relatively lower controllability should either be a liability if controllability is highly desired, or at best be overlooked.

2.7.2. Methods

Procedure. A two factor between-subjects design was used with two manipulated levels of name pronounceability crossed with two manipulated levels of consumer desire for control. Participants were 712 adult consumers who were native English speakers, lived in the USA, and were recruited from MTurk. Their mean age was 36.62 years ($SD = 12.27$), 42.6% were male, and 87.8% were either current or previous dog owners. We randomly assigned participants to a scenario where they either desired higher or lower control over a dog, and we also randomly assigned them to see a dog name that was either the difficult to pronounce Baxtiod or the easy to pronounce Belland (Whittlesea & Williams, 2000). Consumers were asked to read the scenario, and then consider purchasing the named dog for that scenario (see appendix).

Measures. We measured product preference as follows: “Based on your purchase goal of wanting a very wild and feisty dog (calm and obedient dog), how would you evaluate Baxtiod (Belland)?” (1 = Not at all likely to purchase for this situation, 7 = Very likely to purchase for this situation; 1 = Not at all a good choice for this situation, 7 = Very good choice for this situation; 1 = Not at all favorable for this situation, 7 = Very favorable for this situation; $\alpha = 0.97$). Product controllability was assessed with these items: 1 = [name] will be difficult to control, 7 = [name] will be easy to control, 1 = [name] will be difficult to manage, 7 = [name] will be easy to manage; 1 = It will be difficult to get [name] to do what he should, 7 = It will be easy to get [name] to do what he should ($\alpha = 0.91$).

Product name familiarity was measured as: 1 = [name] is a very unfamiliar name, 7 = [name] is a very familiar name; 1 = [name] is a very new name, 7 = [name] is a very old name; 1 = [name] is a very uncommon name, 7 = [name] is a very common name ($\alpha = 0.82$). We did manipulation checks of name pronounceability (1 = Baxtiod/Belland is difficult to pronounce, 7 = Baxtiod/Belland is easy to pronounce) and desire for control (“Recall your assigned purchase goal, how important was it that you selected a dog that is easy to control? 1 = Not at all important, 7 = Very important). Lastly, we measured demographics and dog ownership.

2.7.3. Results

Manipulation checks. The name pronounceability manipulation was verified using a general linear model with manipulated name pronounceability as the independent variable and rated name pronounceability as the dependent variable. As anticipated, there was a main effect for the difficult versus easy-to-pronounce name on rated name pronounceability ($F(1, 710) = 187.30, p < .001, M = 2.82$ versus 4.74). The inclusion of manipulated desire for control resulted, as expected, in a non-significant two-way interaction ($F(1, 708) = 1.77, p = .18$). We also verified the desire for control manipulation, observing the expected main effect for manipulated desire for control on rated desire for control ($F(1, 710) = 1065.47, p < .001, M = 6.78$ versus 2.89) and a non-significant interaction with name pronounceability ($F(1, 708) = 2.60, p = .11$).

Familiarity. The name familiarity data were analyzed the same. As posited, there was a main effect for name pronounceability on name familiarity ratings, with the difficult versus easy-to-pronounce name rated less familiar ($F(1, 710) = 24.25, p < .001, M = 1.97$ versus 2.50, effect size = 0.03). The name pronounceability by desire for control interaction on familiarity was non-significant ($F(1, 708) = 0.79, p = .37$).

Controllability. The controllability data were analyzed the same. As predicted, there was a main effect for name pronounceability on controllability perceptions; the name that was difficult versus easy to pronounce lowered controllability perceptions ($F(1, 710) = 6.83, p = .009, M = 4.16$ versus 4.38, effect size = 0.01). The name pronounceability by desire for control interaction on perceived controllability was

non-significant ($F(1, 708) = 0.73, p = .39$).

Preference. A general linear model tested for effects of manipulated name pronounceability and manipulated desire for control on product preference. The main effect for name pronounceability was, as expected, non-significant ($F(1, 708) = 0.53, p = .47$). Instead, as predicted, name pronounceability and desire for control interactively affected preference ($F(1, 708) = 6.21, p = .013$, effect size = 0.01). Looking at participants in the high desire for control scenario, the difficult versus easy-to-pronounce name reduced preference ($M = 4.16$ versus 4.53, $F(1, 708) = 2.27, p = .023$). But among participants in the lower desire for control scenario, the difficult versus easy-to-pronounce name did not affect preference ($M = 4.37$ versus 4.17, $F(1, 708) = 1.25, p = .211$). See Fig. 3.

Mediation. For mediation, we posited that product name pronounceability would increase perceptions of familiarity and thus enhance perceptions of controllability; and finally, given high desire for control, increase preference. We tested this serial mediation model using Model 92 of PROCESS for SPSS Version 3.2.01 with 5000 resamples (Hayes, 2017), because this model includes each possible moderator pathway so we could establish when moderation had occurred. The independent variable (IV) was name pronounceability ($-0.5 = \text{low}, 0.5 = \text{high}$), the moderator (MOD) was desire for control ($-0.5 = \text{low}, 0.5 = \text{high}$), the serial mediators were name familiarity (M1) and product controllability (M2) in that order, and the dependent variable (DV) was preference.

Having reported the IV and moderator effects on the mediators and DV above, we will focus on the other meaningful pathways. Name familiarity positively affected product controllability ($M1 \rightarrow M2, b = 0.20, t = 7.02, p < .001$) and this effect was not moderated by desire for control ($\text{MOD} \times M1 \rightarrow M2, b = -0.05, t = 0.94, p = .35$). Product controllability positively affected product preference, and this effect was indeed moderated by desire for control ($\text{MOD} \times M2 \rightarrow \text{DV}, b = 0.93, t = 9.95, p < .001$); controllability affected preference given high desire for control ($b = 0.87, t = 14.13, p < .001$) but not given lower desire for control ($b = -0.05, t = 0.78, p = .44$). In other words, high desire for control caused product controllability to affect preference; lower desire for control did not. Finally, looking at the overall tests of mediation, i.e., the indirect effects ($\text{IV} \rightarrow M1 \rightarrow M2 \rightarrow \text{DV}$), given high desire for control the indirect effect was significant ($b = 0.09, 95\% \text{ CI } [0.03, 0.16]$) but given lower desire for control the indirect effect was non-significant ($b = -0.01, 95\% \text{ CI } [-0.03, 0.01]$), confirming that desire for control had moderated the mediating process.

2.7.4. Discussion

Study 2 found that consumers who sought a highly controllable dog for an urban setting preferred one with an easy versus difficult-to-pronounce name, because the difficult name conveyed reduced familiarity and hence reduced controllability. In contrast, consumers who sought a somewhat less controllable dog for a rural setting, while viewing the one with the difficult-to-pronounce name as less familiar and less controllable, did not significantly prefer it less, because controllability was not a high priority for them. This study provides support for our full causal model (see Fig. 1).

These findings are theoretically important because they help rule out the possibility that the link between name pronounceability and preference can be fully explained by fluency-elicited positive affect (Schwarz, 2004; Winkielman et al., 2003). Instead, our results rule in our proposed process account by which, from pronounceability-based processing ease, consumers naively infer familiarity and thus controllability, but preference is affected only if there is high desire for control. Also, at practical level our findings indicate that animal rescues that use difficult-to-pronounce names when renaming animals for adoption (e.g., Siegfried), should instead choose easy-to-pronounce names because most prospective owners are likely to desire a highly controllable pet. A potential limitation of the present study is that desire for control was manipulated across rural versus urban settings which could have unintentionally affected the need for a dog with an easy-to-pronounce name, e.

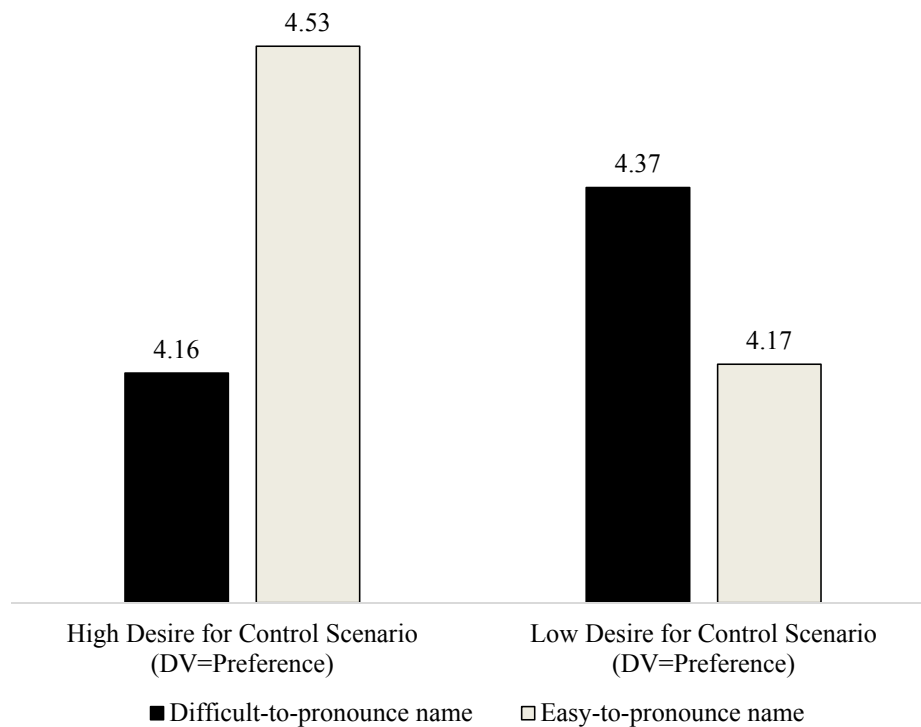


Fig. 3. Dog Study Results on Preference Moderated by a Manipulation of Desire for Control. Note — Higher desire for control $p = .02$, lower desire for control $p = .21$.

g., people may expect they will need to call out the name of their dog more often in urban versus rural settings. Next, we studied a different product category to test the generalizability of our results and we also measured trait desire for control as an individual difference variable to enhance realism beyond our current manipulation of desire for control.

2.8. Study 3. Tire study with trait measure of desire for control

2.8.1. Overview

Study 3 examined whether consumers' lower preference for products with difficult-to-pronounce names might be moderated by trait desire for control (Burger & Cooper, 1979; Faraji-Rad et al., 2016). To maximize realism, we showed car-owning adults professional-looking ads for real winter tires that were currently being sold in the USA online (e.g., on tiresbyweb.com) and in major retail stores (e.g., at Discount Tire). Both focal tires were sold by the same major Finish manufacturer Nokian Tire, but one real tire name was easy to pronounce (Nordman) while the other real tire name was difficult to pronounce (Hakkapeliitta). As in our other studies, neither name was an English word and neither name was in reality familiar to consumers. We measured consumers' desire for control using a standard validated scale (Burger & Cooper, 1979; Faraji-Rad et al., 2016). In sum, we re-tested our full causal model using a different product category and measuring trait desire for control rather than using a manipulation.

2.8.2. Methods

Procedure. A one factor between-subjects design was used with two manipulated levels of product name pronounceability and a measure of trait desire for control (Faraji-Rad et al., 2016). Participants were 679 adult consumers who owned cars, were native English speakers, lived in the USA, and were recruited from MTurk. Their mean age was 37.86 years ($SD = 11.88$) and 39.6% were male. Participants were randomly assigned to either the easy-to-pronounce (Nordman) or difficult-to-pronounce (Hakkapeliitta) name condition. They were asked to view an ad for one of these tires depicted in wintry conditions, and then consider purchasing tires for such conditions (see appendix).

Measures. Product preference was measured by asking "What is your opinion of this product?" 1 = Dislike, 7 = Like; 1 = Not at all favorable, 7 = Very favorable; 1 = Very bad choice, 7 = Very good choice; and 1 = Not at all likely to purchase, 7 = Very likely to purchase ($\alpha = 0.92$). Using the Study 2 measures, we then assessed product controllability perceptions ($\alpha = 0.94$), product familiarity ($\alpha = 0.87$), and product name pronounceability. Next, we measured consumers' desire for control using the standard 20-item scale (Faraji-Rad et al., 2016) which includes items like "I enjoy having control over my own destiny," "I would prefer to be a leader than a follower," and "I enjoy making my own decisions" with 1 = Strongly disagree and 7 = Strongly agree ($\alpha = 0.80$). Demographics were assessed at the end.

2.8.3. Results

Manipulation check. The manipulation check data were analyzed using a general linear model with manipulated name pronounceability as the independent variable and perceived name pronounceability as the dependent variable. We found the expected main effect of manipulated difficult versus easy-to-pronounce name on name pronounceability ratings ($F(1, 677) = 1329.42, p < .001, M = 2.16$ versus 6.14). The inclusion of trait desire for control produced an unexpected two-way interaction between name pronounceability and desire for control on pronounceability ratings ($F(1, 675) = 5.68, p = .017$) but a spotlight analysis (Spiller, Fitzsimons, Lynch, & McClelland, 2013) verified that the difficult-to-pronounce name was consistently rated as less pronounceable. Even at the extremes of 3 SD above and below the mean on trait desire for control, the difficult versus easy-to-pronounce name was rated less pronounceable (3 SD above mean, $F(1, 675) = 188.48, p < .001, M = 1.56$ versus 6.33; 3 SD below mean, $F(1, 675) = 85.59, p < .001, M = 2.76$ versus 5.96).

Familiarity. Product name familiarity perceptions were analyzed the same. As predicted, there was a main effect for name pronounceability, with the difficult versus easy-to-pronounce name rated less familiar ($F(1, 677) = 35.05, p < .001, M = 1.59$ versus 2.17, effect size = 0.05). There was no two-way interaction between name pronounceability and trait desire for control on familiarity ratings ($F(1, 675) =$

1.60, $p = .21$).

Controllability. Perceptions of product controllability were analyzed the same. Unexpectedly there was no significant main effect for the difficult versus easy-to-pronounce name on perceptions of controllability ($F(1, 677) = 2.49, p = .12, M = 5.22$ versus 5.36 , effect size = 0.004). Also there was no two-way interaction between name pronounceability and trait desire for control on perceptions of controllability ($F(1, 675) = 0.55, p = .46$).

Preference. A general linear model examined the effects of manipulated product name pronounceability and consumer trait desire for control on product preference. We observed a main effect for name pronounceability on preference; the product with the difficult versus easy-to-pronounce name was less preferred ($F(1, 675) = 3.88, p = .049, M = 5.07$ versus 5.28). However, qualifying this main effect, we observed the posited two-way interaction between name pronounceability and trait desire for control ($F(1, 675) = 5.22, p = .023$, effect size = 0.01). Floodlight analysis (Spiller et al., 2013) showed that given high trait desire for control, the product with the difficult versus easy-to-pronounce name was less preferred ($p < .05$); but given lower trait desire for control, the products with the difficult and easy-to-pronounce names were comparably preferred. Specifically, a trait desire for control of 4.9 on the 7-point scale was the turning point for name pronounceability to significantly affect preference; see Fig. 4.

Mediation. On mediation, we posited that name pronounceability would affect perceptions of familiarity and controllability, but preference only given high trait desire for control. We again tested this serial mediation using Model 92 of PROCESS for SPSS Version 3.2.01 with 5000 resamples (Hayes, 2017). The independent variable (IV) was name pronounceability ($-0.5 = \text{low}, 0.5 = \text{high}$), the serial mediators were familiarity (M1) and controllability (M2) in that order, the moderator trait was desire for control (MOD), and the dependent variable was preference (DV). Because trait desire for control was an interval measure, indirect or mediation effects were tested at 1 SD below and above the mean on trait desire for control (4.60 and 5.70 on the 7-point scale), these being the natural cutoff points the analysis uses. All participants were included in the analysis.

Since the IV and moderator effects on the mediators and DV are reported above, we will focus on the other relevant pathways. Name familiarity affected product controllability perceptions, but this effect was unexpectedly moderated by desire for control ($\text{MOD} \times \text{M1} \rightarrow \text{M2}, b =$

$0.13, t = 2.28, p = .023$), with name familiarity only affecting controllability perceptions given high trait desire for control ($b = 0.20, t = 3.42, p < .001$) not lower trait desire for control ($b = 0.04, t = 0.82, p = .42$). In other words, people with high trait desire for control used familiarity to infer controllability, while people with lower trait desire for control did not. Moreover, product controllability affected preference ($\text{M2} \rightarrow \text{DV}, b = 0.65, t = 3.32, p = .001$), and this effect was not moderated by desire for control ($\text{MOD} \times \text{M2} \rightarrow \text{DV}, b = 0.02, t = 0.41, p = .68$). Finally, looking at the overall tests of mediation, i.e., the indirect effects ($\text{IV} \rightarrow \text{M1} \rightarrow \text{M2} \rightarrow \text{DV}$), given high trait desire for control the indirect effect was significant ($b = 0.10, 95\% \text{ CI } [0.05, 0.19]$), but given lower trait desire for control the indirect effect was non-significant ($b = 0.01, 95\% \text{ CI } [-0.01, 0.04]$), showing that trait desire for control had moderated the mediating process.

2.8.4. Discussion

Study 3 found that, among consumers with high trait desire for control, a product with a difficult versus easy-to-pronounce name was less preferred because it seemed less familiar and in turn less controllable. Consumers with lower trait desire for control also perceived the product with a difficult-to-pronounce name as less familiar and thus less controllable, but name familiarity had less impact on their controllability perceptions, resulting in a null impact on preference. Overall, this study found that low name pronounceability negatively affected controllability perceptions and preference moderated by desire for control. This study also added realism by using actual product names and measuring consumers' preexisting trait-level need for control rather than manipulating need for control.

2.9. Study 4. Ecommerce tire name study

2.9.1. Overview

In Study 4, we sought more realism by studying the names of car tires that were sold on the leading ecommerce website TireRack.com. We examined whether the tires that were actually being sold in the marketplace varied sufficiently on name pronounceability to affect perceptions of product controllability. On TireRack.com and other similar websites, the product names are prominently displayed. Thus, we wanted to know if some winter tires were given difficult-to-pronounce names, and if this inadvertently conveyed that the tires

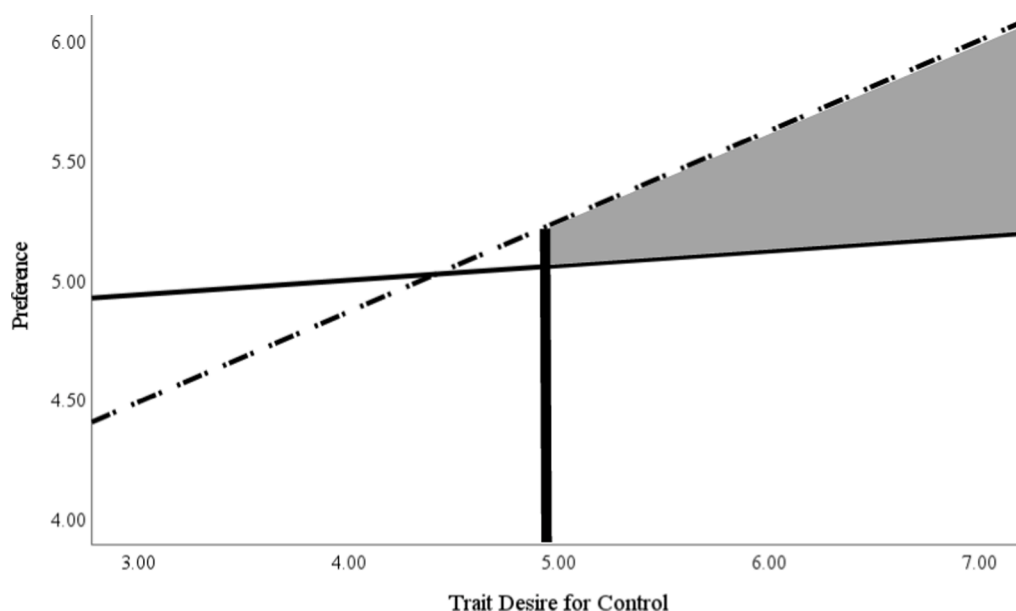


Fig. 4. Tire Study Results on Preference Moderated by Trait Desire for Control. Note – Solid line is for the difficult-to-pronounce name, dotted line is for the easy-to-pronounce name, shaded area is zone of significance, 4.9 is turning point for name pronounceability effect.

were less controllable.

We used TireRack.com because it is the largest online tire retailer in the USA, realizing over \$1 billion in sales and over 50 million visitors annually (PR Newswire, 2015). Also, US consumers spend more than \$20 billion annually on tires (National Research Council, 2006). Tire characteristics affect their controllability (Schroder & Chung, 1995), and tire manufacturers and retailers actively promote controllability to consumers, especially for winter tires, e.g., TireRack.com advertised that its winter tires were “All you need to stay safe and in control.”

2.9.2. Methods

Procedure. Participants saw the names of 23 winter tire models that were sold on TireRack.com and manufactured by BF Goodrich, Bridgestone, Continental, Dunlop, General, Goodyear, Firestone, Michelin, Pirelli, Uniroyal, or Yokohama. All names were prominently displayed, but many manufacturers offered a series of tires with very similar names, e.g., Dunlop offered SP Winter Sport 4D, SP Winter Sport 4D DSST RunonFlat, SP Winter Sport 3D DSST RunonFlat, and SP Winter Sport 3D. In such cases, to avoid undue name repetition, we randomly selected one name, resulting in 23 names out of the 57 available (see appendix). Participants were 175 adult consumers who owned cars, were native English speakers, lived in the USA, and were recruited on MTurk. Their mean age was 39.76 ($SD = 11.85$) and 40.6% were male.

Measures. Participants were asked to consider purchasing tires when control would be important due to wintery conditions. They were shown each of the 23 winter tire names, in random order, and asked about product controllability: “How easy would this tire be to control?” (1 = Very difficult, 7 = Very easy). After this, they were asked about product name pronounceability: “How easy is this tire name to pronounce?” (1 = Very difficult, 7 = Very easy). Participants were then asked about the importance of controllability: “When choosing winter tires for your vehicle, how important is it that the tires are easy to control?” (1 = Not at all important, 7 = Very important). Finally, demographics were assessed.

2.9.3. Results

Across the 23 replicate tire names, name pronounceability was rated 4.99 on average with 7 being most pronounceable. There was

substantial variability in ratings of name pronounceability, e.g., Good-year Winter Cinturato was rated 3.36 while Goodyear Ultra Grip Winter was rated 6.23. Tire controllability also happened to be rated 4.99 on average with 7 being most controllable, and controllability ratings varied widely as well, e.g., Goodyear Winter Cinturato was rated 4.69 while the Goodyear Ultra Grip Winter was rated 5.70.

The name pronounceability-controllability correlation was significant, $r = 0.44$, $p < .001$, effect size = 0.19. We also analyzed the data using a general linear model with the within-subjects predictor variables of rated name pronounceability, replicate name, and their two-way interaction, and rated controllability as the dependent variable. There was a main effect for name pronounceability on controllability ($F(1, 3679) = 816.51$, $p < .001$), a main effect for replicate name ($F(22, 330) = 2.71$, $p < .001$) and a rated name pronounceability by replicate name two-way interaction ($F(22, 320) = 1.95$, $p = .007$). Notwithstanding, pronounceability and controllability were significantly correlated for each of the 23 tire names, the weakest being for Winter Sottozero 3 which was still highly significant ($F(1, 173) = 13.54$, $p < .001$). Participants also indicated that product controllability was important in choosing winter tires; the mean importance was 6.44 on a 7 point scale, which was significantly higher than the scale midpoint of 4.0 ($t(174) = 33.97$, $p < .001$). See Fig. 5.

2.9.4. Discussion

Study 4 further enhanced the realism of our work. We pulled actual tire names from the TireRack.com ecommerce website and asked people about name pronounceability and product controllability. Because we did not manipulate the tire names, but instead studied real names to demonstrate that many actual names were perceived as difficult-to-pronounce, the stimuli were inherently messier than in our other studies. For instance, looking at the difficult-to-pronounce names, some had quirky spellings with numbers (e.g., Blizzak LM001) but not others (e.g., Winter Cinturato), and some names were long (e.g., Winter Maxx WM01 RunOnFlat) while others were short (X-Ice Xi3); and therefore, several factors likely contributed to name pronounceability (King & Janiszewski, 2011). However, our main study aim was realized: we documented the prevalence of difficult-to-pronounce product names on a major e-commerce website, for a product for which controllability is

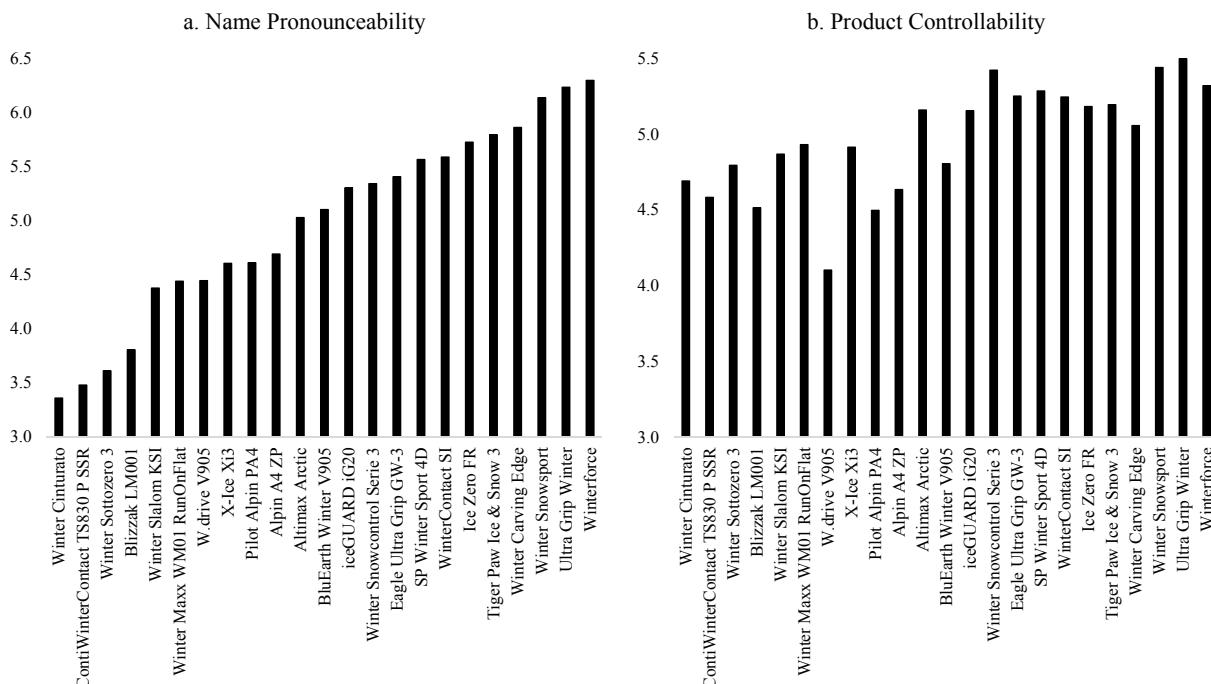


Fig. 5. Ecommerce Tire Name Study: Name Pronounceability and Product Controllability. Note – $r = 0.44$, $p < .001$.

important.

3. General discussion

In this research, we found that product names often differed widely in pronounceability in the real world, including on popular ecommerce websites. Hence, we studied difficult-to-pronounce product names in several product categories including golf balls, car tires, and pet dogs. We found that these low pronounceability product names were a potential liability to marketers. When consumers saw the difficult-to-pronounce names, they judged the products as less controllable; and they preferred these products less if they strongly desired product control. Specifically, product preference was affected, but only when consumers' desire for product control was elevated either because of their product usage goal or their trait desire for control.

3.1. Implications for product naming

Product names help firms compete, especially in mature markets with relatively homogenous offerings (Herrman, 2020; Park et al., 2016). When naming products, managers are faced with several considerations, such as relevance to the product (Chen et al., 2017; Gabler, 2015), fit with the company image (Chen et al., 2017; Park et al., 2016), memorability and distinctiveness (Fetscherin et al., 2015; Lowrey et al., 2003), and trademark requirements (Herrman, 2020; Gabler, 2015). Moreover, to achieve economies of scale and message consistency, global companies often retain the same product names across countries where different languages are spoken (Fetscherin et al., 2015; Herrman, 2020). These factors likely contribute to the observed variability in product name pronounceability, in addition to product naming being considered a creative rather than a scientific process for much of marketing's history (Park et al., 2016).

Our research highlights the importance of a relatively simple consideration when naming products—name pronounceability. Based on our findings, marketers who seek highly unique product names for trademark purposes, or who insist on product name consistency across different countries with different languages for global marketing, should also seriously consider name pronounceability. We find that product name pronounceability can affect familiarity and in turn controllability perceptions, even after consumers try out the products. However, we also find that whether product controllability perceptions actually affect product preference depends on the extent that consumers desire a high level of control, which can vary based on the product category, product usage goals, and trait desire for control.

When considering the issue of product name pronounceability, marketers should consider their product category. Controllability is likely to be highly desired when consumers expect to interact with a product and want or need to be in control during those interactions (e.g., sports equipment); whereas it may be less desirable or irrelevant when consumers expect little product interaction (e.g., artwork) or when controllability is viewed as conflicting with a more desirable product attribute, such as excitement or aggressiveness (Song & Schwarz, 2009). Hence, name pronounceability seems especially important when marketing products that demand controllability to achieve desired outcomes, e.g., hitting a golf ball, riding a bicycle, operating machinery, or driving a car. Marketers should also consider the marketing environment and the consumer segment they are targeting. Our results suggest that consumers who are higher on trait desire for control will prefer products they perceive as controllable, and thus using a pronounceable product name may be especially relevant for them. Research shows that trait desire for control is more pronounced among younger consumers (Woodward & Wallston, 1987) and political conservatives (Fernandes & Mandel, 2014).

3.2. Theoretical implications

Despite the importance of controllability perceptions for human functioning and survival (Bandura, 1977; Langer, 1975; Leotti et al., 2010; Skinner, 1996), prior research had not considered whether the ubiquitous metacognitive experience of processing ease might affect controllability perceptions. We provide initial evidence of this. Seminal work by Langer (1975) and others (Bouts & Van Avermaet, 1992; Burger, 1986; Dykstra & Dollinger, 1990) found a positive relationship between actual familiarity or prior exposure and controllability perceptions. Building on this research, we show that prior exposure or actual familiarity is not necessary to enhance perceptions of familiarity and thus controllability. By using novel stimuli, namely fictitious non-English names (e.g., Whittlesea & Williams, 2000), we document a relationship between familiarity and controllability, independent of factors such as actual exposure or expertise that could have unintentionally influenced previously observed relationships (Landwehr et al., 2017; Whittlesea & Williams, 2000). We extend this work to product-related perceptions and preference and identify relevant boundary conditions for marketers.

We also identify the underlying mediating process. We find that pronounceability-based processing ease positively affects familiarity perceptions and then controllability perceptions, generally irrespective of whether consumers desire control, with desire for control then sometimes affecting preference. Our findings rule out the rival hypothesis that processing ease elicits low-level positive affect that uniformly affects perceptions and preference (Winkielman & Cacioppo, 2001; Winkielman et al., 2003). Instead, pronounceability-based processing ease may or may not affect preference depending on factors such as product category, product usage occasion, or trait desire for control that impact whether consumers strongly desire product controllability.

3.3. Future research directions

In the present research, we manipulated processing ease using fictitious names that were non-words or actual product names. Using fictitious product names that were non-words (studies 1 and 2) helped to control for prior individual experiences with, preferences for, or knowledge of specific product names; while using actual product names (studies 3 and 4) helped to ensure our results were generalizable to current marketing practices. A high level of robustness was achieved by using different types of product names across multiple studies. Future research could assess whether other factors known to evoke processing ease, such as figure-ground contrast, font readability, or different numeric combinations affect product controllability perceptions similarly to product name pronounceability.

Identifying other metacognitive factors that could enhance product controllability perceptions is important because marketers may be limited in their use of easy-to-pronounce names. Trademark restrictions or the need to maintain global brand name consistency, for instance, could affect name selection (Herrman 2020). When name selection is limited, product controllability perceptions might be enhanced by increasing consumers' exposure to the product name. We know that repeated exposure can enhance preference for otherwise novel stimuli (Zajonc, 1968). Future research can assess whether repeated exposure to difficult-to-pronounce product names enhances product controllability perceptions. Actual familiarity through repeated exposure should enhance processing ease (Landwehr et al., 2017) and in turn controllability perceptions (Langer, 1975); but how much repetition is needed remains an empirical question.

Future research should also address how managers can enhance product name pronounceability while ensuring that names fit offerings (Park et al., 2016), and there is a need to consider product name pronounceability in healthcare. Look-alike and sound-alike medication names can result in patients inadvertently being prescribed or choosing incorrect medicines (Traynor, 2010). Using difficult-to-pronounce

medication names could be one way to differentiate otherwise similar medicines to avoid dosage errors (Cho, 2015; Dohle and Siegrist, 2013), but effects on controllability perceptions and preference remain unknown. Finally, during periods of uncertainty when consumers feel a lack of control, product name pronounceability may have more pronounced effects on preference, so this issue merits attention now.

Appendix A

A.1. Scenarios from studies 2–4

A.1.1. Study 2 higher control desirability condition

“Your purchase goal is to find a calm and obedient dog that can live with you and your other dogs in your small apartment. The dog will need to be very obedient and easily trainable to walk with you on a leash. You live on a busy street and it is very important that the dog listen to you and calmly stay by your side when you go out for walks with your other dogs. Your other dogs are old and small, and it is important that your new dog will be mild-mannered and easy to control. In your experience, a well-mannered and easily controllable dog is the best fit for your living situation. You call the local animal shelter and they have a dog named Baxtiod/Belland that is available for adoption for a small purchase fee. Baxtiod/Belland is an adult, male of mixed-breed. Based only on this information you must decide whether Baxtiod/Belland is a good match for your purchase goal of wanting a calm and obedient dog. Based on your purchase goal of wanting a very calm and obedient dog, how would you evaluate Baxtiod/Belland?”

A.1.2. Study 2 lower control desirability condition

“Your purchase goal is to find a wild and feisty dog that can live alone on your large rural property which is inhabited by coyotes. You do not want to put the dog on a leash; you want the dog to roam freely around your property despite the coyotes. It is very important that the dog fend for itself when you let it out to roam freely. Your prior dogs were mild-mannered and obedient and easy to control but you believe they were killed by coyotes. In your experience, a wild and feisty dog has a better chance of fending for itself and is the best fit for your living situation. You call the local animal shelter and they have a dog named Baxtiod/Belland that is available for adoption for a small purchase fee. Baxtiod/Belland is an adult, male of mixed-breed. Based only on this information you must decide whether Baxtiod/Belland is a good match for your purchase goal of wanting a wild and feisty dog. Based on your purchase goal of wanting a very wild and feisty dog, how would you evaluate Baxtiod/Belland?”

A.1.3. Study 3 Nokian Tire scenario

“Imagine that you have finally decided to buy new tires for your car. Your current tires are dangerous and offer you very little control on slippery roads. You were able to drive them in the summer, but winter is coming and you want a tire that will safely get you where you need to go. You really want to buy a tire that is easy to control when driving on ice and snow. The ad below is for a tire made by Nokian Tire. What do you think of this model of tire based on your goal of trying to find a tire that is safe and easy to control?”

CRediT authorship contribution statement

James M. Leonhardt: Conceptualization, Methodology, Investigation, Formal analysis, Writing - original draft, Writing - review & editing. **Cornelia Pechmann:** Conceptualization, Methodology, Investigation, Formal analysis, Writing - original draft, Writing - review & editing.

A.1.4. Study 4 TireRack.com scenario

“Imagine that you have finally decided to buy new tires for your car. Your current tires are dangerous and offer you very little control on slippery roads. You were able to drive them in the summer, but winter is coming and you want a tire that will safely get you where you need to go. You really want to buy a tire that is easy to control when driving on ice and snow. Based on your goal of trying to find a winter tire that is safe and easy to control, rate each of the following winter tire models sold at Tire Rack.”

Appendix B. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.obhdp.2021.04.009>.

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