The Unexplored Impacts of Communication Elements in Marketing

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This dissertation includes two essays that examine how the use of different marketing communication approaches influences consumers. In the first essay, I propose that the use of human silhouettes, when compared to images of attractive human models, enhances marketing communication effectiveness by reducing the extent to which consumers experience self-threat when viewing an ad. In addition, I predict this effect holds for appearance-related products only and strengthens as consumers’ level of appearance-related self-esteem decreases. Five studies reported in this essay provide converging evidence in support of these expectations.

In the second essay, I investigate into how the use of puns in brand names influences consumption experience. Across seven studies, this essay teases out the bright- and dark-side effects of pun use in brand names on consumption experience and illustrates the potential benefits and risks associated with this marketing approach. Specifically, the findings show that the use of puns in brand names is a double-edged sword in that it can either enhance or dampen the enjoyment of the consumption experience. In addition, this research also identifies cognitive engagement as a moderator for these multifaceted effects of pun use in brand names on consumption experience. Besides meaningful contributions to theory, this research also yields important insights for practice by suggestion caution in the use of puns when naming brands.
# TABLE OF CONTENTS

INTRODUCTION ............................................................................................................................................... 1

ESSAY 1 .......................................................................................................................................................... 6
Abstract ....................................................................................................................................................... 7
Introduction ................................................................................................................................................ 8
Conceptual Background .............................................................................................................................. 13
Studies ......................................................................................................................................................... 21
  Study 1A ................................................................................................................................................... 23
  Study 1B ................................................................................................................................................... 27
  Study 2 ...................................................................................................................................................... 34
  Study 3 ...................................................................................................................................................... 40
  Study 4 ...................................................................................................................................................... 49
General Discussion ..................................................................................................................................... 60

ESSAY 2 .......................................................................................................................................................... 68
Abstract ....................................................................................................................................................... 69
Introduction ................................................................................................................................................ 70
Conceptual Background .............................................................................................................................. 75
Studies ......................................................................................................................................................... 82
  Pilot Study ................................................................................................................................................ 87
  Study 1 ...................................................................................................................................................... 89
  Study 2 ...................................................................................................................................................... 91
  Study 3 ...................................................................................................................................................... 98
  Study 4 .................................................................................................................................................... 105
  Study 5 .................................................................................................................................................... 109
  Study 6 .................................................................................................................................................... 113
General Discussion ..................................................................................................................................... 116

CONCLUSION .............................................................................................................................................. 125

REFERENCES .............................................................................................................................................. 126

APPENDICES .............................................................................................................................................. 144
  Appendix of Essay 1 ................................................................................................................................. 144
  Appendix of Essay 2 ................................................................................................................................. 167
VITA .............................................................................................................................................................. 182
**LIST OF TABLES**

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Summary of Studies in Essay 1</td>
<td>22</td>
</tr>
<tr>
<td>Table 2</td>
<td>ANCOVA Results in Study 1A (Essay 1)</td>
<td>25</td>
</tr>
<tr>
<td>Table 3</td>
<td>Image Type and Product Type Interactions in Study 1B (Essay 1)</td>
<td>30</td>
</tr>
<tr>
<td>Table 4</td>
<td>Effect of Image Type in Study 2 (Essay 1)</td>
<td>37</td>
</tr>
<tr>
<td>Table 5</td>
<td>Interaction Results in Study 3 (Essay 1)</td>
<td>45</td>
</tr>
<tr>
<td>Table 6</td>
<td>Three-way Interaction Results in Study 4 (Essay 1)</td>
<td>54</td>
</tr>
<tr>
<td>Table 7</td>
<td>Summary of Studies in Essay 2</td>
<td>84</td>
</tr>
<tr>
<td>Table 8</td>
<td>Effects of Pun Use in Brand Names Across Studies in Essay 2</td>
<td>119</td>
</tr>
<tr>
<td>Table 9</td>
<td>Descriptive Statistics in Study 3 (Essay 1)</td>
<td>158</td>
</tr>
<tr>
<td>Table 10</td>
<td>Regression Results in Study 3 (Essay 1)</td>
<td>159</td>
</tr>
<tr>
<td>Table 11</td>
<td>Indices of Moderated Mediation in Study 3 (Essay 1)</td>
<td>161</td>
</tr>
<tr>
<td>Table 12</td>
<td>Descriptive Statistics in Study 4 (Essay 1)</td>
<td>162</td>
</tr>
<tr>
<td>Table 13</td>
<td>ANCOVA Results 1 in Study 1B (Essay 1)</td>
<td>163</td>
</tr>
<tr>
<td>Table 14</td>
<td>ANCOVA Results 2 in Study 1B (Essay 1)</td>
<td>163</td>
</tr>
<tr>
<td>Table 15</td>
<td>Relevant Research in Puns in Marketing</td>
<td>167</td>
</tr>
<tr>
<td>Table 16</td>
<td>Establishment Names in Pilot Study (Essay 2)</td>
<td>170</td>
</tr>
<tr>
<td>Table 17</td>
<td>Coding Results in Pilot Study (Essay 2)</td>
<td>171</td>
</tr>
<tr>
<td>Table 18</td>
<td>Customer Overall Experience in Pilot Study (Essay 2)</td>
<td>172</td>
</tr>
<tr>
<td>Table 19</td>
<td>Customer Intention to Return in Pilot Study (Essay 2)</td>
<td>172</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

Figure 1. Proposed Conceptual Framework (Essay 1) ........................................................................... 10
Figure 2. Contrast Between A Silhouette And A Model Image .......................................................... 17
Figure 3. Purchase Intentions in Study 1A (Essay 1) ......................................................................... 26
Figure 4. Purchase Intentions across conditions in Study 1B (Essay 1) ............................................ 33
Figure 5. Silhouette Effects in Study 2 (Essay 1) .............................................................................. 37
Figure 6. Mediation Path on Ad Evaluation in Study 2 (Essay 1) ...................................................... 38
Figure 7. Mediation Path on Purchase Intentions in Study 2 (Essay 1) ............................................. 38
Figure 8. Interaction Results in Study 3 (Essay 1) ............................................................................ 45
Figure 9. Effects on Purchase Intentions in Study 3 (Essay 1) .......................................................... 47
Figure 10. Mediation Path on Ad Evaluation in Study 3 (Essay 1) .................................................. 47
Figure 11. Mediation Path on Purchase Intentions in Study 3 (Essay 1) ........................................... 48
Figure 12. Product Attitude in Study 4 (Essay 1) .............................................................................. 56
Figure 13. Ad Evaluation in Study 4 (Essay 1) .................................................................................. 58
Figure 14. Conceptual Framework of Essay 2 ................................................................................... 83
Figure 15. Pun Effects in Study 1 (Essay 2) ....................................................................................... 92
Figure 16. Physical Movement in Study 2 ......................................................................................... 96
Figure 17. Mediation Path in Study 2 (Essay 2) ................................................................................ 96
Figure 18. Effect of Cognitive Engagement in Study 2 (Essay 2) ..................................................... 97
Figure 19. Pun Effect on Mood Enhancement in Study 2 (Essay 2) ................................................ 97
Figure 20. Interaction in Study 3 (Essay 2) ....................................................................................... 104
Figure 21. Product Evaluation and Purchase Intention in Study 4 (Essay 2) .................................... 108
Figure 22. Enjoyment of Checking Out Product (Female Participants) (Essay 2) ............................. 108
Figure 23. Music Evaluation in Study 5 (Essay 2) ............................................................................. 112
Figure 24. Sharing Intention in Study 5 (Essay 2) ............................................................................ 112
Figure 25. Johnson-Neyman Analysis in Study 6 (Essay 2) ........................................................... 117
Figure 26. Willing-to-Pay Price in Study 6 (Essay 2) ........................................................................ 117
Figure 27. Brand Attitude in Study 4 (Essay 1) ............................................................................... 145
Figure 28. Behavioral Intention in Study 4 (Essay 1) ...................................................................... 147
Figure 29. Ad Evaluation in Study 1B (Essay 1) ............................................................................. 165
Figure 30. Examples of Puns in Brand Names ............................................................................... 169
Figure 31. Customer Reactions in Pilot Study (Essay 2) ................................................................. 171
Figure 32. Major Contents in Reviews in Pilot Study (Essay 2) ..................................................... 172
INTRODUCTION

An important aspect of marketing is communication, which is defined as “the means by which firms attempt to inform, persuade, incite, and remind consumers – directly or indirectly - about the brands they sell” (p. 819; Lane Keller 2001). Communication approaches are highly important to the success of a marketing campaign, a brand, or even a company because they can shape how consumers perceive, evaluate and respond to what firms offer (Luxton et al. 2015; Narayanan et al. 2005). There are multiple examples of how good communication approaches can enhance valued firm outcomes as well as how bad communication approaches can hinder, or even destroy, the growth of a brand or a company. For example, the “Share-a-Coke” campaign by Coca-Cola enabled the brand to be the leading player in the cola market and “integrated the Coca-Cola Company into the homes of its consumers” with amazing results: “within the first year, more than 500,000 photos were shared using the #ShareaCoke hashtag, consumers created over six million virtual Coke bottles, and Coca-Cola gained roughly 25 million Facebook followers” (p.5; Vincent and Kolade 2019). On the other hand, Pepsi, the direct competitor of Coca-Cola, chose to communicate about the brand using political protests as the major theme in a 2017 campaign, which came across as highly inappropriate to many people and evoked significant criticism, leading to the company’s cancellation of the campaign not long after it was launched (Grigore and Molesworth 2018).

In this day and age, along with the highly interconnected social media network, communication approaches are becoming even more important than before because any mistakes that firms make in their communication may cause significant havoc on the future of a firm on a global scale (Fu et al. 2015; Hewett et al. 2016; Pfeffer et al. 2014). Therefore, companies have
become more vigilant and strategic in their communication approaches so that they can maximize the potential benefits while reducing possible issues (Einwiller and Steilen 2015). Against this backdrop, it’s important that marketers be equipped with the insights necessary to craft successful communication campaigns. With this end in mind, marketing researchers have long examined multiple aspects of marketing communication and have provided much needed guidance. For example, research has shown that an interactive communication approach which focuses on social ties (Shen et al. 2016) and leverages multiple channels (Danaher and Rossiter 2011) helps to enhance consumer attitudes, prompts sharing intentions, and increases communication effectiveness (Danaher and Rossiter 2011; Luxton et al. 2015; Shen et al. 2016). In addition, personalized communication helps enhance customer loyalty (Hänninen and Karjaluoto 2017) and relationship commitment (Sharma and Patterson 1999). A communication approach that is in line with firm strategy and mission can also generate additional synergy to boost firm performance (Einwiller and Boenigk 2012) and strengthen stakeholders’ belief (Finney 2011).

Even though there has been a considerable amount of work done in the realm of marketing communication, the quick expansion of social media platforms along with the increasing diversity in needs and consumption trends means that firms need to continuously renew their marketing communication approaches to catch up with a rapidly changing market place (Madhavaram et al. 2005; Reid et al. 2005; Vernuccio and Ceccotti 2015). For example, traditional communication platforms (e.g., television advertising) have become more fragmented and are giving shares to new platforms (e.g., social media channels) that are not only increasing in numbers but also becoming more influential to consumers (Lane Keller 2001). Thus, as firms attempt to revise their communication strategy to fit in with the dynamic market landscape, it is
important that marketing researchers further explore communication aspects that have not been examined to provide deeper insights for marketers while uncovering new phenomena in a world that is moving at a faster-than-ever rate.

Inspired by the practical challenges that marketers have to face in crafting successful communication campaigns, in this dissertation I set out to explore how different marketing communication elements can influence consumer attitudes and behavior. In two essays, I examine unexplored communication approaches to generate new knowledge about the effect of each approach on consumers, the reasons for each effect, and the boundary conditions that shape their impacts on consumers. Together, the two essays investigate both visual and verbal elements in marketing communication and thus provide complementary insights for marketers into how to leverage these elements to craft more effective communication campaigns.

In the first essay, I examine how the use of silhouettes in marketing communication can help enhance communication effectiveness relative to traditional communication efforts which rely on attractive models. This research provides novel insights to the literature because even though the use of silhouettes in marketing is popular, marketing research related to how these images can influence consumer attitudes and behavior is very limited. In addition, no research has examined the interesting question of whether the use of silhouettes can be better than the use of attractive models in marketing communication. The first essay addresses these knowledge gaps. A series of five studies in this essay provide converging evidence that the use of silhouettes (relative to attractive models) helps to enhance communication effectiveness for appearance-related products by reducing self-threat perceptions. In addition, this effect tends to increase as appearance-related self-esteem decreases because individuals with relative low appearance-
related self-esteem are more vulnerable to self-threat perceptions upon the exposure to attractive models than those with relatively higher levels of appearance-related self-esteem. Besides enriching the literature by providing empirical evidence about a phenomenon that has received limited attention, the findings in this essay also suggest important insights that marketing practitioners can leverage to design more effective communication campaigns.

In the second essay, I explore how the use of puns in brand names can influence consumption experience. This research connects multiple literature streams and adds novel perspectives to the dynamic discussions about humor, rhetorical figures, brand identity, and consumption experience. Even though previous research has examined the effects of rhetorical figures (McQuarrie and Mick 1996; McQuarrie and Mick 1992; McQuarrie and Mick 2003; McQuarrie and Mick 1999) and humor in marketing (e.g., Eisend 2009; Weinberger and Gulas 1992), the majority of these works have focused on exploring how such communication approaches would influence marketers’ communication goals rather than consumers’ consumption experience. In addition, the literature related to puns in marketing has mainly explored the use of puns in slogans (e.g., McQuarrie and Mick 2009; McQuarrie and Mick 2003), whereas the use of puns in brand names has not been explored. Moreover, previous works have mostly documented the positive effects of pun use in marketing, leaving open the question of when this approach would be ineffective, or even worse, create negative effects. This research responds directly to such knowledge gaps by providing empirical evidence about the use of puns in brand names and consumption experience. Across seven studies, this essay teases out the bright- and dark-side effects of pun use in brand names on consumption experience and illustrates the potential benefits and risks associated with this marketing approach. Specifically, the findings show that the use of puns in brand names is a double-edged sword in that it can
either enhance or dampen the consumption experience. In addition, this research also identifies cognitive engagement as a moderator for these multifaceted effects of pun use in brand names on consumption experience. Besides meaningful contributions to theory, this research also yields important insights for practice by suggestion caution in the use of puns when naming brands.

In summary, this dissertation represents a subset of my research portfolio in which I aim to explore how different elements in marketing communication can influence consumer behavior and firm communication goals. In addition to providing important insights for marketing practitioners, I also intend for my research to raise attention to issues that are concerning to our society and suggest ways to mitigate such concerns (e.g., Mick 2006; Mick et al. 2012b; Mick et al. 2012a). With clear contributions to both theory and practice, I am optimistic that this dissertation will excite readers and initiate ideas for future research in this area.
ESSAY 1

More Than Shapes: The Silhouette Effect in Marketing Communications
Abstract

Even though the use of silhouettes in marketing is prevalent, there has been no empirical evidence about the effects of these images. In this essay, I propose that the use of human silhouettes, when compared to images of attractive human models, enhances marketing communication effectiveness by reducing the extent to which consumers experience self-threat when viewing an ad. In addition, I predict this effect holds for appearance-related products only and strengthens as consumers’ level of appearance-related self-esteem decreases. Five studies reported in this essay provide converging evidence in support of these expectations.
**Introduction**

A silhouette is “a dark shape seen against a light surface” (Cambridge Dictionary). The term “silhouette” is said to have originated from France and dated back to the eighteen century to refer to artistic individual portraits created by paper-crafting techniques (Muney 2014). The use of silhouettes as miniature portraits became increasingly popular during the nineteenth century (Muney 2014), and today, silhouettes are featured in various aspects of life, from simple digital drawings to artistic photography (Forgione 1999). In marketing, silhouettes are also often featured in the communication efforts of brands such as Coca-Cola, P&G, Apple, Danone, and Beiersdorf, to name a few (see Appendix B for additional examples). Apple’s use of silhouettes in its 2003 iPod launch is perhaps the best known application of silhouettes in a marketing campaign because it helped Apple establish its image on a global scale and achieve valued business goals (Cooper 2009; Doyle 2011).

Examples like the ones noted above suggest that human silhouettes (hereafter referred to as silhouettes for short) are often used in place of attractive human models (hereafter also referred to as models for short) to achieve marketing communication objectives. The prevalence of their use implies that marketers find or at least believe that the use of silhouettes, relative to models, is advantageous in some form. However, in my review of the literature, I uncover no empirical evidence in support of this assertion, nor any theorizing to suggest why their use may ultimately be beneficial in marketing contexts. This lack of attention to the impact of silhouettes in marketing communication belies their prevalence as a phenomenon and leads me to pose the following question, which I attempt to answer here through my empirical work: why and under what conditions are human silhouettes more effective in promoting marketing communication objectives than attractive models?
To address this research question, I build on the social comparison and self-threat literature to propose that the use of silhouettes (relative to models) enhances the effectiveness of marketing communication, but only in certain situations. That is, I predict that advertisements featuring silhouettes are more effective in terms of engendering positive consumer responses to the ad and the advertised product than those which include attractive models. Further, I argue that these benefits of silhouette use hold only for appearance-related products and can be attributed to a reduction in self-threat perceptions, and for that reason, are most common among consumers that lack appearance-related self-esteem. Figure 1 provides a conceptual framework that serves as the foundation for the present research.

My theorizing regarding the likely benefits of silhouette use receives strong support across a series of five empirical studies. Specifically, Studies 1A & 1B provide initial evidence that the use of silhouettes (relative to attractive models) enhances ad evaluation and purchase intentions for appearance-related products (but not for non-appearance-related products). Study 2 replicates the effect while showing that reduction in self-threat perceptions is the underlying mechanism. In line with these findings, Study 3 further establishes that the effect is more common among consumers who lack appearance-related self-esteem and thus would perceive attractive models as more threatening. Finally, Study 4 provides conclusive evidence of reduction in self-threat perceptions as the most likely explanation through a process-by-moderation approach (Spencer et al. 2005) while replicating the effect observed in previous studies.
Figure 1. **Proposed Conceptual Framework (Essay 1)**
The theorizing and findings in this research make several meaningful contributions to marketing theory and practice. First, to the best of my knowledge, this research is the first to explore and provide empirical evidence for the impact of using silhouettes in marketing. As mentioned above, even though the use of silhouettes in marketing is quite popular, besides some anecdotal evidence about the use of silhouettes in practice (e.g., Cooper 2009; Doyle 2011), there is no empirical evidence about the effect of these images in marketing. Against this context, this study reveals important insights as to not only when the use of silhouettes in marketing can be more effective (than featuring attractive models) in helping firms achieve communication goals, but also why such effects happen. In doing so, this research establishes the foundation for future investigation into this interesting but neglected topic.

Second, this research extends the current literature on imagery processing by providing evidence that visual stimuli with relatively fewer details can be more effective in influencing consumer attitudes and behavior than visual stimuli with relatively more details. Whereas consumers tend to rely on visual cues in marketing communication to evaluate products and services (Baker et al. 1992; Hu and Jasper 2006; Kim and Kim 2012), previous research has mainly studied the impacts of concrete visual stimuli with elaborate details such as pictures of models (Bower 2001; Bower and Landreth 2001; Xiao and Ding 2014), the presence of people in the surrounding environment such other customers or store staff (Argo et al. 2008; Dahl et al. 2012; Wan and Wyer Jr 2015), or the endorsement of popular celebrities or influencers (Sääksjärvi et al. 2016; Stone et al. 2003; Tingchi Liu et al. 2007). Little is known about when and why visual stimuli with relatively fewer details can be more influential than visual stimuli with more elaborate details in enhancing communication effectiveness. In addressing that gap, this research yields novel empirical observation to enrich understanding about how consumers
interact with and respond to marketing visual stimuli. The findings in this research point to the possibility that visual stimuli in marketing communication do not have to be rich in details to have a meaningful impact on viewers, and this finding presents an interesting venue for future research ideas into this topic.

Third, this research also contributes to the self-esteem literature. Even though psychology research into self-esteem is quite abundant (e.g. Baumeister et al. 1989; Rudich and Vallacher 1999; Schütz and Tice 1997) and has suggested that self-esteem can influence how people make decisions (Anthony et al. 2007), build relationships (Rudich and Vallacher 1999), respond to social feedback (Kille et al. 2017; Swann Jr et al. 1992), perceive experiences (Wood et al. 2003) and handle events in life (Wood et al. 2005), marketing research that considers how self-esteem can influence consumer attitudes and behavior in various consumption stages is not as plentiful (Stuppy et al. 2020). Because self-esteem is such an important factor in how consumers evaluate and make decision about marketing offers, there have been calls for more research into this area (Stuppy et al. 2020). Furthermore, even though some research has examined how self-esteem can influence product design (Song et al. 2017), product choice (Stuppy et al. 2020), consumption amounts (Mandel and Smeesters 2008), responses to social referents (Dahl et al. 2012), no research has examined how self-esteem may influence consumer responses to silhouettes in marketing communication. This research responds to such gaps by examining how self-esteem can influence the way consumers respond to silhouettes (relative to attractive models) for different product types and suggesting the explanation for such behavioral tendencies. In addition, whereas previous research tends to examine self-esteem as a general construct, this research offers a nuanced look into different dimensions of self-esteem (appearance, performance, and social) and shows that only one self-esteem dimension (i.e., appearance-related
self-esteem) is salient in influencing consumer responses to the use of silhouettes in marketing communications. These findings enable a more holistic understanding of self-esteem in marketing and suggest that it would be more insightful to examine the impact of self-esteem in marketing at more specific levels of the construct than using the construct at a generalized level, which may obscure the impact of the effect under investigation.

Finally, this research echoes the Transformative Consumer Research (TCR) movement that aims to use research to enhance life quality and social welfare (Mick 2006; Mick et al. 2012b; Mick et al. 2012a). Previous research has shown that the exposure to attractive models can trigger self-comparison toward the models and amplify the thoughts of “not being able to measure up” to those “perfect” models, leading to unhealthy self-perceptions and negative affect (Bower 2001; Micu, Coulter, and Price 2009; Trampe, Stapel, and Siero 2010). It has been reported that more than half of those who have issues with eating disorder in the U.S. attribute social pressure to be the cause for their misery, and more alarmingly, younger populations (children and adolescents) increasingly fall prey to such pressure (Abate 2020; Berne et al. 2014). Against such background, this research suggests one meaningful way to mitigate the deleterious impact of social media on youth where photoshopped images that feature “perfect” models are highly prevalent.

**Conceptual Background**

Even though the use of silhouettes is common in marketing practice, little is known about how their use helps brands achieve key communication goals. Except for scattered anecdotal evidence from the practitioner literature (e.g., Cooper 2009; Doyle 2011), empirical evidence regarding the impact of silhouettes on consumer attitudes and behavior is still very limited. In contrast, not only is the use of attractive models common in marketing practice, the effect of
using models in marketing has also been examined for decades with ample evidence suggesting how the use of attractive models can influence marketing appeals. Thus, from both practical and theoretical standpoints, it is both interesting and meaningful to ask when the use of silhouettes in marketing can be better than using attractive models to achieve communication objectives.

_Silhouettes, Attractive Models and Self-threat_

Attractive models are models who have relatively high physical appeals or are aesthetically pleasing in terms of appearance (Baker and Churchill 1977). Even though the use of attractive models in marketing practice is quite common, this practice can lead to undesirable consequences. Social comparison theory suggests that people have an innate desire to get an accurate understanding of who they are and thus have a tendency to compare themselves to others in an attempt to arrive at a correct evaluation of their own qualities (Festinger 1954). The comparing targets can be anyone, from peers in the same community (Luszczynska et al. 2004; Mueller et al. 2010), to strangers at a retail store (Dahl et al. 2012), and, commonly, celebrities (Amos et al. 2008; Hsu and McDonald 2002). In addition, people also have the need to feel good about who they are and to have a positive self-concept (Campbell and Sedikides 1999; Dunn and Dahl 2012; Steele 1988). Self-concept has been defined as “the totality of cognitive beliefs that people have about themselves; it is everything that is known about the self, and includes things such as name, race, likes, dislikes, beliefs, values, and appearance descriptions, such as height and weight” (p.220; Heatherton and Wyland 2003). The irony is that when comparing oneself to others, an individual may be vulnerable to self-threat perceptions. Self-threat has been defined as “a threat to the self-concept” (p. 25; Campbell and Sedikides 1999) and may happen “when favorable views about oneself are questioned, contradicted, impugned, mocked, challenged, or otherwise put in jeopardy” (p.8; Baumeister et al. 1996). Dunn and Dahl (2012) suggest that
“when self-concept is threatened, consumers experience a psychological sense of discomfort that they then become motivated to reduce” (p. 672). Previous research has shown that the exposure to attractive models in marketing can evoke self-threat perceptions by making people feel bad about themselves, thinking that they just cannot measure up to the standards of attractiveness that the models exemplify (Argo and Dahl 2018; Bower 2001; Grabe et al. 2008; Groesz et al. 2002; Gulas and McKeage 2000; Richins 1991; Sääksjärvi et al. 2016). Such self-threat perceptions can negatively impact self-evaluation (Gulas and McKeage 2000), temporarily lower self-esteem (Sääksjärvi et al. 2016), increase social anxiety (Wan and Wyer Jr 2015), and reduce body satisfaction (Fuller-Tyszkiewicz et al. 2019; Grabe et al. 2008; Groesz et al. 2002; Richins 1991). Data from two meta-analytic studies suggests that the exposure to ideally attractive models can lead to long-term, detrimental mental and physical health consequences by activating thinness schema and increasing concerns about body image imperfections, ultimately leading to inappropriate eating behaviors (Grabe et al. 2008; Groesz et al. 2002). Consequently, the negative emotions that occur when exposed to attractive models can spill onto the communications that feature such models and hamper consumer evaluation of the products and the brands being advertised (Argo and Dahl 2018; Bower 2001). Consumers who experience self-threat as a result of social comparison can also end up abandoning interaction with the focal brand and switch to other brands to regain their self-worth perception (Hoegg et al. 2014). For example, Wan and Wyer Jr (2015) show that when concerns about how one looks are made salient, consumers react less positively to service providers that are highly attractive in comparison with those who are less attractive. Thus, contrary to marketer expectations, the exposure to attractive models can have a detrimental impact on consumers. Based on these findings, it is possible that relative to using attractive models, the use of silhouettes can help to
enhance communication effectiveness by mitigating self-threat perceptions that are activated when consumers see attractive models. The reason is that unlike attractive models, silhouettes are artistic representations of human shapes that reveal significantly fewer physical details, thus reducing social comparison in terms of physical attractiveness. For example, as Figure 2 illustrates, whereas the picture of the attractive model is full of fine details that convey how she looks, the type of clothes that she is wearing, the color of her hair, her facial expressions, etc., such information is not present in the silhouette created from that exact same picture. The lack of appearance-related cues in silhouettes consequently should help to reduce consumers’ self-threat perceptions by comparing themselves to the attractive models.

Furthermore, I predict that the enhanced effectiveness of silhouettes (relative to attractive models) would hold mainly for appearance-related products (rather than for non-appearance-related products). Cambridge dictionary defines appearance as “the way a person or thing looks to other people”. In line with this definition, appearance-related consciousness has been conceptualized as “the extent to which individuals’ thoughts and behaviors reflect ongoing awareness of whether they might look attractive” (p. 164; Choukas-Bradley et al. 2020). Thus, appearance-related products are those that might alter the appearance of their users (Lo et al. 2013), and are frequently used to help consumers enhance how they look (Lo et al. 2013; Sarpila 2013) because these products can “provide affirmational value to one's sense of appearance” (p. 71; Hoegg et al. 2014). Previous research suggests that people are more likely to engage in social comparison about how they look when contexts that give rise to such comparisons are made salient (Argo and Dahl 2018; Hoegg et al. 2014; Patrick et al. 2004). The exposure to appearance-related products has been shown to be one of such contexts because these products
<table>
<thead>
<tr>
<th>Silhouette</th>
<th>Attractive model</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="silhouette_image" alt="" /></td>
<td><img src="model_image" alt="" /></td>
</tr>
</tbody>
</table>

Figure 2. Contrast Between A Silhouette And A Model Image
prompt consumers to think about their own appearance and increase appearance-related social comparison with surrounding referents (Argo and Dahl 2018; Dahl et al. 2012; Dahl et al. 2001).

For example, advertisements about appearance-related products may include pictures and texts that not only directly emphasize the importance of appearance but also implicitly trigger comparison with the featured attractive models, thus giving rise to debilitating thoughts about one’s appearance (e.g., “She is prettier than I am”) (Bower 2001; Richins 1991). In the context of this research, such findings suggest that the effect of silhouettes (relative to attractive models) in reducing self-threat perceptions should happen only when consumers have salient thoughts about how they look, and consequently, is more likely to hold for appearance-related products than for non-appearance-related products. Previous research provides direct support for this proposition by showing that whereas there is a significant difference between using highly attractive models versus merely attractive models in terms of ad effectiveness for appearance-enhancing products, no such difference exists in the case of problem-solving products (Bower and Landreth 2001). In the same vein, Argo and Dahl (2018) show that a mannequin is used to showcase products, consumers reduce their evaluations only in the case of appearance-related products. Tiggemann and Barbato (2018) further show that comments on social media platforms (e.g., Facebook) will lead to greater body dissatisfaction when they are related to appearance than when they are not. Consequently, I predict that:

**H1:** Relative to employing attractive models, silhouette use increases marketing communication effectiveness for appearance-related products only.

**H2:** The marketing effectiveness gains associated with silhouette use relative to attractive model use occur because the former reduces consumers’ self-threat perceptions.
Silhouette Effect and Self-esteem

Self-esteem has been defined as “an attitude about the self and is related to personal beliefs about skills, abilities, social relationships, and future outcomes” (p. 220; Heatherton and Wyland 2003). Research in psychology suggests that there are certain differences between high and low self-esteem individuals. For example, high self-esteem individuals tend to adopt a self-enhancing mindset such as being more open to risk-taking, wanting more attention, emphasizing one’s good qualities (Baumeister et al. 1989; Rudich and Vallacher 1999; Schütz and Tice 1997). On the other hand, low self-esteem individuals tend to adopt a self-protective mindset characterized by a desire to avoid making mistakes, being unwilling to take risks, and trying to escape attention (Baumeister et al. 1989; Rudich and Vallacher 1999; Schütz and Tice 1997).

Low self-esteem individuals also tend to make decisions based on social acceptance (Anthony et al. 2007) and the possibility of building a genuine relationship (Rudich and Vallacher 1999). Interestingly, low self-esteem individuals tend to reject positive feedback about themselves (e.g., compliments) because they don’t think such positive feedback reflects who they really are (Kille et al. 2017; Swann Jr et al. 1992). In addition, people with low self-esteem are more likely to ignore positive experiences (Wood et al. 2003) or feel anxious after making an achievement because they think such success may bring undesirable outcomes (Wood et al. 2005). Previous research also suggests that people with high and low self-esteem tend to react differently in various marketing contexts. For example, low self-esteem individuals (high self-esteem individuals) tend to prefer products with a less (more) conspicuous design when they feel embarrassed (Song et al. 2017), choose inferior (superior) products that fit their self-views (Stuppy et al. 2020), and increase purchase and consumption amounts in response to increased mortality salience (Mandel and Smeesters 2008). Importantly, prior research finds that
consumers with low appearance self-esteem are highly sensitive to external factors (Argo and White 2012) and are likely to engage in negative social comparison upon exposure to an attractive referent (Dahl et al. 2012). Based on these findings, I surmise that the benefits of silhouette (versus attractive model) use in marketing communications are likely to be more pronounced among relatively low appearance-related self-esteem individuals. I predict this would occur because relatively low appearance-related self-esteem individuals are likely to be particularly vulnerable to the impact of self-threat when exposed to attractive model images, while relatively high appearance-related self-esteem individuals are not. Previous research supports this proposition by demonstrating that low self-esteem individuals tend to feel insecure about their qualities, even if such feelings are unwarranted (Murray et al. 2000). Low self-esteem individuals also tend to think that other people have a negative view of them, sometimes to dramatic extents (Murray et al. 2000). As a result, those with low appearance self-esteem tend to prefer less attractive models to highly attractive models (Bian and Wang 2015) and dislike products that are endorsed by referents that exemplify beauty standards (Argo and Dahl 2018). Furthermore, prior research finds that (1) overweight people who feel they are unable to control their weight express less liking for slim models than their normal weight counterparts (Martin, Veer, and Pervan 2007), (2) images of celebrities with a positive public image decrease temporal self-esteem for consumers with low self-esteem (Sääksjärvi, Hellén, and Balabanis 2016), and (3) consumers with low self-esteem do not like to look at "professional model" images (Bian and Wang 2015). On the other hand, those with high appearance-related self-esteem consider normally attractive models to be equal to highly attractive models (Bian and Wang 2015) and tend to evaluate products endorsed by either normally attractive models or highly attractive models in the same manner. Based on the preceding theorizing and findings, I thus predict:
**H3:** The positive impact of silhouette use relative to attractive model use on marketing communication effectiveness strengthens as consumer self-esteem decreases.

**Studies**

Five studies were conducted to examine the central hypotheses in this research. Study 1A provides initial evidence for H1 that the use of silhouettes can help to enhance communication effectiveness relative to attractive models. Study 1B replicates this effect and provides further evidence for H1 by showing that the effect of silhouettes holds for appearance-related products but not for non-appearance-related products. Study 2 replicates findings in the previous two studies and provides evidence for H2 about the role of self-threat reduction as the mechanism for the effect of silhouettes. Study 3 helps to strengthen the results of Study 2 by ruling out alternative explanations for the effect while providing evidence for H3 that the effect of silhouettes tends to be more salient among people with relatively low appearance-related self-esteem. Last but not least, Study 4 provides more evidence to support both H2 and H3 via a process-by-moderation approach. Table 1 provides an overall summary of the five studies in this research.
### Table 1. Summary of Studies in Essay 1

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Type</th>
<th>Sample size</th>
<th>Primary objectives</th>
<th>Design</th>
<th>Product</th>
<th>Key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1A</td>
<td>Mturk workers</td>
<td>280</td>
<td>Seek initial evidence that silhouette use can enhance communication effectiveness relative to attractive model use.</td>
<td>Randomized between subject design with 3 ad conditions (silhouette, attractive model &amp; control).</td>
<td>Gym water bottle</td>
<td>Purchase intentions in the silhouette condition are higher than those in the attractive model condition.</td>
</tr>
<tr>
<td>Study 1B</td>
<td>Mturk workers</td>
<td>377</td>
<td>Extends Study 1A by showing that the effect of silhouettes holds for appearance-related products but not for non-appearance-related products.</td>
<td>Randomized between subject design with 2 (silhouette &amp; attractive model) x 2 (product type: appearance-related vs non-appearance related) ad conditions.</td>
<td>Swinwear for women (appearance-related), beach resort (non-appearance-related)</td>
<td>• For the appearance-related product, ad evaluation and purchase intentions in the silhouette condition are significantly higher than those in the attractive model condition. • For the non-appearance-related product (i.e., resort), there are no differences between the silhouette and attractive model conditions in terms of either ad evaluation or purchase intentions.</td>
</tr>
<tr>
<td>Study 2</td>
<td>Prolific male workers</td>
<td>201</td>
<td>Seek evidence of the underlying mechanism for the effect of silhouettes: reduction in self-threat perceptions.</td>
<td>Randomized between subject design with 2 ad conditions (silhouette vs attractive model).</td>
<td>Swinwear for men</td>
<td>• Ad evaluation and purchase intentions in the silhouette condition are significantly higher than those in the attractive model condition. • Mediation analyses show that reduction in perceived self-threat is the mechanism for the effects observed.</td>
</tr>
<tr>
<td>Study 3</td>
<td>Mturk workers</td>
<td>205</td>
<td>• Seek evidence that the effect of silhouettes tends to increase as appearance-related self-esteem decreases. • Rule out some alternative explanations.</td>
<td>Randomized between subject design with 3 ad conditions (silhouette, attractive model &amp; control). Self-esteem was measured as a continuous variable.</td>
<td>Swinwear for women</td>
<td>• There are significant interactions between the use of silhouettes and appearance self-esteem:  - At low appearance self-esteem level: the use of silhouette (vs attractive model) helps to enhance ad evaluation and purchase intentions.  - At high appearance self-esteem level: the use of attractive model (vs silhouette) helps to enhance ad evaluation and purchase intentions. • Alternative explanations ruled out include beauty standard signals, fear of rejection, derogation.</td>
</tr>
<tr>
<td>Study 4</td>
<td>Prolific female workers</td>
<td>349</td>
<td>• Strengthen support for the proposed underlying mechanism through a process-by-moderation approach. • Provide more evidence that the effect of silhouettes tends to increase as appearance-related self-esteem decreases.</td>
<td>Randomized between subject design with 2 (silhouette &amp; attractive model) x 2 (threat priming: no-threat vs threat-induced) conditions. Self-esteem was measured as a continuous variable.</td>
<td>Self-tanning product</td>
<td>• In the no-threat condition, there are significant interactions between the use of silhouette and appearance-related self-esteem:  - At low appearance-related self-esteem level: the use of silhouette (vs attractive model) helps to enhance ad evaluation and product attitude.  - At high appearance self-esteem level: the use of silhouette is similar to that of attractive model in enhancing ad evaluation and product attitude. • In the threat-priming condition, there are no significant interactions between the use of silhouette and appearance-related self-esteem. The use of silhouette (vs attractive model) is overall better at enhancing ad evaluation and product attitudes across self-esteem levels.</td>
</tr>
</tbody>
</table>
Study 1A

Method

Participants and Design. Study 1A was designed as an initial test of H1, which posits that, in the case of appearance-related products, using silhouettes is more effective than using attractive models for achieving desired communication outcomes. To achieve this objective, this study uses a randomized between-subject experimental design with three ad conditions. 280 Amazon Mechanical Turk (Mturk) participants were recruited for this study (48.60% Male, M_{Age} = 37 years).

Procedure. After consenting to be involved in the study, participants were asked to carefully look at one of three ads, which were randomly assigned across participants (the ad stimuli and focal questions used in all of the studies in this research are available in Appendix C). The ads in this study are about a fictitious water bottle brand and feature either an attractive model, the silhouette created from that model or no images but some words on the bottle (the latter served as the control condition). After seeing one of three the ads, participants were asked to answer questions about their purchase intentions (5 items, \( \alpha = .98 \)) (e.g., “To what extent do you feel like you want to buy the product in the ad?” on a 7-point scale with 1 being “not at all” and 7 being “very much”, “How likely are you to purchase the water bottle?” on a 7-point scale with 1 being “not likely at all” and 7 being “highly likely”). Because the context of this ad is about working out, an item that measures participants’ level of interest in working out was included for control purposes. I also included a manipulation check question about the type of image that participants saw and an attention check question. At the end of the survey, participants were asked demographic questions (age and gender) and then debriefed.
Results

Five participants failed the attention check question and were removed from all the analyses mentioned in this study, leaving a usable sample of 275 participants.

Manipulation Checks. The manipulation in this study worked as intended: participants in the silhouette condition confirmed that they saw a silhouette image (80%), whereas participants in the model condition confirmed that they saw the model image (84.4%), and those in the control condition confirmed that they didn’t see any human images but a bottle of water with texts on it (83.8%; χ²(4, N = 275) = 306.51, p < .001).

Effect of Image Type. An ANCOVA (controlling for interest in working out) was performed to examine the main effect of image type on purchase intentions. The results reveal a significant main effect of image type on purchase intentions (F(2, 271) = 3.03, p = .05; see Table 2 for details).

In support of H1, planned contrasts reveal that purchase intentions in the silhouette condition are significantly higher than in the attractive model condition (M_{Model} = 3.62; M_{Silhouette} = 4.23; F(1, 271) = 4.39, p = .04). In addition, purchase intentions in the control condition are also significantly higher than in the attractive model condition (M_{Model} = 3.62; M_{Control} = 4.26; F(1, 271) = 4.72, p = .03), and there is no significant difference between the silhouette condition and the control condition in terms of purchase intentions (M_{Control} = 4.26; M_{Silhouette} = 4.23; F(1, 271) = .18, p = .67). Figure 3 provides a graphical summary of these results.
Table 2. ANCOVA Results in Study 1A (Essay 1)

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares (SS)</th>
<th>df</th>
<th>Mean Square (MS)</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Model</td>
<td>91.335</td>
<td>3</td>
<td>30.445</td>
<td>7.506</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Intercept</td>
<td>169.041</td>
<td>1</td>
<td>169.041</td>
<td>41.674</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Workout Liking</td>
<td>68.337</td>
<td>1</td>
<td>68.337</td>
<td>16.847</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Image type</td>
<td>24.602</td>
<td>2</td>
<td>12.301</td>
<td>3.033</td>
<td>0.05</td>
</tr>
<tr>
<td>Error</td>
<td>1099.239</td>
<td>271</td>
<td>4.056</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5633.88</td>
<td>275</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>1190.574</td>
<td>274</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 3.  
Purchase Intentions in Study 1A (Essay 1)
Discussion

In line with H1, the results from this study demonstrate that purchase intentions in the silhouette condition are significantly higher than that in the attractive model condition. Thus, this study provides initial evidence that the use of silhouettes can be more effective than using attractive models to achieve desired marketing communication outcomes. However, Study 1A has some shortcomings. First, I did not confirm whether the ad context was relevant to appearance or not. Second, it was unclear whether participants in this study thought of the model as attractive or not. Third, I used a male model image in this study, so it is possible that female participants might have viewed the image as unfit with their gender identity. Even though previous research finds that the gender of models does not distort the impact of attractive models on consumers (e.g., Argo and Dahl 2018), a more controlled design is needed to rule out potential confounds associated with gender identity. Thus, given initial evidence in this study, Study 1B was conducted to further examine the effect of silhouettes while addressing the shortcomings of Study 1A.

Study 1B

Method

*Participants and Design.* Besides aiming to replicate the effect of silhouettes as seen in Study 1A, Study 1B also sought direct evidence to further support H1 that the superior effect of silhouettes (over attractive models) mainly holds for appearance-related products rather than for non-appearance-related products. Thus, this study employs a 2 (image type: silhouette vs attractive model) by 2 (product type: appearance-related vs non-appearance-related) design in a randomized between subject experiment. 377 Amazon Mechanical Turk (Mturk) female participants were recruited for this study ($M_{\text{Age}} = 41$ years).
Procedure. After consenting to participate, participants were asked to carefully look at one of four ads, which were randomly assigned among participants. The ads in this study feature either an attractive model or a silhouette created from that model. In the appearance-related product condition, participants saw an ad from a fictitious brand of swimwear for women and a bikini as an exemplary product from this brand. In the non-appearance-related product condition, participants saw an ad from a fictitious resort and a photo of this resort. All of the questions and stimuli used in this study are available in Appendix C. After seeing one of four the ads, participants were asked to evaluate the ad using a scale (4 items, $\alpha = .97$) adapted from McQuarrie and Mick (1999) (e.g., “What is your overall opinion of the ad?” on a scale of 1 to 9 anchored by “highly unfavorable” and “highly favorable” respectively) and to indicate their purchase intentions (4 items, $\alpha = .98$) (e.g., “If the prices of this swimwear brand/the rates of this beach resort are affordable to me, I would definitely want to buy from this swimwear brand/stay at this beach resort” on a scale of 1 to 9 anchored by “highly unfavorable” and “highly favorable” respectively). I also included an attention check question, a manipulation check question about the type of image that participants saw, and a question about whether participants thought of the focal product/service in the ad as appearance-related or unrelated to appearance (“The ad that you saw was definitely about: 1= an appearance-related product or service, and 9 = a non-appearance-related product or service”). Participants were also asked to indicate the extent to which they thought that the model in the ad was attractive (“How would you rate the attractiveness (appearance) of the model in the ad?” on a scale of 1 to 9 anchored by “not attractive at all” and “highly attractive” respectively). At the end of the survey, participants provided information about age and were then debriefed.
Results

Nine participants failed the attention check question and were removed from all the analyses mentioned in this study, leaving a usable sample of 368 participants.

Manipulation Checks. The manipulation of image type worked as intended: participants in the silhouette condition confirmed that they saw a silhouette image (97.6%), whereas participants in the model condition confirmed that they saw the model image (88.4%) ($\chi^2(2, N = 368) = 268.38$, $p < .001$). The manipulation of product type was also successful: participants thought of swimwear as highly related to appearance ($M_{Swimwear} = 2.49$, $t(180) = -15.32$, $p < .001$) and of the resort as not related to appearance ($M_{Resort} = 5.07$, $t(186) = .36$, $p = .72$). In addition, participants also considered the model in this study to be highly attractive ($M_{Model} = 8.00$, $t(180) = 32.96$, $p < .001$). Thus, all the intended manipulations worked in this study.

Effect of Image Type by Product Type. An independent sample t-test reveals that the silhouette image is considered to be significantly less attractive than the model image ($M_{Model} = 8.00$, $M_{Silhouette} = 7.06$, $t(327) = 5.80$, $p < .001$). Previous research suggests that the attractiveness level of a visual stimulus can meaningfully influence how consumers respond to the marketing communication efforts, such that when the attractiveness level is reduced, the influence becomes insignificant (Argo and Dahl 2018). Thus, attractiveness was included in subsequent analyses as a control variable to rule out potential confounding effects and to address concerns that the effect of silhouettes might be mainly driven by the attractiveness level of the focal image. Thus, when the attractiveness of the focal image is controlled for, any effect of silhouette use on the dependent variables should exist above and beyond the influence of attractiveness.
Table 3. Image Type and Product Type Interactions in Study 1B (Essay 1)

<table>
<thead>
<tr>
<th>Source</th>
<th>Ad Evaluation</th>
<th>Purchase Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SS</td>
<td>df</td>
</tr>
<tr>
<td>Overall Model</td>
<td>488.937</td>
<td>4</td>
</tr>
<tr>
<td>Intercept</td>
<td>115.358</td>
<td>1</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>242.575</td>
<td>1</td>
</tr>
<tr>
<td>Product Type</td>
<td>208.709</td>
<td>1</td>
</tr>
<tr>
<td>Image Type</td>
<td>53.808</td>
<td>1</td>
</tr>
<tr>
<td>Product * Image</td>
<td>10.763</td>
<td>1</td>
</tr>
<tr>
<td>Error</td>
<td>1366.06</td>
<td>363</td>
</tr>
<tr>
<td>Total</td>
<td>18635.5</td>
<td>368</td>
</tr>
</tbody>
</table>
I conducted ANCOVAs (controlling for attractiveness) to examine the interaction between image type and product type on participant’s evaluation of the ad and purchase intentions. The results are reported in Table 3. The results show that there is a marginally significant interaction between image type and product type on purchase intentions ($F(1, 363) = 3.43, p = .065$)$^1$, a significant main effect of image type on purchase intentions ($F(1, 363) = 8.37, p = .004$), and a significant main effect of product type on purchase intentions ($F(1, 363) = 86.99, p < .001$). Given a marginal interaction and significant main effects for both predictors, I examined the effect of image type within each level of product type to confirm my hypothesis (H1) that the effect of silhouettes would mainly hold for appearance-related products (but not for non-appearance-related products). Focusing on the non-appearance-related product condition (i.e., selecting only the cases in this condition), I performed an ANCOVA (controlling for attractiveness) with image type as the main predictor and find that image type doesn’t influence purchase intentions ($M_{\text{Model}} = 7.19; M_{\text{Silhouette}} = 7.47; F(1, 184) = 0.33, p = .57$). However, using similar procedure for the appearance-related product condition, I find that image type significantly influences purchase intentions in the appearance-related product condition such that purchase intentions in the silhouette condition are significantly higher than those in the attractive model condition ($M_{\text{Model}} = 4.51; M_{\text{Silhouette}} = 5.68; F(1, 178) = 9.89, p = .002$). Thus, these results support H1 that the effect of silhouettes (relative to attractive models) in enhancing communication effectiveness would hold mainly for appearance-related products (but not for non-appearance-related products)$^2$. Figure 4 illustrates how purchase intentions differ across

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$^1$ This interaction effect became significant at traditional levels ($p < .05$) when attractiveness was removed from the model: $F(1, 364) = 4.98, p = .026$.

$^2$ It is worth noting here that even though the effect of silhouettes (relative to attractive models) differs for different product type, the interaction between image type and product type is not significant at the conventional level ($p < .05$) because I controlled for attractiveness level. In fact, this interaction becomes significant if attractiveness level is
conditions. ANCOVA results on purchase intentions for each product type are reported in Appendix G.

The results for the effect of silhouette use (relative to attractive models) on ad evaluation follows the same pattern as purchase intentions\(^3\). For the sake of brevity, these results are reported in Appendix G.

**Discussion**

Study 1B offers further evidence in support of H1. Specifically, the results of this study reveal that for appearance-related products, the use of silhouettes enhances marketing communication effectiveness, thus replicating the findings in Study 1A. However, for non-appearance-related products, I find no difference between the use of silhouettes and attractive models. Given these findings, the next study was conducted to explore the mechanism for the superior effect of silhouettes over attractive models.

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\(^3\) There is a positive correlation between ad evaluation and purchase intentions in this study \((r = .81, n = 368, p < .001)\).
Figure 4. **Purchase Intentions across conditions in Study 1B (Essay 1)**
Study 2

Method

*Participants and Design.* The previous two studies provide evidence to support H1; namely, that silhouette use can enhance the effectiveness of marketing communication. Building on these findings, the objective of Study 2 was to explore the mechanism that underlies this effect. As stated in H2, I hypothesize that in comparison with using attractive models, the use of silhouettes can be more effective in marketing communications because silhouettes help to reduce perceived self-threat upon exposure to marketing ads. To test this proposition, this study randomized two ad conditions (silhouette vs attractive model) among participants. 201 Prolific male participants were recruited for this study (M_Age = 29 years). I recruited male participants for this study to show the generalizability of the silhouette effect and mitigate concerns that this effect may pertain to only women (as shown in Study 1B).

*Procedure.* After consenting to participate, participants were asked to carefully look at one of two ads, which were randomly assigned across participants. The ads in this study feature either an attractive model or a silhouette created from that model. In this study, the ads are about a fictitious brand of swimwear for men. After seeing one of the two ads, participants were asked to answer questions about ad evaluation (4 items, α = .95) and purchase intention (4 items, α = .92) (the items are similar to those used Study 1A and Study 1B and are reported in Appendix C). Self-threat reduction is measured with two items adapted from Park and Maner (2009) (r = .66, n = 195, p < .001) (“How did the model in the ad make you feel about yourself?” on a 9-point scale with 1 being “very bad about myself” and 9 being “very good about myself”; and “After seeing the model in the ad, what was your mood?” on a 9-point scale with 1 being “very negative mood” and 9 being “very positive mood”). Thus, lower scores of this measure would suggest
high levels of perceived self-threat, whereas higher scores of this measure would suggest
reduction in self-threat perceptions. I also included an attention check question, a manipulation
check question about the type of image that participants saw, and a question about whether
participants thought of the product as appearance-related or non-appearance-related (similar to
Study 1B). Participants were also asked to indicate the extent to which they thought that the
model in the ad was attractive (similar to Study 1B). To get insights into how the use of
silhouettes could influence self-esteem, I also included self-esteem measures adapted from
Heatherton and Polivy (1991). This scale has been frequently used in marketing research (e.g.,
Argo and Dahl 2018; McFerran et al. 2010; Pounders et al. 2017) and includes questions that
Even though the conceptual framework of this research focuses on appearance-related self-
esteeem, I included the whole scale to reduce participants guessing that the study concentrated on
their appearance and thus would give biased responses out of social desirability (Podsakoff et al.
2003). In addition, the three subgroups of this scale were also counterbalanced in the order that
they appeared. At the end of the survey, participants were asked questions about age, race and
then debriefed.

Results

Six participants failed the attention check question and were removed from all the
analyses mentioned in this study, leaving a usable sample of 195 participants.

Manipulation Checks. The manipulation of image type worked as intended: participants in the
silhouette condition confirmed that they saw a silhouette image (100%), whereas participants in
the model condition confirmed that they saw the model image (91.5%) ($\chi^2 (1, \ N = 195) =
162.06, p < .001$). Participants also thought of the focal product in this study as being highly
related to appearance ($M_{Swimwear} = 7.19, t(194) = 14.49, p < .001$) and considered the model in this study to be highly attractive ($M_{Model} = 7.23, t(96) = 11.31, p < .001$). Thus, the manipulations worked as intended.

Effect of Image Type. Consistent with Study 1B, an ANCOVA (controlling for attractiveness) was performed to examine the effect of image type on ad evaluation and purchase intentions. The results are reported in Table 4.

First, there is a significant main effect of image type on ad evaluation such that ad evaluation in the silhouette condition is significantly higher than in the model condition ($M_{Model} = 4.09; M_{Silhouette} = 5.81; F(1, 192) = 38.82, p < .001$). Additionally, there is a significant main effect of image type on purchase intentions such that intent to purchase is significantly higher in the silhouette condition than that in the model condition ($M_{Model} = 2.71; M_{Silhouette} = 5.15; F(1, 192) = 59.86, p < .001$). Figure 5 illustrates how ad evaluation and purchase intentions differ across image type conditions.

The Underlying Mechanism. To test H2, that self-threat reduction is the mechanism for the effects of silhouettes mentioned above, I performed a mediation analyses using SPSS PROCESS by Hayes (2017) (Model 4) with the self-threat measure as the mediator, image type as the categorical independent variable, ad evaluation and purchase intentions as separate dependent variables, and attractiveness as the control variable. The results show that self-threat reduction indeed mediates the effect on image type on the focal dependent variables in this study (see Appendix H for result details of these analyses). Specifically, for ad evaluation, the use of silhouettes (vs attractive models) leads to self-threat reduction, which then helps to increase ad evaluation (indirect effect coefficient = .39; 95% CI [.10, .69]). Similarly, for purchase
### Table 4. Effect of Image Type in Study 2 (Essay 1)

<table>
<thead>
<tr>
<th>Source</th>
<th>Ad Evaluation</th>
<th>Purchase Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SS</td>
<td>df</td>
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<td>Overall Model</td>
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<tr>
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<tr>
<td>Attractiveness</td>
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<td>Image Type</td>
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<td>1</td>
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<td>192</td>
</tr>
<tr>
<td>Total</td>
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<td>195</td>
</tr>
</tbody>
</table>

![Silhouette Effects in Study 2 (Essay 1)](image)

**Figure 5.** Silhouette Effects in Study 2 (Essay 1)
The use of silhouettes (vs attractive models) 

Self-threat reduction

$\beta = .54, t(192) = 2.46, p = .02$

Ad evaluation

$\beta = .71, t(192) = 9.55, p < .001$

购买意图

$\beta = 1.33, t(192) = 5.77, p < .001$

Figure 6. Mediation Path on Ad Evaluation in Study 2 (Essay 1)

The use of silhouettes (vs attractive models)

Self-threat reduction

$\beta = .54, t(192) = 2.46, p = .02$

购买意图

$\beta = .68, t(192) = 7.36, p < .001$

$\beta = 2.07, t(192) = 7.32, p < .001$

Figure 7. Mediation Path on Purchase Intentions in Study 2 (Essay 1)
intentions, the use of silhouettes (vs attractive models) also leads to self-threat reduction, which then helps to increase purchase intentions (indirect effect coefficient = .37; 95% CI [.09,.68]). Figures 6a & 6b illustrate these mediation paths.

**Self-esteem and Self-threat.** In line with the proposed conceptual framework, I also tested whether the benefits of silhouette use (relative to model use) increase with decreasing levels of appearance-related self-esteem. To test this possibility, I conducted a moderation analysis using SPSS PROCESS by Hayes (2017) (Model 1) with the self-threat measure as the dependent variable, image type as the categorical independent variable, the average of four items (α = .87) that measure appearance self-esteem as the moderator⁴, and attractiveness as the control variable. The results reveal a significant interaction between image type and appearance self-esteem on self-threat reduction ($F(1, 190) = 20.48$, $p = .05$), such that at relatively low appearance self-esteem levels (1SD below the mean), the use of silhouettes (vs attractive models) significantly reduces self-threat perceptions ($\beta = .98$, $t = 3.64$, $p < .001$), but no benefit of using silhouettes (vs attractive models) emerges at relatively high appearance self-esteem level (1SD above the mean) ($\beta = .23$, $t = .87$, $p = .38$).

As a robustness check, I also examined whether performance-related self-esteem and social self-esteem moderate the effect of silhouettes (relative to attractive models) on self-threat perceptions using similar analytical procedures. I find that neither performance self-esteem ($F(1, 190) = .00$, $p = .95$) nor social self-esteem ($F(1, 190) = .16$, $p = .69$) influences the effect of silhouettes (relative to attractive models) on self-threat perceptions. Because there is no impact of social self-esteem or performance-related self-esteem on any of the dependent variables in this

---

⁴ This approach is used by Argo and Dahl (2018). Specifically, they revised the scale by removing two items that are not directly relevant to appearance (“I feel that others respect and admire me” & “I feel good about myself”) from the original appearance self-esteem scale by Heatherton and Polivy (1991).
study and in the subsequent studies, these two factors will not be discussed further for the sake of brevity. These findings suggest that appearance concerns are central to the beneficial effects of silhouettes, and thus the effect would be more salient among those who are more vulnerable to such concerns.

Discussion

The results of Study 2 not only lend more support to H1, but also provide direct evidence in support of H2. Specifically, besides replicating the two previous studies’ findings that the use of silhouettes is more effective than using attractive models, Study 2 indicates that this effect occurs because silhouettes use results in lower self-threat perceptions. In addition, Study 2 provides initial evidence that the effect of silhouettes on self-threat reduction is more salient among people with relatively low appearance self-esteem. Taken together, these findings provide initial support for my overall conceptual framework.

Study 3

The primary objective of this study was to extend the Study 2 findings in two important ways. First, I wanted to seek more evidence in support of H3, which posits that the marketing effectiveness gains associated with silhouette use (relative to attractive model use) will increase as consumer appearance-related self-esteem decreases. Second, I wanted to examine alternative explanations for the effect of silhouettes (vs attractive models). These alternative explanations were based on previous works which suggest that attractive models can either signal beauty standards that make people feel they can’t measure up (Argo and Dahl 2018) or evoke fear of rejection (Argo and Dahl 2018), leading to lower preferences for communications that feature attractive models. In addition, it has been shown that people may derogate attractive models and underrate the communications that feature these models as a way to reinforce self-esteem and
feel better (Richins 1991). Thus, I included relevant measures for these alternative explanations in this study and explored their mediational roles. The lack of evidence to support the mediational roles of these alternative explanations would strengthen support for H2, which posits that a reduction in self-threat perceptions is the most likely explanation for the effect of silhouettes (vs attractive models) observed in this research.

Method

Participants and Design. To test the proposition that effect of silhouettes (vs attractive models) as seen in previous studies tends increase as consumer appearance-related self-esteem decreases, this study manipulates the type of image in ads (silhouette vs attractive model vs control) while measuring self-esteem as a continuous variable across ad conditions. I brought back the control condition in this study to address a concern that the ad in the control condition in Study 1A uses texts rather than images, and therefore is not highly comparable to the ads in silhouette and attractive model conditions. Thus, it is possible that such differences in design might have driven different responses from participants, rather than the effect of image type as proposed in this research. In this study, I aimed to address this concern by coming up with ad stimuli that are similar in terms of design rating across different conditions. Once ad stimuli are similar in terms of design rating, any differences due to image type manipulation would provide more persuasive evidence for the effect of silhouettes. 205 Mturk female participants were recruited for this study (M_{Age} = 42 years).

Procedure. After consenting to participate, participants were asked to carefully look at one of three ads, which were randomly assigned across participants. The ads in this study featured either an attractive model, a silhouette created from that model, or a stylized starfish. In this study, the ads are about a fictitious brand of swimwear for women. Participants also saw an exemplary
product from the brand along with one of the three ads (all of the ad stimuli and measures used in this study are available in Appendix C). After seeing one of the ads, participants were asked to answer questions about ad evaluation (4 items, $\alpha = .98$) and purchase intentions (3 items, $\alpha = .97$) (similar to those used in the previous studies). To reduce participants guessing about the true purpose of the study, before showing participants the self-esteem measures adapted from Heatherton and Polivy (1991) as in Study 2, I followed best practices in experimental design (Podsakoff et al. 2003) and asked participants to respond to a series of distracting questions to avoid participants guessing the true purpose of this study (“To what extent do you like to travel?” with a 9-point scale anchored by 1 being “to a very small extent” and 9 being “to a very large extent”; “To what extent has Covid 19 impacted your travel plan so far?” with a 9-point scale anchored by 1 being “to a very small extent” and 9 being “to a very large extent”; “To what extent would you agree with this statement: “Covid 19 is my major concern when travelling these days” with a 9-point scale anchored by 1 being “completely disagree” and 9 being “completely agree”). After the distracting questions and the self-esteem measures, participants answered questions related to the alternative explanations including signal of beauty (adapted from Argo and Dahl (2018) with 2 items, $r = .94$, $n = 197$, $p < .001$), fear of rejection (1 item adapted from Argo and Dahl (2018)), derogation (adapted from Richins (1991) with 5 items, $\alpha = .92$) and perceived similarity (1 item). The order of these questions was also counterbalanced. To confirm the role of self-threat reduction, I also added two items for this measure ($r = .94$, $n = 197$, $p < .001$) adapted from Dommer and Swaminathan (2013) (“In comparison with other people, what is your opinion of yourself wearing the bikini from the brand in the ad?” with a 9-point scale anchored by 1 being “very negative” to 9 being “very positive”; “In comparison with other people, how do you view the image of yourself wearing the bikini from the brand in the
ad?” with a 9-point scale anchored by 1 being “very negative” and 9 being “very positive”). I also included an attention check question, a manipulation check question about the type of image that participants saw, and a question about whether participants thought of the advertised brand as relevant to appearance or not. Participants were also asked to indicate the extent to which they thought that the model in the ad was attractive and how they thought of the overall design of the ad (adapted from Cian et al. (2014) with 2 items, \( r = .89, n = 197, p < .001 \)). At the end of the survey, participants were asked to indicate their age and then debriefed.

Results

Eight participants failed the attention check question and were removed from all the analyses mentioned in this study, leaving a usable sample of 197 participants. Descriptive statistics for the variables in this study are reported in Appendix D.

Manipulation Checks. The manipulation of image type worked as intended: participants in the silhouette condition confirmed that they saw a silhouette image (93.3%), participants in the model condition confirmed that they saw the model image (72.9%), and participants in the control condition confirmed that they didn’t see any human images (98.1%) \( \chi^2 (4, N = 197) = 254.94, p < .001 \). Participants also thought of the focal product in this study as highly relevant to appearance \( (M_{\text{Swimwear}} = 6.03, t(196) = 6.42, p < .001) \) and considered the model in this study to be highly attractive \( (M_{\text{Model}} = 9.14, t(63) = 16.99, p < .001) \). Importantly, there is no significant difference among the three ad conditions in terms of ad design \( (M_{\text{Model}} = 6.08; M_{\text{Silhouette}} = 6.25; M_{\text{Control}} = 6.50; F(2, 194) = .54, p = .58) \). This evidence suggests that any differential effect among the ad conditions in this study is unlikely to be driven by ad design. Thus, the study manipulations worked as intended.
Self-esteem and Image Type. To test H3 which posits that the effect of silhouettes (vs attractive models) is likely to increase as consumer appearance-related self-esteem decreases, I conducted a moderation analyses using SPSS PROCESS by Hayes (2017) (Model 1) with ad evaluation and purchase intentions as separate dependent variables, image type as the categorical independent variable with two focal ad conditions (silhouette and attractive model), the average of four items ($\alpha = .87$) that measure appearance self-esteem as the moderator (similar to Study 2), and attractiveness as the control variable (consistent with the previous two studies). The results of these analyses are presented in Table 5. First, there is a significant interaction between image type and appearance self-esteem on ad evaluation ($F(1, 127) = 9.54, p = .003$). Floodlight analysis (Spiller et al. 2013) reveals that for relatively low appearance self-esteem individuals (individuals with self-esteem levels less than 4), the use of silhouettes (vs attractive models) significantly helps to enhance ad evaluation ($B_{IJ} = .86, SE = .43, p = .05$), whereas for relatively high appearance self-esteem individuals (individuals with self-esteem levels higher than 8.45), the opposite is true: the use of attractive models (vs silhouettes) significantly helps to enhance ad evaluation ($B_{IJ} = -1.33, SE = .67, p = .05$). The results of this floodlight analysis are illustrated in Figure 7. There is also a significant interaction between image type and appearance self-esteem on purchase intentions ($F(1, 127) = 5.19, p = .03$). Floodlight analysis (Spiller et al. 2013) reveals that for individuals whose appearance-related self-esteem level is less than 7.26, the use of silhouettes did not differ significantly from using attractive models in terms of evoking purchase intentions. However, for individuals whose appearance-related self-esteem level is equal to or more than 7.26, the use of attractive models (relative to using silhouettes) significantly helps to enhance purchase intentions ($B_{IJ} = -1.26, SE = .64, p = .05$). The results of this floodlight analysis are illustrated in Figure 8.
Table 5. Interaction Results in Study 3 (Essay 1)

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Ad Evaluation</th>
<th>Purchase Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>SE</td>
</tr>
<tr>
<td>Constant</td>
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<td>Image Type (IT)</td>
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<td>Self-esteem (SE)</td>
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<td>IT*SE</td>
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</tr>
<tr>
<td>Attractiveness</td>
<td>0.557</td>
<td>0.12</td>
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</tbody>
</table>

$R^2 = .2683$  $R^2 = .2686$


Figure 8. Interaction Results in Study 3 (Essay 1)
Mediation Analyses. To examine whether each of the potential explanatory factors mediates the effect of silhouettes (vs attractive models) across different levels of appearance self-esteem in this study, I conducted moderated mediation analyses using SPSS PROCESS by Hayes (2017) (Model 7) with ad evaluation and purchase intentions as separate dependent variables in each analysis, image type as the categorical independent variable that with two focal ad conditions (silhouette and attractive model), the appearance self-esteem measure as the moderator, attractiveness as the control variable, and each of the alternative explanatory factors as a separate mediator in each analysis. The results of these analyses are reported in Appendix E. Overall, there is no evidence to suggest that any of the potential alternative explanations (i.e., signal of beauty standards, fear of rejection, model derogation) is likely to be the mechanism for the effect of silhouettes (relative to attractive models) in this study. However, similar to findings in Study 2 and in support of H2, the results show that self-threat reduction mediates the effect of image type on both ad evaluation (index of moderated mediation = -.14; 90% CI [-.27, .02]) and purchase intentions (index of moderated mediation = -.21; 90% CI [-.40, -.03]) in this study. The mediation paths are shown in Figures 9a & 9b.
Figure 9. Effects on Purchase Intentions in Study 3 (Essay 1)

The use of silhouettes (vs attractive models) → Appearance self-esteem → Self-threat reduction

\[ \beta = .28, t(127) = -1.69, p = .09 \]

Appearance self-esteem → Ad evaluation

\[ \beta = .56, t(128) = 1.64, p = .10 \]

Figure 10. Mediation Path on Ad Evaluation in Study 3 (Essay 1)
Figure 11. Mediation Path on Purchase Intentions in Study 3 (Essay 1)
Discussion

Along with the evidence in Study 2, the results of Study 3 offer further support for H3 that the effect of silhouettes (over attractive models) is likely to increase when appearance-related self-esteem decreases. In addition, Study 3 also yields more evidence to support H2 that reduction in self-threat perceptions is the underlying mechanism for this effect. Moreover, the evidence in Study 3 helps to rule out some alternative explanations for the effect of silhouettes (vs attractive models). However, a limitation in Study 3 is that the effect of silhouette use (relative to attractive model use) on purchase intentions is directional as hypothesized but not statistically significant. Therefore, I conducted Study 4 to provide a more robust test of the proposed underlying mechanism as well as to seek more support for H3 that the effect of silhouettes (over attractive models) is likely to increase when appearance-related self-esteem decreases.

Study 4

So far, the studies in this research provide two important insights: first, the use of silhouettes (relative to attractive models) enhances communication effectiveness for appearance-related products; and second, this effect is likely to increase as consumer appearance-related self-esteem decreases. To further corroborate these propositions while seeking more evidence for the role of self-threat reduction as the underlying mechanism, I conducted Study 4 in which I adopted a process-by-moderation approach (Spencer et al. 2005) and manipulated self-threat to examine the effect of silhouettes (over attractive models) on marketing communication effectiveness. This approach has been used in previous research (e.g., Argo and Dahl 2018; Hasford et al. 2018; Hepworth et al. 2021) to establish the mechanism more compellingly for observed effects. If self-threat reduction is the underlying mechanism for the effect of silhouettes
(relative to attractive models), then such effect should be observed in the normal condition when there is no prior priming of appearance-related self-threat (as seen in the previous studies in which there is no prior priming of appearance-related self-threat). In other words, when there is no prior threat priming, the effect of silhouettes should increase as appearance self-esteem decreases. However, when appearance-related self-threat is induced prior to introducing the images, this pattern of effect should be disrupted, at least to some extent. The reason is that the priming of appearance-related self-threat, if successful, should make this threat salient among all participants beforehand, thus making people more sensitive to additional exposure to more appearance-related threats. So how would people react to seeing silhouettes and attractive models after an appearance-related threat is made salient? A meta-analysis by Vandellen et al. (2011) suggests that after a salient threat, people tend to engage in compensating reaction to recover self-concept, but high self-esteem individuals tend to do so at a much larger extent than low self-esteem individuals. They also find that whereas low self-esteem individuals may engage in breaking reactions to threat, high self-esteem individuals don’t exhibit such behaviors (Vandellen et al. 2011). In the context of this research, these findings suggest that when appearance-related self-threat is induced prior to introducing the images, the effect of silhouettes will not increase as appearance self-esteem decreases. Instead, it’s possible that even those who are relatively high in appearance-related self-esteem would prefer the use of silhouettes to attractive models as a compensating reaction to avoid more negative feelings, whereas those who are relatively low in appearance-related self-esteem would view silhouettes at least as favorably as model attractive models.
Method

*Participants and Design.* To test the above reasoning, this study employed a 2 (image type: silhouette vs attractive model) by 2 (threat priming: no-threat (control) vs threat induced) randomized between-subject design, with self-esteem measured as a continuous variable across conditions (similar to Studies 2 and 3). In line with H3, I predict that in the no-threat condition (when there is no prior priming of appearance-related self-threat), the effect of silhouettes (relative to attractive models) on enhancing communication effectiveness should be more salient among people with relatively low appearance self-esteem than among people with relatively high appearance self-esteem (consistent with Study 2 and Study 3). However, in the threat-induced condition, the effect of silhouettes (relative to attractive models) on enhancing communication effectiveness will not increase as appearance-related self-esteem decreases. Instead, it’s possible that the use of silhouettes will yield at least the same level of favorable responses as attractive models across appearance-related self-esteem levels. 349 female participants from Prolific were recruited for this study ($M_{Age} = 25$ years).

*Procedure.* To reduce participant guessing about the true purpose of the study, they were informed at the outset that the study included unrelated tasks and, therefore, they would need to read the instructions for each task carefully (Podsakoff et al. 2003). After consenting to participate, participants were first assigned to one of the two appearance-threat manipulation conditions. This manipulation is adapted from Park and Maner (2009) and has been shown to be effective. In the threat-induced condition, participants were asked to write a short essay about appearance traits that they felt insecure about, whereas in the no-threat (control) condition, participants were asked to list some objects that they could find in their rooms. All of the stimuli and measures of this study are available in Appendix C. A pre-test with 80 female participants
from Prolific indicates that this manipulation works: in comparison with participants in the control condition, the writing exercise makes participants in the threat-priming condition feel more negative about themselves (M\text{Threat} = 3.58; M\text{Control} = 5.5, F(1, 78) = 33.65, p < .001); have more negative mood (M\text{Threat} = 4.38; M\text{Control} = 5.78, F(1, 78) = 12.62, p < .001); become more likely to have negative thoughts about their appearance (M\text{Threat} = 7.05; M\text{Control} = 1.30, F(1, 78) = 310.47, p < .001); and become more prone to think about their appearance-related insecurities (M\text{Threat} = 7.68; M\text{Control} = 1.28, F(1, 78) = 423.87, p < .001). After the writing exercise, participants were asked to carefully look at one of two ads, which were randomly assigned among participants. The ads in this study feature either an attractive model or a silhouette created from that model. The ads are about a fictional brand of self-tanning product (whereas swimwear is used as the appearance-related product in Studies 1B, 2 & 3, I used a different product in this study to enhance the generalizability of this research; see Table 1 for a summary of all the studies). After seeing one of the ads, participants answered questions about ad evaluation (4 items, \(\alpha = .95\)) and product attitude (adapted from Yoon et al. (2012) with 6 items, \(\alpha = .95\)) as the focal dependent variables\(^5\) before responding to the same self-esteem measures used in the previous studies. I also included an attention check question, a manipulation check question about the type of image that participants saw, and a question about whether participants thought of the advertised product as relevant to appearance or not. Participants were also asked to indicate the extent to which they thought that the model in the ad was attractive. At the end of the survey, participants answered questions about age, race and then debriefed.

\(^5\) I also added measures of brand attitude and behavioral intentions, which show similar result patterns as ad evaluation and product attitude reported here. The analysis results of brand attitude and behavioral intentions are reported in Appendix A for the sake of brevity.
Results

Four participants failed the attention check question and were removed from all the analyses mentioned in this study, leaving a usable sample of 345 participants. Descriptive statistics for the variables in this study are reported in Appendix F.

Manipulation Checks. The manipulation of image type worked as intended: participants in the silhouette condition confirmed that they saw a silhouette image (91.9%), and participants in the model condition confirmed that they saw the model image (100%) \( (\chi^2(2, N = 345) = 300.13, p < .001) \). Participants also thought of the focal product in this study as highly relevant to appearance (M = 8.34, t(344) = 46.99, p < .001) and considered the model in this study to be highly attractive (M_{Model} = 7.60, t(171) = 25.83, p < .001). Thus, all the intended manipulations worked in this study.

Image Type, Self-esteem, and Self-threat. To test the central prediction in this study that the effect of silhouettes (vs attractive models) on enhancing communication effectiveness is likely to increase as appearance self-esteem decreases, and that reduction in self-threat perceptions is the underlying mechanism for this effect, I conducted moderation analyses using SPSS PROCESS by Hayes (2017) (Model 3) to examine the three-way interaction between image type, self-esteem & threat priming. In each of these analyses, I used ad evaluation and product attitude as the corresponding dependent variable, image type as the categorical independent variable with two focal ad conditions (silhouette and attractive model), the average of four items (\( \alpha = .87 \)) that measure appearance self-esteem as the moderator (similar to Study 2 and Study 3), and attractiveness as the control variable (consistent with the previous studies). The results of these analyses are summarized in Table 6.
Table 6. Three-way Interaction Results in Study 4 (Essay 1)

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<th>Antecedent</th>
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<td>Attractiveness</td>
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Model Summary

- $R^2 = .1574$
- $F(8, 336) = 7.8453, p < .0001$

- $R^2 = .1636$
- $F(8, 336) = 8.2169, p < .0001$
First, for product attitude, there is a significant 3-way interaction \( (F(1, 336) = 5.46, p = .02) \) such that in the no-threat (control) condition, there is a significant interaction between image type and self-esteem \( (F(1, 336) = 6.37, p = .01) \), but in the threat condition, there is no significant interaction between image type and self-esteem \( (F(1, 336) = .064, p = .42) \). Spotlight analyses (Spiller et al. 2013) at low–high levels of appearance self-esteem (+/- 1SD from mean) reveal that in the no-threat condition, participants with relatively low appearance self-esteem indicate significantly more favorable attitude toward the product when the ad features the silhouette image versus when the ad features the model image \( (\beta = 1.42, t(177) = 3.94, p < .001) \). This result is consistent with those in Studies 2 & 3. However, participants with relatively high appearance self-esteem indicate similar levels of product attitude irrespective of whether the ad features a silhouette image or a model image \( (\beta = .45, t(177) = .16, p = .63) \). Thus, these results provide further support for H3.

In the threat condition, the opposite pattern appears: participants with relatively low appearance self-esteem indicate similar levels of product attitude irrespective of whether the ad featured a silhouette image or a model image \( (\beta = .46, t(162) = 1.21, p = .23) \). However, participants with relatively high appearance self-esteem indicate significantly more favorable attitude toward the product when the ad features the silhouette image versus when the ad features the model image \( (\beta = .87, t(162) = 2.29, p = .024) \). Figure 9 visually depicts these differences.
Figure 12. Product Attitude in Study 4 (Essay 1)
Second, for ad evaluation, there is no significant 3-way interaction \(F(1, 336) = .69, p = .41\). However, an examination into the lower two-way interactions reveals that in the no-threat (control) condition, there is a significant interaction between image type and self-esteem \(F(1, 336) = 4.09, p = .044\), but in the threat condition, there is no significant interaction between image type and self-esteem \(F(1, 336) = .66, p = .42\). Spotlight analyses (Spiller et al. 2013) at low – high levels of appearance-related self-esteem (+/- 1SD from mean) reveal that in the no-threat condition, participants with relatively low appearance self-esteem rate the ad significantly better when the ad features the silhouette image versus when the ad features the model image \(\beta = 1.91, t(177) = 4.29, p < .001\). Again, this result is in line with those in Studies 2 and 3. On the other hand, participants with relatively high appearance self-esteem rate the ad marginally better when the ad features the silhouette image versus when the ad features the model image \(\beta = .75, t(177) = 1.90, p = .06\).

In the threat condition, participants with relatively low appearance self-esteem rate the ad significantly better when the ad features the silhouette image versus when the ad features the model image \(\beta = 1.35, t(162) = 2.89, p = .004\). On the other hand, participants with relatively high appearance self-esteem rate the ad marginally better when the ad features the silhouette image versus when the ad features the model image \(\beta = .84, t(162) = 1.80, p = .08\). Figure 10 visually depicts these differences.
Figure 13. Ad Evaluation in Study 4 (Essay 1)
Discussion

By using a process-by-moderation approach, Study 4 provides more evidence to support both H2 and H3. More specifically, when there is no prior appearance-related self-threat (control condition), the effect of silhouettes on product attitude increases as appearance-related self-esteem decreases and this pattern is line with findings in previous studies. However, when appearance-related self-threat is induced prior to the introduction of ad stimuli, the effect of silhouettes on product attitude no longer increases when appearance-related self-esteem decreases. Instead, even participants with relatively high appearance-related self-esteem show more favorable responses to the focal product when silhouettes are used than when attractive models are used.

However, there are some limitations with the findings of Study 4. First, the pattern of responses from participants with relatively high appearance self-esteem in this study is quite different from that in Study 3. Specifically, whereas in Study 3, participants with relatively high appearance self-esteem indicate more favorable responses when the ad features an attractive model than when the ad features a silhouette, in Study 4, participants with relatively high appearance self-esteem either view the two images as equal or indicate more favorable responses when the ad features a silhouette than when the ad features an attractive model in the control conditions. It is worth noting here that such inconsistency in how participants with relatively high appearance self-esteem would respond to marketing stimuli has been observed in previous research (e.g., Argo and Dahl 2018) and presents a good venue for future research. However, this limitation does not undermine H3 that the effect of silhouettes tends to increase as self-esteem decreases because the overall results of this study show that people with relatively low self-esteem tend to respond more favorably to the use of silhouettes than to using attractive models.
Second, an objective of this study is to demonstrate the underlying mechanism for the silhouette effect (i.e., reduction in self-threat perceptions) via a process-by-moderation approach. The results of Study 4 show that whereas there is indeed a three-way interaction for product attitude, there is no three-way interaction for ad evaluation. Thus, Study 4 provides partial support for H2. Despite this limitation, given that support for H2 is found in Study 2, Study 3 and Study 4, the overall results of the studies in this research still suggest that reduction in self-threat perceptions is likely the most possible explanation for the silhouette effect.

**General Discussion**

The present research examines when and why the use of human silhouettes can be more effective than using attractive models in enhancing marketing communication effectiveness. Five studies in this research reveal that the use of silhouettes (relative to the norm of attractive models) enhances communication effectiveness for appearance-related products by reducing consumers’ self-threat perceptions. In addition, this effect is likely to be enhanced as appearance-related self-esteem decreases. Together, these findings provide several theoretical and practical implications.

**Theoretical Contributions**

First, to the best of my knowledge, this research is the first to explore and provide empirical evidence of the impact of using silhouettes in marketing. Given the scant amount of research on this topic, the present research helps to set the stage for ensuing discussion on this topic. By showing when the use of silhouettes (vs attractive models) can help enhance communication effectiveness and suggesting the underlying mechanism as well as the boundary conditions for this effect, this research helps to shed light on a phenomenon that has been largely ignored in the literature.
Second, this research contributes to the imagery processing literature by documenting how ostensibly vague, simplified images can better influence attitudes and behavioral intentions than clearer, more detailed images. Previous research suggests that consumers rely on a variety of visual cues in purchase and consumption contexts to help them make sense of the focal products before arriving at a decision (Baker et al. 1992; Hu and Jasper 2006; Kim and Kim 2012). However, the visual cues that have been studied so far include mainly concrete, specific ones such as pictures of models or the presence of other people such as another customer or a store staff (Argo et al. 2008; Dahl et al. 2012). Very little has been known about how subtle, abstract visual cues such as silhouette images may influence consumer attitudes and behavior in comparison with more concrete images even though the use of such cues is popular in practice. The findings in this research suggest that even though silhouettes and attractive model images are both visual illustrations, they may evoke every different reaction from viewers. Thus, the findings in this research help to extend our understanding on how images are processed and used as inputs for subsequent cognitive and affective responses. In doing so, this research contributes to the ongoing research efforts that span more than three decades to identify and capture humans' "true" mental models that may have crucial implications on constructing artificial intelligence through computational and cognitive approaches (Vorm 2019; Wenger 2014).

Third, this work also contributes to the advertising literature related to using models in marketing. Whereas research related to models in marketing has mainly focused on how the appearance of models influences consumer attitudes and behavior, this research offers a novel perspective by investigating how silhouettes – human shapes that offer little to no clues about the appearances of the model - can influence consumer attitudes and behavior. Additionally, by providing direct evidence to compare the similarities and differences between models and
silhouettes for different product types (e.g., appearance-related vs non-appearance-related) and for different target audience (e.g., people with different levels of appearance self-esteem), this research helps to enrich insights on the potential pros and cons of each image type in different situations and suggests guidance on how best to leverage each image type. Furthermore, by showing that the mechanism through which silhouettes can enhance marketing appeals better than attractive models is self-threat reduction while ruling out alternative explanations, this research enriches the discussion in the literature as to when and why the use of attractive models is not an optimal option.

Fourth, this research also extends our understanding about the role of appearance self-esteem in marketing. Stuppy et al. (2020) suggest that consumers with different self-esteem levels may have different consumption goals as well as different approaches to realizing those goals. Thus, they encourage future marketing research to explore self-esteem as a moderating variable with a focus on those who have low self-esteem because this group has not received a lot of attention. This research responds to such calls by, first, examining the role of self-esteem in the silhouette effect, and second, providing evidence that the effect of silhouettes (vs attractive models) tends to be more salient for consumers with relatively low appearance self-esteem. More importantly, this research extends previous findings about the role of self-esteem in marketing by providing a nuanced look into different dimensions of self-esteem (appearance, performance, and social) and examines which dimension is most relevant to the effect of silhouettes. In doing so, this research suggests that the impact of self-esteem on behaviors is likely to be local (i.e., happening at a particular dimension of self-esteem) rather than global, thus providing a more well-rounded perspective on how different dimensions of self-esteem can be active in different purchase and consumption contexts. Such nuanced insight not only extends understanding about
how self-esteem can influence consumer attitudes and behavior but also enriches insights for future research.

Fifth, this research also contributes to the Transformative Consumer Research (TCR) movement that aims to use research to enhance life quality and social welfare (Mick 2006; Mick et al. 2012b; Mick et al. 2012a). By providing insights to help mitigate ethical concerns related to using attractive models in marketing, this research responds directly to calls in the TCR movement in conducting research that can translate into meaningful benefits to consumer health (Mick et al. 2012b; Mick et al. 2012a). Previous research (including the present research) has shown that the exposure to attractive models can trigger self-comparison toward the models and amplify the thoughts of “not being able to measure up” to those “perfect” models, leading to unhealthy self-perceptions and negative affect (Bower 2001; Micu, Coulter, and Price 2009; Trampe, Stapel, and Siero 2010). In the long run, such unhealthy self-perceptions can lead to more severe consequences such as eating disorder and low self-esteem (e.g., Hamel et al. 2012; Kiang and Harter 2006; Kim and Lennon 2007; Smeets et al. 2011). It’s estimated that in the United States, “20 million women and 10 million men suffer from a clinically significant eating disorder at some time in their lives” (Abate 2020), and that about 65% of people with eating disorders blamed social pressure as the major cause (Abate 2020). More importantly, the pervasive use of social media riddled with photoshopped images of attractive models has further flamed the toxic consequences of such unhealthy self-comparisons (Abate 2020), impacting even adolescents and smaller children who should be protected from such debilitating self-perceptions (Abate 2020; Hamel et al. 2012; Harrison 2000; Kim and Lennon 2007). Thus, the use of attractive models has recently met with backlash, such as recent consumer boycotts against brands using “perfect” models out of body-shaming concerns (Danziger 2018; Weiss and Kast
2018; Zarya 2015). In addition, many companies have recently faced criticism for ads that provoke concerns about racism for using models that may suggest lack of respect for people of different ethnicities (Pfeiffer and Mayes 2017). Given all of those potential ethical issues related to using attractive models, some companies have taken steps to address such consumer concerns. For example, Unilever initiated the famous “Real Beauty” campaign to promote healthy self-perception of body images (Abate 2020), or Victoria’s Secret has recently featured plus-size models in their communications (Ali 2019). Amid such social background, this research suggests that the use of human silhouettes may be a good option that brands can consider replacing using attractive models in their marketing communications. Because human silhouettes tend to portray overall shapes without exposing specific physical details or personal traits of the models, silhouettes may help to mitigate some of the concerns with using attractive models and represent an interesting approach to marketing communication.

**Implications for Marketing Practices**

This research also yields important implications for marketing practice. First, the most obvious and straightforward implication from this research is that firms can consider using silhouettes instead of attractive models on their marketing materials when appropriate to enhance the effectiveness of marketing activities. For example, all the studies in this research using different ad scenarios converge to show that using silhouettes may be a better approach to using attractive models in marketing communications for appearance-related products. Moreover, the use of silhouettes in place of model images can help companies become more efficient in their marketing activities by reducing costs, project lead-time, logistic issues and manpower dedicated to marketing projects. Those would be significant advantages that enable firms to succeed in the increasingly competitive markets.
Second, the studies in this research show that in comparison with using attractive models, the use of silhouettes can help to increase marketing appeals for consumers with relatively low appearance self-esteem. This finding is meaningful to marketing practices because it suggests that brands can flexibly use silhouettes in a wide variety of contexts to promote their offers, especially when their target audience has salient concerns about their appearance (e.g., customers who look for plus-size clothes; patients who have to go through medical procedure such as breast cancer treatment). The present research suggests that this approach not only can make customers more amenable to brand communications and thus increase sales potential, but also help establish better relationship between customers and the brands.

Limitations and Future Research

While this research provides important insights on when and why the use of silhouettes (vs attractive models) can better influence marketing appeals, some limitations should be noted.

First, even though Study 2 provides evidence that perceived self-threat reduction is the mechanism for the effect of silhouettes (vs attractive models) in this study, the direct paths in these mediation analyses are still significant (see Figures 6a & 6b). These significant direct paths suggest that there are other potential mediators that can simultaneously mediate the effect of image type on focal dependent variables (Zhao et al. 2010). Even though the mediation analyses in Study 3 address this concern by showing that reduction in self-threat perceptions fully mediate the silhouette effect while ruling out some alternative explanations, future research can explore other factors that may simultaneously mediate the silhouette effect in this research.

Second, even though Studies 2, 3 and 4 provide repeated evidence that the effect of silhouettes (vs attractive models) in reducing perceived self-threat and consequently enhancing communication effectiveness tends to be more salient among participants with relatively low
appearance self-esteem, the analyses in Study 3 show that the effect of silhouettes (vs attractive models) in enhancing purchase intention is directionally but not statistically significant. Given that the statistical significance of the effect of silhouettes among participants with relatively low appearance self-esteem is more consistent in other findings in this research, this insignificant result doesn’t materially distort the overall conclusions, but future researchers should be aware of this limitation. It’s also worth mentioning that previous research encounters similar limitations.

For example, even though Argo and Dahl (2018) find repeated evidence across six studies that low appearance self-esteem individuals tend to lower their product evaluation when the focal product is put on a mannequin, in their Study 3a, they find that there is no significant difference in willingness-to-pay between a normal mannequin and a mannequin with flaws among low appearance self-esteem individuals. Argo and Dahl (2018) encourage future research to investigate this issue for a deeper understanding of their observed effect. In addition, the effect of silhouettes (vs attractive models) among participants with relatively high appearance self-esteem is not consistent in this study. Specifically, whereas in Study 3, participants with relatively high appearance self-esteem significantly prefer the use of attractive models to the use of silhouettes, in Study 4, the pattern is different: participants with relatively high appearance self-esteem either prefer the use of silhouettes or evaluate both types of images in a similar fashion. The inconsistency in how participants with relatively high appearance self-esteem respond to marketing stimuli has also been observed in previous research. For example, Argo and Dahl (2018) hypothesize that a flawed or incomplete mannequin shouldn’t concern people with high appearance self-esteem, but they find that whereas an incomplete mannequin doesn’t influence product evaluation among people with high appearance self-esteem (Study 3B), a flawed mannequin makes people with high appearance self-esteem give significantly lower product
evaluation than a normal mannequin (Study 3A). The inconsistency observed among people with high appearance self-esteem in Argo and Dahl (2018) is quite similar to the pattern observed in this research. Thus, echoing Argo and Dahl (2018), I encourage future research to explore these interesting results.

Third, participants in the studies of this research were mainly from the United States. However, previous research suggests that people from different cultures can process and react to visual stimuli in different ways (Miyamoto et al. 2006; Nisbett and Miyamoto 2005). Therefore, it’s possible that the effect of human silhouettes as seen in this study may change for consumers in different cultures. Future research can further investigate this topic to see how culture can influence the effect of human silhouettes.

Conclusion

The present research seeks to understand when and why the use of human silhouettes can better enhance communication effectiveness than using attractive models. The findings suggest that for appearance-related products, the use of silhouettes (vs attractive models) helps enhance communication effectiveness by reducing appearance-related self-threat perceptions. In addition, this silhouette effect tends strengthen as appearance self-esteem decreases. With clear theoretical and managerial implications, I hope the findings of this research will be useful for both academic researchers and marketing practitioners while stimulating further research on this topic.
ESSAY 2

How “Punny” It Is! The Double-Edged-Sword Effects of Pun Use in Brand Names
Abstract

Even though the use of puns in brand names is not uncommon, there is limited understanding as to how this approach can influence consumption experience. In this essay, I investigate into how the use of puns in brand names influences the enjoyment of the consumption experience. Across seven studies, this essay teases out the bright- and dark-side effects of pun use in brand names on consumption experience and illustrates the potential benefits and risks associated with this marketing approach. Specifically, the findings show that the use of puns in brand names is a double-edged sword in that it can either enhance or dampen the enjoyment of the consumption experience. In addition, this research also identifies cognitive engagement as a moderator for these multifaceted effects of pun use in brand names on consumption experience. Besides meaningful contributions to theory, this research also yields important insights for practice by suggestion caution in the use of puns when naming brands.
Introduction

It is 3pm in the afternoon and Maria has been having a busy day at work. She is feeling overwhelmed with a lot of urgent tasks and non-stop phone calls from various parties. She decides to stand up from her desk and heads to the office pantry to get a cup of coffee for a break. As she opens the pantry closet, she quickly notices a pack of ground coffee whose label reads “jamaican me crazy.” Maria stares at the pack for a short moment and realizes what the label implies. She grabs the pack, takes out some coffee and makes herself a cup. How would Maria think about the taste of the coffee now? Would the coffee make her feel energetic, recharged, and ready to get back to dealing with the hassles at work? If there is a colleague around, would she be more willing to reach out and initiate a conversation? Or would she take a picture of her cup of coffee and post it on her Facebook page with the tagline “Had a ‘Jamaican me crazy’ moment today”, hoping to receive some interaction from friends? Would she think that she has a good coffee break? And how would her experience have differed if she had seen a pack of Nescafe coffee instead?

The brand of coffee mentioned above – “jamaican me crazy” – is an example of a real brand that features a pun in its name. Brand name is one of the most important elements in marketing because it can shape how consumers think of and react to a brand (Baker 2003; Klink 2001; Maheswaran et al. 1992; Wänke et al. 2007; Yorkston and Menon 2004). Therefore, brand names have received a lot of attention from both academic researchers and marketers (Argo et al. 2010; Keller et al. 1998). Despite conventional wisdom that brand names should be simple and clear to avoid sending mixed messages (Patel 2015), it is not uncommon for marketers to “think outside the box” and add puns to their brand names as in the “jamaican me crazy” coffee example. A pun is defined as “a figure of speech that expresses a few meanings within one which
can lead to a humorous effect” (p. 268; Djafarova 2008). In practice, marketers have used puns in brand names of different services (e.g. “Tech it easy” (IT Shop), “Thai Tanic” (Thai restaurant), “Wok this way” (Chinese restaurant), “Pho real” (Vietnamese restaurant), “Lord of the Fries” (fast-food restaurant), “Back to the Fuchsia” (florist shop), “Hair force one” (barber shop), “Surelock Homes” (keys & locks services)) and products (e.g. “Wooden-it-be-nice” (furniture shop), “Grate expectations” (antique store), “Planet of the Grapes” (wines and spirits store), “Seeduction” (whole-grain bread by WholeFoods), “Great Egg-spectations” (egg whites), “Thyme capsules” (health supplement)) (see the Appendix for additional examples of puns use in brand names). However, there is limited understanding of how this marketing approach influences consumers’ experience. In fact, extant research has mainly focused on how puns in slogans can influence marketer communication goals and is still silent on how puns in brand names can influence consumers’ consumption experience (see the Appendix for a summary of relevant research). Furthermore, even though previous works have repeatedly documented the positive effects of pun use in slogans (Lazović 2018; McQuarrie and Mick 1992; Van Mulken et al. 2005), anecdotal evidence from practice suggests that pun use in names can actually be detrimental to the consumption experience (Beck 2015). Here, consumption experience refers to the experiential aspects of consumption, including consumer fantasies, feelings and fun (Chaney et al. 2018; Holbrook and Hirschman 1982) during the pre-consumption experience, the purchase experience, the core consumption experience and the remembered consumption experience (Carù and Cova 2003). The lack of discussion about the potential negative impacts of pun use on consumption not only suggests a knowledge gap that needs to be addressed but also implies a likely oversight of the boundary conditions that regulate the valence of the effects of pun use. Given the strategic importance of brand names in determining brand success, the lack of research
examining how pun use in brand names influences consumption experience warrants in-depth investigation into this topic. Additionally, given that pun use can either help or hurt brand success, it is important that marketers understand when and why each scenario would happen so that they could make informed decisions. The knowledge gaps and the lack of insights into the double-edged-sword effects of pun use in brand names on consumption experience fueled the inspiration for this research, in which I propose to explore the following questions:

- Does the use of puns in brand names influence consumption experience? If so, what explains the effect of pun use in brand names on consumption experience (if any)?
- What influences the effect of pun use in brand names on consumption experience (if any)?

In addressing the above questions, seven studies in this research highlight the risks associating with using puns in brand names by providing evidence for the bright- and dark-side effects of this approach, which can interestingly either elevate or dampen the enjoyment of the consumption experience. Furthermore, I find that these effects partly depend on consumer cognitive engagement (also referred to as engagement for short in this research), which refers to “an individual’s experiences, interest and attention towards a focal engagement object” (p. 1414, Bowden and Mirzaei 2021). Specifically, the effects of pun use in brand names on consumption experience become salient (negligible) when consumers devote high (low) levels of engagement to the names. Together, these findings make meaningful theoretical and practical contributions as follows.

First, even though there has been a significant amount of research into humor and rhetorical figures in marketing, the majority of this literature has focused mainly on how humor or rhetorical figures can help marketers achieve certain communication objectives, and much less
attention has been devoted to examining how humor or rhetorical figures can enable consumers to achieve their consumption goals (Warren et al. 2018). This is a significant knowledge gap that clearly warrants in-depth research (Warren et al. 2018) given that consumption experience is crucial to long-term brand success (Grace and O'Cass 2004; Jiang et al. 2018). This research directly addresses that gap by examining the variegated effects of pun use in brand names on consumption experience. Second, whereas previous research has mainly examined the influence of puns in slogans (McQuarrie and Mick 1992; McQuarrie and Mick 1999; Van Mulken et al. 2005), this research explores how the use of puns in the context of brand names influences consumption experience. Even though these two contexts for pun use may seem ostensibly similar, previous research suggests that they may differ in important ways. Specifically, whereas both brand names and brand slogans are important aspects that shape brand identity, they serve different functions and thus have some different characteristics (Keller et al. 1998). Whereas brand names shape the core identities of brands and act as anchors for brand images, slogans enable consumers to better understand brand meanings and what makes the brands special (Kohli et al. 2007). Therefore, while slogans tend to be dynamic and evolving through time, brand names tend to stay consistent such that changes in brand names may have substantial consequences (Kohli et al. 2007). Moreover, previous research has shown that brand names can produce priming effects on consumers, while slogans can reverse such priming effects (Laran et al. 2011). Findings from such research suggest that assuming the impacts of pun use in each context of brand names and slogans to be the same would be inappropriate and may blur important insights. Against this backdrop, this research attempts to enrich the current discussion with a nuanced investigation into the specific case of pun use in brand names on consumption experience. Third, this research identifies a factor that determines the effect of pun use on
consumption experience – cognitive engagement. On the one hand, this insight facilitates a more comprehensive understanding of when pun use is more likely to influence consumers so that practitioners can proactively harness the power of this approach. On the other hand, it enables future research to further explore the connections between language processing and sensory information formation in working memories. Fourth, this research also extends the consumption experience literature. Even though previous research has explored the impacts of different marketing stimuli on consumption experience such as price promotion (Lee and Tsai 2014), aesthetic cues (Reber et al. 2004), green products (Tezer and Bodur 2020), luxury services (Yang and Mattila 2016), there has been no investigation into the use of humor and rhetorical figures on consumption experience (Warren et al. 2018). This knowledge gap is not only worth further investigation but also important to address since consumption experience is important to long-term brand success. This research helps to connect the missing links in the literature related to humor, rhetorical figures, brand names and consumption experience by providing a nuanced, empirically tested understanding into how the use of puns in brand names influences consumption experience.

This research also yields important practical implications. Given that brand names are one of the most important brand identifiers, the choice of brand names is challenging and can have strategic implications (Baker 2003; Klink 2001; Maheswaran et al. 1992; Wänke et al. 2007; Yorkston and Menon 2004). For example, previous works suggest that brand names can increase expectation of product performance (Srinivasan and Till 2002), convey important brand image attributes (Klink and Wu 2017), and improve brand awareness (Mccracken and Macklin 1998). Because the use of puns in brand names is not uncommon, it is important to understand the strategic implications of this approach so that marketers can make informed decisions. The
findings in this research converge to highlight the double-edged-sword effects of pun use in brand names and suggest caution about the risks associated with this approach. Specifically, the use of puns in brand names can simultaneously evoke positive and negative consumer reactions, which can either enhance or dampen the consumption experience. Additionally, this research identifies the role of cognitive engagement as a factor regulating the effects of pun use in brand names such that these double-edged-sword effects of pun use in brand names become more salient among consumers who highly engage in the name, whereas this approach seems to exert no effect on those with low engagement. Even though this research documents more positive effects of pun use in brand names on consumption experience among those with high engagement, the simultaneous existence of negative effects suggests that practitioners need to exercise prudence in deciding whether and how they should incorporate puns in brand names. Moreover, since consumption experience is highly important in determining customer repatronage, customer loyalty, and customer word-of-mouth (Grace and O'Cass 2004; Jiang et al. 2018), this research points out not only the benefits but also the risks in featuring puns in brand names with regard to short-term consumer experience and long-term brand success. Of course, this research by no means implies a universal answer to whether marketers should feature or abandon the use of puns in brand names, but rather, suggests insights into the pros and cons of this approach so that marketers could craft better marketing strategies.

**Conceptual Background**

**Puns, Brand Names and Consumption Experience**

As mentioned earlier, pun has been defined as “a figure of speech that expresses a few meanings within one which can lead to a humorous effect” (p. 268; Djafarova 2008). According to this definition, puns are characterized by the ambiguity in meanings via unusual word
combinations that deviate from conventional linguistic rules (Lazović 2018; McQuarrie and Mick 2009; McQuarrie and Mick 1992), leaving receivers with different ways to interpret them (Djafarova 2008). Attridge (1988) emphasizes that puns are “the product of a context deliberately constructed to enforce an ambiguity, to render impossible the choice between meanings, to leave the reader or hearer endlessly oscillating in semantic space” (p. 141). Echoing this point, Van Mulken et al. (2005) mention that “puns create ambiguous slogans, which allow for a less salient interpretation, together with a more salient interpretation” (p. 3). Puns are commonly used in marketing to achieve multiple communication goals. It has been shown that the use of puns in ads can increase attention (Lazović 2018), heighten ad appreciation (Van Mulken et al. 2005), enhance ad liking and brand attitude (McQuarrie and Mick 1992), improve ad persuasiveness (Tom and Eves 1999) and help consumers to better memorize and retrieve the communicated information (McQuarrie and Mick 2003; Summerfelt et al. 2010; Tom and Eves 1999). Such improvement in attention, recognition and recall can happen even with incidental exposure to the ads (Summerfelt et al. 2010). The use of puns in enhancing ad recall can be even more effective than relentless repetition of the ads (McQuarrie and Mick 2009). Given that puns can effectively enhance recall in such economical ways (e.g., a few words in a print ad instead of a lengthy TV commercial), puns can be more cost-effective, especially for brands with small budgets. Such advantage of puns partly explains why some marketers choose to use puns in their communication efforts (Djafarova 2008; McQuarrie and Mick 1992). For example, a content analysis of 2183 advertisements featured in U.S. magazines reveals that puns are among the most popular rhetorical styles used by marketers (Phillips and McQuarrie 2002).

Even though the above-mentioned works have provided important insights into the use of puns in marketing, they clearly have focused mainly on marketers’ communication goals,
leaving open the question of how the use of puns can influence consumers’ consumption experience (Warren et al. 2018). This knowledge gap is significant and warrants investigation efforts because not only is consumption experience important to long-term brand success (Grace and O'Cass 2004), but also success in marketers’ communication goals does not automatically equate with a positive consumer experience (Grace and O'Cass 2004). For example, the slogan “Shoe-icide is not the answer” by the shoe-maker company Foot Petals increased attention significantly, but not in the way that the company intended: consumers criticized the slogan, saying that it was inappropriately making light of suicide (Story 2007). Furthermore, previous works have also mainly documented the positive impacts of pun use in marketing, whereas anecdotal evidence from practice suggests that pun use can be detrimental to both the brand and the target audience (Beck 2015). This theoretical oversight suggests the need to identify important moderating factors and contexts that help explain when and why pun use would turn out to be a good or bad idea. This research addresses these important gaps by examining the unexplored effects of pun use in brand names on consumption experience. Here, consumption experience includes not only the benefits that consumers may derive from using a product or service, but also the emotions that consumers have during the whole process of interacting with that product or service (Carù and Cova 2003; Holbrook and Hirschman 1982). According to Carù and Cova (2003), consumption experience includes the pre-consumption experience, the purchase experience, the core consumption experience and the remembered consumption experience. The pre-consumption experience entails consumer reactions when they look for and/or consider a product/service. The purchase experience is formed when consumers interact with the products/service and make a purchase decision, whereas the core consumption experience refers to “the sensation, the satiety, the satisfaction/dissatisfaction, the irritation/flow,
the transformation” that consumers have when using the product/service (p. 271; Carù and Cova 2003). Finally, the remembered consumption experience happens when consumers “re-live” the previous stages.

Consumption experience is important to brand success because consumers buy products and services to achieve specific consumption goals (Bagozzi and Dholakia 1999; Baumgartner et al. 2008) and many consumption experiences, even mundane or extraordinary, can be viewed as goal-directed (Ajzen 1985; Bagozzi and Warshaw 1990; Baumgartner et al. 2008). Therefore, consumers prefer products and services that enable them to have positive consumption experience and satisfy their needs (Van Osselaer and Janiszewski 2012). Furthermore, in choosing products or services, consumers use brand name as a cue to infer judgement about the potential performance of a product or service, and to determine whether the focal product or service would be appropriate for them (Hillenbrand et al. 2013; Wänke et al. 2007; Yorkston and Menon 2004). It has been shown that brand names can shape consumer perception of brand quality and brand image, suggesting to consumers what the brand is about and what it can do for them (Baker et al. 2004; Davis and Herr 2013; Dimofte and Yalch 2011; Keller et al. 1998; Lerman and Garbarino 2002). For example, “Nescafe” may suggest good quality coffee that is produced by a famous food company (Nestle), or “Diet Coke” may suggest a tasty cola drink that is suitable for those who wish to manage their weight. Thus, brand names help consumers decide whether a product (e.g., Diet Coke) would enable them to have a positive consumption experience (e.g., enjoying a drink without worrying about calories) (Argo et al. 2010; Keller et al. 1998; Klink 2001; Lowrey and Shrum 2007; Salciuviene et al. 2010). In this example of Diet Coke, a consumer would buy this product to achieve a hedonic short-term goal of satisfying the thirst with a tasty cola drink, while hoping to fulfill another long-term goal of sticking to a
calorie consumption target. Thus, the purchase of the product (e.g., Diet Coke in this case) would signal consumers’ belief in the positive consumption experience that they would have using the product (Warren et al. 2018).

Based on the logic above, it is possible that the use of puns in brand names can influence consumption experience for consumers. This proposition is grounded in rhetorical figure theory (McQuarrie and Mick 1996), which rests on the premise that rhetorical figures interact with the way consumers process a communication and that this impact is driven by the “formal properties” of rhetorical figures. According to this theory, every rhetorical figure is “an artful deviation in the form taken by a statement” (p. 424; McQuarrie and Mick 1996) and therefore tends to have more than one meaning. The theory proposes that because certain rhetorical figures such as puns are “under-coded” (in the sense that they don’t enable an immediate, straightforward interpretation of the message), those rhetorical figures “may lead to multiple encodings and/or the strengthening of existing conceptual linkages in memory” (p. 429; McQuarrie and Mick 1996). This process not only captures more consumer attention, but also motivates consumers to engage in or interact more with the focal rhetorical figures, and more specifically puns in the context of this research. Thus, in line with the theory, it is reasonable to expect that the use of puns in brand names may trigger a certain “degree of arousal” (p. 427; McQuarrie and Mick 1996) and consequently influence consumption experience. However, it is reasonable to expect that this influence can be either positive or negative, and I further discuss about each possibility below.

First, there are contexts in which pun use in brand names may enhance consumption experience. For example, some puns in names may trigger humor, which helps to elevate mood and facilitate positive consumption experience (Martin and Lefcourt 1983; Wicker et al. 1981).
In addition, it has been suggested that deciphering the multiple meanings in a pun is similar to solving a puzzle in that it gives people pleasant feelings when they successfully “solve” the pun (Tanaka 1992; Van Mulken et al. 2005). Furthermore, many consumption activities are for social connections (e.g., dining at restaurants, going to coffee shops, drinking at bars), and consumers may choose products or services whose brand names have puns because the names suggest that such services offer friendly contexts that facilitate social bonding. As an illustration, the “Thai me up” restaurant may convey to customers the impression that this place not only offers flavorful Thai dishes but also is a “cool” place to hang out with friends to have good laughs. What’s more, consumers may keep sharing about brand names with puns to friends or acquaintances as a way to socially connect (e.g. breaking the ice with a funny anecdote) as well as to self-enhance by showing that one is interesting and intelligent (Warren et al. 2018). Thus, based on the above reasons, the use of puns in brand names can help enhance consumption experience by enhancing consumer mood, which is defined as “a phenomenological property of a person's subjectively perceived affective state” (p. 271, Swinyard 1993).

However, in line with anecdotal evidence from practice, I also expect the double-edged-sword effects of pun use in brand names on consumption experience in that under some circumstances, this approach may dampen the consumption experience. Specifically, I predict that the effects of pun use in brand names on consumption experience are contingent on various factors, which determine the valence of the effects. In this research, I propose that cognitive engagement is one of those regulating factors, such that the use of puns in brand names helps to enhance consumption experience only when engagement level is high but would not affect or even dampen consumption experience when engagement level is low. I further discuss the theoretical background for this prediction below.
The Moderating Role of Cognitive Engagement

Because puns involve an irregular word choice that deviates from conventional language habits and often implies more than one meanings (which may evoke multiple interpretations), readers need certain levels of cognitive engagement to resolve the incongruity in them and decipher the intended meaning of the puns (McQuarrie and Mick 1996; Tanaka 1992). Otherwise, readers may have a hard time understanding the seemingly at-odds verbal usage and such processing difficulties may lead to less favorable responses to the pun stimuli and negatively impact consumption experience (Maheswaran and Chaiken 1991; Reber et al. 2004; Wyer Jr et al. 2008). Therefore, it is reasonable to expect that when consumers devote more cognitive engagement to processing the puns, they should be more likely to solve the puns and experience the positive emotional rewards as mentioned earlier (McQuarrie and Mick 1999; Summerfelt et al. 2010; Tanaka 1992). In contrast, if consumers do not sufficiently engage in processing puns, they may either feel indifferent to the puns or, even worse, find the puns “weird” and incomprehensible, leading to negative reactions to the stimuli, thus dampening the consumption experience. Previous research supports this proposition by showing that verbal figures in ads tend to perform better when people are willing to actively process the ads (McQuarrie and Mick 2003), and that when people fail to successfully process puns (e.g., because they lack the cultural competency to do so), the positive effect of puns may diminish or disappear (McQuarrie and Mick 1999). Additionally, McQuarrie and Mick (1996) propose that the positive impact of rhetorical figures on consumer responses happens only when consumers could comprehend the communication. In summary, I hypothesize that:

**H1:** The use of puns in brand names enhances individuals’ enjoyment of the consumption experience.
**H2**: Mood enhancement mediates the effect of pun use in brand names on the enjoyment of the consumption experience.

**H3**: Cognitive engagement moderates the effect of pun use in brand names on the enjoyment of the consumption experience such that the effect is positive only when engagement level is high, but not when engagement is low.

**Studies**

To test the hypotheses, in this research, I have conducted a series of seven studies, which are summarized in Table 7. This research starts with a pilot field study, in which I collected Yelp reviews for establishments that feature puns in the names. The results of this pilot study reveal the double-edged-sword effects of pun use in brand names on consumption in that 88% of the reviews indicate positive reactions to the names, whereas 45% of the reviews indicate negative reactions to the names. Based on this field data, the seven following lab studies further shed light on these double-edged-sword effects by showing their mechanism and a boundary condition. Specifically, Study 1 provides strong evidence for the positive impact of pun use in brand names on consumption experience, whereas Studies 2 and 3 demonstrate that mood enhancement is the processing factor for this effect. Studies 4, 5 and 6 extend the generalizability of this research by using different sets of stimuli, different product categories and different settings. Besides providing more evidence for the moderating role of cognitive engagement, these three studies further highlight the double-edge-sword effects of pun use in brand names on consumption experience. The objectives, procedures and results of each study are sequentially described in the next section. Figure 14 illustrates the conceptual framework of this research.
Figure 14. Conceptual Framework of Essay 2
<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Size</th>
<th>Primary objectives</th>
<th>Design</th>
<th>Product</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot Study</td>
<td>1,308 Reviews</td>
<td>Seek field evidence for effect of puns in brand names on consumption experience.</td>
<td>Customer reviews from Yelp.</td>
<td>Restaurants, coffee shops and food outlets</td>
<td>Pun use in brand names has both positive and negative impact on consumption experience, with positive reactions prevailing.</td>
</tr>
<tr>
<td>Pre-test 1</td>
<td>50 Participants</td>
<td>Identify the appropriate stimuli for Study 1.</td>
<td>Within-subject design with different brand names for different products. The order of appearance of brand names is randomized.</td>
<td>Music, potato chips, chocolate, fruit punch, water</td>
<td>One pair of song names was chosen for Study 1.</td>
</tr>
<tr>
<td>Study 1</td>
<td>120 Participants</td>
<td>Seek initial evidence that the use of puns in brand names can enhance the enjoyment of consumption experience.</td>
<td>Randomized between-subject design with 2 conditions: a control condition with a brand name that has no puns, and a brand name with puns condition.</td>
<td>Music</td>
<td>Significant main effects of pun use on consumption experience.</td>
</tr>
<tr>
<td>*Pre-test 2 (#83511)</td>
<td>120 Participants</td>
<td>Identify the appropriate stimuli for subsequent studies.</td>
<td>Within-subject design with different brand names for different products.</td>
<td>Flashlight, dessert, tea, running shoes, fashion boots, ties, sausages, videos, songs</td>
<td>Two pairs of names (“Get yourself fit to a tea” vs “Get yourself into a lot of hot tea”; and “The Lord of the Swing” vs “The Theme of the Swing”) are comparable in terms of key dimensions of usualness, surprise, typicality, and novelty. • Significant main effects of pun use on consumption experience. • Significant index of mediation for mood enhancement. • In support of the prediction that cognitive engagement moderates the impact of pun use on consumption experience, there is a marginally significant interaction ($p = .056$) between pun use and engagement on music enjoyment.</td>
</tr>
<tr>
<td>*Study 2 (#84173)</td>
<td>100 Participants</td>
<td>• Replicate Study 1 with more controlled stimuli.   ```</td>
<td>Randomized between-subject design with 2 conditions: a control condition with a brand name that has no puns, and a brand name with puns condition.</td>
<td>Music (for a TVC about tea)</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Sample Size</td>
<td>• Primary objectives</td>
<td>Design</td>
<td>Product</td>
<td>Results</td>
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<tr>
<td>---------------</td>
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</tbody>
</table>
| *Pre-test 3   | 80          | • Test the effectiveness of a mood manipulation approach by using a writing exercise. | Between-subject design with two conditions: mood enhancement and neutral mood. | Four pairs of stimuli for four different product categories (bread, eggs, books, and chips) | • The writing exercise is effective in manipulating mood.  
• No pairs of stimuli satisfy the same criteria used in earlier pre-tests to select stimuli.                                                                 |
| (#86753)     | Participants| • Identify another set of stimuli to generalize the findings in this research.       |                                                                        |                                                                          |                                                                                                                                                                                                 |
| *Pre-test 4   | 80          | • Test the effectiveness of a mood manipulation approach by using upbeat music.       | Mixed design: within-subject design for the music part; between-subject design for the stimuli evaluation part. | Four pairs of stimuli for four different product categories (flashlights, desserts, ties, and sausages). | • The music is effective in manipulating mood.  
• A pair of stimuli for ties (“Forget-me-Knots” and “Look-good-Knots”) satisfies the criteria.                                                                                                          |
| (#86753)     | Participants| • Identify another set of stimuli to generalize the findings in this research.       |                                                                        |                                                                          |                                                                                                                                                                                                 |
| *Study 3      | 360         | • Seek more evidence for mood enhancement as the mechanism via process-by-moderation approach. | Randomized between subject experiment in a 2 (Mood manipulation: mood enhancement vs neutral mood) x 2 (Pun in names: Yes vs No) design | Music (for a TVC about tea)  | Significan 3-way interaction ($p = .05$) between pun use, engagement level and mood enhancement in support of the proposition that mood enhancement mediates the effect of pun use in brand names on consumption experience.  

Because the target audience of the focal product in this study is males, I consider the role of gender in analyzing the effect of pun use in this study. In support of the prediction that engagement moderates the effect of pun use in brand names, there is a significant 3-way interaction among pun use, engagement, and gender ($p = .007$) such that:  
• There is a significant main effect of pun use among male participants.  
• Pun use significantly enhances consumption experience among female participants with low engagement and reduces consumption experience among female participants with high engagement.                                                                 |
<p>| (#86753)     | Participants| • Seek more evidence that engagement is a moderator for the effect of using puns.     |                                                                        |                                                                          |                                                                                                                                                                                                 |
| *Study 4      | 197         | Extend the generalizability of previous findings by using a different set of stimuli, product type, and different setting | Randomized between subject design (Pun Use: Yes vs No)  | Ties  |                                                                                                                                                                                                 |
| (#87968)     | Participants|                                                                                     |                                                                        |                                                                          |                                                                                                                                                                                                 |</p>
<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Size</th>
<th>Primary objectives</th>
<th>Design</th>
<th>Product</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Study 5 (87968)</td>
<td>119 Participants</td>
<td>Solidify the findings in this research by replicating results in Study 4 while addressing concerns in Study 4.</td>
<td>Randomized between subject design  &lt;br&gt;(Pun Use: Yes vs No)</td>
<td>Music</td>
<td>In support of the prediction that engagement moderates the effect of pun use in brand names, there is a significant interaction between pun use and engagement on sharing intention ($p = .04$) and a marginally significant interaction between pun use and engagement on music evaluation ($p = .06$)</td>
</tr>
<tr>
<td>*Study 6 (84173)</td>
<td>209 Participants</td>
<td>Enhance generalizability of findings in this research with an additional set of stimuli (“The Lord of the Swing” vs “The Theme of The Swing”).</td>
<td>Randomized between subject design  &lt;br&gt;(Pun Use: Yes vs No)</td>
<td>Music</td>
<td>In support of the prediction that cognitive engagement moderates the effect of pun use, pun use significantly enhances willing-to-pay amount among those with high engagement level, but not among those with low engagement level.</td>
</tr>
</tbody>
</table>

*Note: Pre-registered studies at As Predicted (aspredicted.org), with corresponding pre-registry numbers in parentheses.
Pilot Study

Method

Objective. The purpose of this pilot study is to seek field evidence for the effect of pun use in brand names on consumption experience. To reach this objective, I collected data from a random sample of services in the food and beverage sector (e.g., restaurants, coffee shops, bakeries...) on Yelp, whose consumer reviews provide an appropriate context to explore the research questions in this essay.

Procedure. Using Google search, I identified 25 businesses whose names feature puns in English. I then looked up customer reviews of these businesses on Yelp. Only 12 of these 25 establishments had customer Yelp reviews. I then collected all of the reviews for these 12 establishments, which resulted in a total of 1,305 reviews from January 2008 to November 2021. These establishments are located in different parts of the world. I then coded each review to identify whether the reviews mentioned the use of puns in the business names, the valence of the impact of pun use on consumption experience (e.g., positive, or negative impact), the impact of pun use on both trial intention and re-patronage intention.

Results

Among the 1,305 reviews collected, there are 88 reviews (6.7%) mentioning the use of puns in brand names (see Appendix B1 for graphs illustrating the results of the Pilot Study). Among these 88 reviews, 88% express some positive reactions to the use of puns in brand names, whereas 45% express some negative reactions to the use of puns in brand names (some comments mention both positive and negative reaction to the use of puns in brand names). Additionally, 44% of the reviews specifically mention that the use of puns helps to facilitate
positive affect; 19% of the reviews play on the pun names to compliment the establishments; 17% of the reviews play on the pun names to criticize; and 14% of the reviews mention that the use of pun in the names trigger trial intentions. Moreover, among reviews that mention negative reactions to the names, 53.3% also mention a negative consumption experience. In contrast, among reviews that mention positive reactions to the name, 79.6% mention a positive consumption experience. In the same manner, among reviews that mention negative reactions to the names, only 37.5% indicate intentions to return to the establishments. In contrast, among reviews that mention positive reactions to the name, 83.3% indicate intentions to return to the establishments.

Discussion

The pilot study using field data provides some initial evidence that there seems to be a relationship between the use of puns in brand names and consumer experience. Specifically, the use of puns in brand names can trigger both positive and negative reactions, even though the number of positive reactions in this data set is more dominant. In addition, there seems to be a close relationship between the valence of customer reactions to the punned names and their consumption experience. Specifically, those who expressed negative reactions to the name tended to indicate a negative consumption experience and lower intention to return. However, those who expressed positive reactions to the name tended to indicate a positive consumption experience and higher intention to return. Thus, in line with my hypothesizing, field evidence from the pilot study suggests that the use of puns in brand names indeed influences consumption experience, and that there are factors that determine the valence of this effect. Using a more controlled setting, the following studies provide further insights into this effect of pun use in brand names on consumption experience.
Study 1

Method

Participants and Design. The primary objective of Study 1 is to seek initial evidence for the proposition in H1 that the use of puns in brand names can help to enhance consumption experience. To achieve this objective, this study uses a randomized between-subject experimental design with two conditions. 120 Prolific participants were recruited for this study (49.2% Female, M_{Age} = 33.07 years).

Procedure. After consenting to be involved in the study, participants were told to imagine that they were looking for a song to play at a party. Then, participants were shown the song’s names, which were randomly assigned across participants (the ad stimuli and focal questions used in all the studies in this research are available in Appendix C1). The two names used in the study were “The Lord of the Swing” (pun condition) and “A Party Dance Song” (control condition). This pair of names was chosen based on the results of a pre-test. In this pre-test, 50 participants from Prolific were shown different names for different product categories (music, potato chips, chocolate, fruit punch, water) and were asked to indicate the extent to which they thought the names had pun or not. The results of the pre-test revealed that the pair of names used in this study was significantly different in terms of pun perception. After seeing one of the two names, participants listened to the music and then were asked to answer questions about their evaluation of the music (4 items, α = .971, on a 9-point bipolar scale with 4 dimensions such as “unfavorable/favorable”, “disliked/like); their level of music enjoyment; their purchase intention of the music; their sharing intention; the extent to which they had physical movement and facial expression as they listened to the music. The music used in this study was chosen from
Youtube’s copyright-free music inventory and was classified as having a neutral mood. At the end of the survey, participants were asked demographic questions (age and gender) and then debriefed.

Results

Manipulation Checks. The manipulation in this study worked as intended: participants in the pun condition perceived the name of the song to have a pun ($M_{\text{Pun}} = 4.68; M_{\text{Control}} = 2.63; F(1, 118) = 24.35, p < .001$) and to be more polysemous than that in the control condition ($M_{\text{Pun}} = 4.33; M_{\text{Control}} = 2.53; F(1, 118) = 17.58, p < .001$).

Effect of Pun Use. I used age as a control variable in all analyses across all studies in this research because previous research has shown that the effect of humor differs for different age groups (e.g., Greengross 2013; Kaufman 2005; Ruch et al. 1990). A series of ANCOVAs was performed to examine the main effect of pun use in brand names on consumption experience. The results reveal that in comparison with the name in the control condition, the song name with the pun significantly enhances music evaluation ($M_{\text{Pun}} = 6.19; M_{\text{Control}} = 5.37; F(1, 117) = 4.22, p = .042$), music enjoyment ($M_{\text{Pun}} = 5.98; M_{\text{Control}} = 5.13; F(1, 117) = 4.72, p = .032$), and sharing intention ($M_{\text{Pun}} = 3.71; M_{\text{Control}} = 2.19; F(1, 117) = 12.15, p < .001$). Moreover, participants exposed to the song name with a pun also reported having more physical movement ($M_{\text{Pun}} = 5.26; M_{\text{Control}} = 3.89; F(1, 117) = 8.04, p = .005$) and more facial expressions ($M_{\text{Pun}} = 3.99; M_{\text{Control}} = 2.76; F(1, 117) = 7.48, p = .007$) as they listened to the music (see Figure 15).

Discussion

In line with the field data in the pilot study, the results of Study 1 provide evidence in support of H1 that the use of puns in brand names can enhance the enjoyment of the consumption experience. However, the design of Study 1 has a major limitation: the two names
used in this study might not be comparable in terms of important dimensions such as surprise or novelty (Chang et al. 2019; McQuarrie and Mick 1992), and consequently, it’s possible that the effect seen in this study might have been driven by those confounding factors rather than by the use of puns. Thus, in order to better understand the effect of pun use in brand names on consumption experience, I conducted Study 2 in which I used a different pair of stimuli that are comparable in terms of these potential confounding elements.

**Study 2**

**Method**

*Participants and Design.* Study 2 has multiple objectives. First, I wanted to examine the effect of using puns in brand names on consumption experience (H1) while employing a set of names that are comparable along key dimensions (e.g., novelty, surprise, etc.) to avoid confounds that undermine causal inferences. Second, I wanted to seek evidence to support H2, which argues that the positive effect of using pun in brand names on consumption experience is driven by mood enhancement. In doing so, I also wanted to examine possible alternative explanations for the effect of pun use in brand names. Third, I wanted to explore whether cognitive engagement is the moderator for the effect of pun use in brand names on consumption experience as stated in H3. To achieve these objectives, I first conducted Pre-test 2 to select the appropriate stimuli for this study. 121 Prolific participants participated in this pre-test. 10 different pairs of names for different product categories (flashlight, dessert, tea, running shoes, fashion boots, ties, sausages, videos, songs) were featured in this pre-test. Four of these names were adopted from prior research by McQuarrie and Mick (1992) and McQuarrie and Mick (2003).
Figure 15. Pun Effects in Study 1 (Essay 2)
Similar to McQuarrie and Mick (1992), participants in this pre-test were asked to indicate their opinions of the names in terms of how usual, surprising, typical and novel each name is. Additionally, participants also indicated the extent to which each name has a pun and has multiple meanings. The criteria for choosing the appropriate stimuli for subsequent studies is that a pair of names should be comparable on the four key dimensions of usualness, surprise, typicality, novelty, while also distinct in terms of pun perceptions. In this pre-test, I was able to identify a pair of stimuli that match these criteria: “Get yourself fit to a tea” and “Get yourself into a lot of hot tea” used by McQuarrie and Mick (1992) and McQuarrie and Mick (2003).

Thus, this pair of names is used in Study 2. Study 2 uses a randomized between-subject experimental design with two conditions (Pun in name: yes vs no). 100 Prolific participants were recruited for this study (87% Female, M_{Age} = 41.79 years).

*Procedure.* After consenting to be involved in the study, participants were asked to indicate their mood. Then participants were told that a beverage company intended to launch a new type of tea and would like to have their opinions of the song intended to be used in the television commercial for this tea. Then, participants were shown the song’s name (either “Get yourself fit to a tea” or “Get yourself into a lot of hot tea”), which was randomly assigned across participants (the ad stimuli and focal questions used in all studies in this research are available in Appendix C1). After seeing one of the two names, participants listened to the music, which was the same one used in Study 1. Then, participants were asked to indicate the extent to which the music gave them relaxation and the extent to which they had physical movement as they listened to the music. Next participants responded to multiple measures related possible mechanisms that underlie the effect of puns on consumption experience. Even though I speculate that mood enhancement is the mechanism for the effect of pun use in brand names on consumption experience.
experience, it is possible that the effect of pun might be driven by increased perceived intelligence. Specifically, being able to understand the pun and its multiple meanings may give participants a sense of self-pride by thinking that they have the intellectual capabilities to decode a linguistic challenge (Warren et al. 2018), and this sense of self-pride may spill onto the consumption experience. Additionally, benign violation theory suggests that benign violation is a possible explanation for the effect of using puns. Because puns imply multiple meanings, this polysemy characteristic can be seen as a type of linguistic violation (McQuarrie and Mick 1996; Warren and McGraw 2015). According to benign violation theory (Warren and McGraw 2015), as long as the “violation” is benign, the use of pun may generate humor and thus positively influence consumption experience. I also included manipulation check questions and the four control variables used in Pre-test 2 (usualness, surprise, typicality, novelty). At the end of the survey, participants were asked demographic questions (age and gender) and then debriefed.

Results

Manipulation Checks. The manipulation in this study worked as intended: participants in the pun condition perceived the name of the song to have a pun \( (M_{\text{Pun}} = 7.96; M_{\text{Control}} = 6.51; F(1, 98) = 17.17, p < .001) \) and to be more polysemous than that in the control condition \( (M_{\text{Pun}} = 7.61; M_{\text{Control}} = 6.71; F(1, 98) = 7.29, p = .008) \). Additionally, in line with Pre-test 2, the two names were considered to be similar in terms of usualness \( (M_{\text{Pun}} = 4.65; M_{\text{Control}} = 4.18; F(1, 98) = 1.24, p = .27) \), surprise \( (M_{\text{Pun}} = 5.80; M_{\text{Control}} = 5.69; F(1, 98) = .90, p = .77) \), typicality \( (M_{\text{Pun}} = 4.27; M_{\text{Control}} = 3.90; F(1, 98) = 1.26, p = .26) \) and novelty \( (M_{\text{Pun}} = 5.78; M_{\text{Control}} = 5.73; F(1, 98) = .022, p = .88) \).

Effect of Pun Use. Using ANCOVA as in Study 1, I find that there is a significant main effect of pun use on consumption experience. Specifically, in comparison with the song in the
control condition, the song that features a pun in its name significantly facilitated participants’ physical reactions as they listened to the music ($M_{\text{pun}} = 5.10; M_{\text{Control}} = 3.94; F(1, 987) = .420, p = .043$). Figure 16 illustrates this difference. Additionally, using PROCESS MODEL 4 (Hayes 2017), I find that mood enhancement is the mechanism for this effect (Indirect effect = .18, 90% CI [.0023; .3952]). Specifically, as Figure 17 illustrates, the use of puns helps to facilitate pleasant feelings, leading to an enhancement in music enjoyment. Moreover, there is no evidence to support the other alternative explanations including increased perceived intelligence (Indirect effect = -.026, 90% CI [-.2342; .2493]) and benign violation (Indirect effect = .12, 90% CI [-.1795; .5066]).

Exploring the role of cognitive engagement. To test H3 which posits that cognitive engagement moderates the impact of pun use in brand names on consumption experience, I conducted a moderation analysis using PROCESS MODEL 1 (Hayes 2017). I find that there is a marginally significant interaction between the use of pun and engagement level on the enjoyment of consumption experience ($F(1, 95) = 3.75, p = .056$). As illustrated in Figure 18, Johnson-Neyman analysis shows that among those with low engagement, the use of pun does not influence the consumption experience, whereas among those with high engagement, the use of pun helps to enhance the enjoyment of consumption experience. Additionally, to rule out the possibility that cognitive engagement is the processing mechanism rather than moderator in this research, I also conducted mediation analysis using PROCESS MODEL 4 (Hayes 2017) with cognitive engagement as the mediator. The result of this analysis shows that cognitive engagement is not the processing mechanism for the effect of pun use in brand names on consumption experience (Indirect effect = .1438, 90% CI [-.0161; .4102]).
Figure 16. Physical Movement in Study 2

Figure 17. Mediation Path in Study 2 (Essay 2)
Figure 18.  Effect of Cognitive Engagement in Study 2 (Essay 2)

Figure 19.  Pun Effect on Mood Enhancement in Study 2 (Essay 2)
Discussion

Similar to Study 1, the results of Study 2 provide further support for H1 which holds that the use of puns in brand names can facilitate the enjoyment of consumption experience. By making sure that the stimuli are equal on different control variables, the design in Study 2 helps to eliminate concerns about potential confounds and suggests that the effect of pun use in brand names on consumption experience exists above and beyond the effects of these factors. In addition, this study also provides evidence for H2 (which holds that mood enhancement is the explanation for the positive effect of pun use in brand names on consumption experience) and H3 (which argues that cognitive engagement is a moderator for the effect of pun use in brand names on consumption experience). Specifically, Study 2 reveals a significant interaction between pun use and engagement on the enjoyment of the consumption experience such that the use of puns in brand names enhances mood and thus facilitates consumption experience among those with high engagement, but not among those with low engagement. Based on the findings in Study 2, Study 3 was conducted to further confirm these observed patterns.

Study 3

Method

Participants and Design. Study 3 has multiple objectives. First, given that Study 2 provides initial evidence that mood mediates the positive effect of pun in brand names on consumption experience, I wanted to seek more evidence to confirm this finding. With that aim in mind, I used a process-by-moderation approach, in which I manipulated mood and observed the effect of pun use. Specifically, I anticipated that if mood enhancement is indeed the explanation for the effect of pun use in brand names on consumption experience, then the effect of pun use should disappear when mood enhancement occurs prior to exposure to the pun stimuli. Second, Study 2
also provides evidence that cognitive engagement moderates the effect of pun use in brand names on consumption experience. Specifically, the results of Study 2 suggest that the use of puns in brand names helps to enhance the consumption experience among those with high engagement (but not among those low engagement). Given these two objectives, a research design that shows a three-way interaction between pun use, engagement level, and mood manipulation would provide convincing evidence to complement the findings in Study 2 and further support H2 & H3.

To achieve these objectives, I first conducted two pre-tests. The pre-tests have two major objectives. First, I wanted to make sure that the procedure for mood manipulation would work in the main study. Second, I sought to identify another pair of brand name stimuli as a way of increasing the generalizability of the findings in this research. Each of these pre-tests had 80 Prolific participants. In Pre-test 3, I tested the approach to manipulate mood based on prior works by White and McFarland (2009) and Batra and Stayman (1990). Specifically, in the mood enhancement condition, participants were asked to describe a positive life event that made them very happy. Participants in the neutral mood condition were asked to list ten things that they could see in their room. Before the writing exercise, all participants were asked to indicate their mood, and after the writing exercise, participant mood was measured once again. The changes in mood were used as indicators for the effectiveness of this mood manipulation exercise. The results of Pre-test 3 show that this approach is effective in mood manipulation. In Pre-test 3, I also tested participant opinions of four pairs of stimuli for four different product categories (bread, eggs, books, and chips). However, no pairs of stimuli satisfy the same criteria used in earlier pre-tests to select stimuli (i.e., the stimuli must be comparable in terms of usualness, surprise, typicality, and novelty). Following up with Pre-test 3, I conducted Pre-test 4. Another
way to enhance mood is to let participants listen to a piece of upbeat music as previous research (e.g., Di Muro and Murray (2012)) has shown. I chose a copyright-free piece of music that has upbeat tune for this pre-test. Similar to Pre-test 3, I also measured participant mood change before and after listening to the music as indicators of mood manipulation effectiveness. The results of this pre-test showed that the intended piece of music really helps to enhance participant mood. Additionally, I also tested four different sets of stimuli for different product categories (flashlights, desserts, ties, and sausages). Using the same criteria used in earlier pre-tests to select stimuli (i.e., the stimuli must be comparable in terms of usualness, surprise, typicality, and novelty), I find that a pair of stimuli for ties (“Forget-me-Knots” and “Look-good-Knots”) satisfies the criteria and can be used in later studies. For Study 3, I kept the same pair of name stimuli used in Study 2 because I wanted to replicate the effect in Study 2 to confirm its findings. Given both approaches in mood manipulation were shown to be effective in Pre-test 3 and Pre-test 4, I included both approaches in the main test to make sure that I could successfully manipulate mood enhancement. Study 3 uses a randomized between-subject experiment in a 2 (Mood manipulation: mood enhancement vs mood neutral) x 2 (Pun in brand names: yes vs no) design. 360 Prolific participants were recruited for this study (58.9% Female, M_{Age} = 36.52 years).

Procedure. After consenting to be involved in the study, participants were asked to indicate their mood. Then participants were randomly assigned to one of the two mood manipulation conditions (the ad stimuli and focal questions used in all the studies in this research are available in Appendix C1). In the mood enhancement condition, participants were first asked to write about a positive event in their life that made them very happy, and then they listened to the upbeat music used in Pre-test 4. In the neutral mood condition, participants were asked to
describe ten objects in their room. Then, all participants indicated their mood again. After the mood manipulation exercise, all participants were randomly assigned to one of the two pun manipulation conditions, as in Study 2. After seeing one of the two names, participants listened to the same music used in Study 2, and then indicated their level of music enjoyment (3 items, $\alpha = .96$). Even though Study 2 showed that benign violation is not the mechanism for the effect of pun use in brand names on consumption experience, it is possible that the effect of pun use as seen in Study 1 and Study 2 is partly due to the nature of linguistic violation that is still considered to be totally acceptable in puns (Warren and McGraw 2016). In other words, because puns cause readers to pay attention to the play on words and reappraise the meanings (McGraw and Warren 2010), pun use triggers more reactions to the stimuli. Therefore, it is possible that when two stimuli are comparable in terms of the level of benign violation, the effect of pun use as seen in Study 1 and Study 2 may be reduced or washed away. Because of this reason, I kept measuring the level of benign violation evoked by the names (2 items, $r = .61, p < .001$) and used it as a control variable in my analyses. Similarly, another potential confounding factor that is related to the concept of benign violation is incongruity. Specifically, McQuarrie and Mick (2009) suggested that because of the “pleasing incongruity” in their nature, puns help to enhance memory and more positive attitudes toward the stimuli. McQuarrie and Mick (1992) further emphasized that the incongruity in puns motivate people to investigate into the implied meaning(s), leading to increased preferences. Based on such theoretical background, it is possible that the effect of pun use in brand names on consumption experience as seen in previous studies is partly driven by the incongruity in puns. To eliminate concern that incongruity is a confounding factor, I measured participant perception of incongruity evoked by the names (2 items, $r = .60, p < .001$) as a control variable. I also included manipulation check questions and
the same four control variables used in previous studies (usualness, surprise, typicality, novelty).

At the end of the survey, participants were asked demographic questions (age, gender, and ethnicity) and then debriefed.

Results

Manipulation Checks. First, the manipulation of mood in this study worked as intended: participants in the mood enhance condition reported feeling happier ($M_{\text{Enhance}} = .047$; $M_{\text{Neutral}} = -.01$; $F(1, 358) = 31.65, p < .001$), merrier ($M_{\text{Enhance}} = .68$; $M_{\text{Neutral}} = .01$; $F(1, 358) = 39.58, p < .001$), more comfortable ($M_{\text{Enhance}} = .16$; $M_{\text{Neutral}} = -.18$; $F(1, 358) = 10.41, p = .001$), less unpleasant ($M_{\text{Enhance}} = -.29$; $M_{\text{Neutral}} = -.06$; $F(1, 358) = 5.77, p = .017$), less worried ($M_{\text{Enhance}} = -.47$; $M_{\text{Neutral}} = -.23$; $F(1, 358) = 6.40, p = .012$) than those in the neutral mood condition.

Second, the manipulation of puns in this study also worked as intended: participants in the pun condition perceived the name of the song to have a pun ($M_{\text{Pun}} = 7.73$; $M_{\text{Control}} = 6.35$; $F(1, 358) = 39.89, p < .001$) and to be more polysemous than that in the control condition ($M_{\text{Pun}} = 7.31$; $M_{\text{Control}} = 6.61$; $F(1, 358) = 10.31, p = .001$). And even though the two names were considered to be similar in terms of surprise ($M_{\text{Pun}} = 5.18$; $M_{\text{Control}} = 5.50$; $F(1, 358) = 1.98, p = .16$) and novelty ($M_{\text{Pun}} = 5.78$; $M_{\text{Control}} = 5.80$; $F(1, 358) = .007, p = .93$), they were significantly different in terms of usualness ($M_{\text{Pun}} = 4.98$; $M_{\text{Control}} = 4.10$; $F(1, 358) = 14.98, p < .001$) and typicality ($M_{\text{Pun}} = 4.81$; $M_{\text{Control}} = 4.11$; $F(1, 358) = 11.02, p < .001$). Furthermore, the two names were also significantly different in terms of perceived incongruity ($M_{\text{Pun}} = 2.84$; $M_{\text{Control}} = 3.43$; $F(1, 358) = 9.84, p = .002$) and benign violation level ($M_{\text{Pun}} = 7.52$; $M_{\text{Control}} = 6.47$; $F(1, 358) = 29.22, p < .001$). Because of these differences, usualness, typicality, incongruity, age, and benign violation were added as control variables in all of the analyses in this study.
Effect of Pun Use. Using PROCESS MODEL 3 (Hayes 2017), I find that there is a significant three-way interaction between pun use, cognitive engagement and mood manipulation on music enjoyment ($F(1, 347) = 3.81, p = .05$). To further explore this interaction, I examined the two-way interaction between pun use and cognitive engagement in each mood manipulation condition. I find that in the neutral mood condition, there is a significant interaction between pun use and engagement level on music enjoyment ($F(1, 174) = 3.88, p = .05$). As depicted in Figure 20, Johnson-Neyman analysis reveals that among those who engage in high level of engagement, the use of puns in brand names significantly enhances music enjoyment, whereas among those with low engagement, the use of puns in brand names does not influence music enjoyment. In contrast, there is no interaction between pun use and engagement level in the mood enhancement condition ($F(1, 168) = .89, p = .35$).

Discussion

Study 3 sheds further light on the effect of pun use in brand names on consumption experience. First, via a process-by-moderation approach, this study strengthens the findings in Study 2 and provides further support for H2 that mood enhancement is the mechanism for the effect of pun use on consumption experience. Second, Study 3 yields more convincing evidence for H3 that cognitive engagement moderates the effect of pun use in brand names on the enjoyment of the consumption experience. Specifically, using the same stimuli as in Study 2, Study 3 shows that the positive effect of pun use in brand names on the enjoyment of the consumption experience only holds at high cognitive engagement. Given these important findings, I conducted Study 4 to extend the generalizability of this research.
Figure 20. Interaction in Study 3 (Essay 2)
Study 4

Method

*Participants and Design.* Based on the findings of previous studies, Study 4 has multiple objectives. First, I wanted to extend the generalizability of the findings in Studies 1, 2, & 3 by using a different product, a different set of stimuli and a different research setting. To reach this aim, I conducted an in-person lab study in which participants could interact directly with a different product. The set of stimuli used in this study was “Forget-me-knots” and “Look-good-knots”, which are similar in important dimensions of usualness, typicality, surprise, and novelty in Pre-test 4. Accordingly, I used ties as the focal product in this in-person study to fit in with the stimuli names. Another objective of Study 4 was to seek further evidence that cognitive engagement moderates the effect of pun use in brand names on consumption experience (as observed in Study 2 and Study 3). Given these two objectives, Study 4 uses a randomized between-subject experimental design with two conditions: brand name with pun and brand name without pun. 197 undergraduate students at The University of Tennessee participated in this study (58.3% Female, $M_{\text{Age}} = 21.09$ years). Even though ties are mainly used by men, I did not exclude female students from participating in this study for of a variety of reasons. First, the IRB at The University of Tennessee discourages against screening out student participants for studies that both genders can participate. Second, including participants of all gender reduces participant guessing about the true purpose of the study. Third, even though men are the main target audience for ties, it is not uncommon that women also buy ties as gifts, and therefore I am interested in exploring whether there are any differences in consumption experience between two genders.
Procedure. After consenting to be involved in the study, participants were randomly assigned to one of the two pun manipulation conditions. Participants were told that an apparel company was planning to launch a new brand of tie and would like to get customer opinion about their product. After seeing one of the two names, participants were instructed to open a paper bag that contained a black tie and examine the tie as they would do so if they were in the market shopping for ties, either for themselves or as a gift for someone else. Then, participants were asked to indicate how excited they were to check out the tie, the feel of the fabric, and their enjoyment when checking out the ties. Then participants answered to questions about engagement level (3 items, $\alpha = .75$), perceived incongruity (2 items, $r = .59, p < .001$), and benign violation (2 items, $r = .52, p < .001$) as in Study 3. Because the extent to which participants interacted with the tie (e.g., touching the tie, trying on the tie) may influence their perceptions of the product, I also included a variable that measured the level of interaction with the ties. And, similar to previous studies, there were manipulation check questions and measures for the same four control variables (usualness, surprise, typicality, novelty). At the end of the survey, participants were asked demographic questions (age, gender, and ethnicity) and then debriefed.

Results

Manipulation Checks. The manipulation of puns in this study worked as intended: participants in the pun condition perceived the name of the tie brand to have a pun ($M_{\text{Pun}} = 8.04; M_{\text{Control}} = 5.79$; $F(1, 195) = 63.87, p < .001$) and to be more polysemous than that in the control condition ($M_{\text{Pun}} = 7.43; M_{\text{Control}} = 5.17; F(1, 195) = 60.28, p < .001$). And even though the two names were considered to be similar in terms of usualness ($M_{\text{Pun}} = 4.97; M_{\text{Control}} = 5.13; F(1, 195) = .35, p = .56$), they were significantly different in terms of surprise ($M_{\text{Pun}} = 5.21; M_{\text{Control}} = 4.27; F(1, 195) = 12.63, p < .001$), typicality ($M_{\text{Pun}} = 4.72; M_{\text{Control}} = 5.64; F(1, 195) = 12.53, p < .001$) and
novelty ($M_{\text{Pun}} = 5.63; M_{\text{Control}} = 4.57; F(1, 195) = 15.15, p < .001$). Because of these differences, surprise, typicality, and novelty were added as control variables in all the analyses in this study along with incongruity, benign violation, age (to be consistent with Study 3) and the amount of interaction with the product.

Effect of Pun Use. Because the main target audience of ties is men, I first examined the effect of pun use on consumption experience among male participants. I find that the use of pun significantly reduces product evaluation ($M_{\text{Pun}} = 5.29; M_{\text{Control}} = 6.13; F(1, 77) = 4.78, p = .032$) and purchase intentions ($M_{\text{Pun}} = 4.98; M_{\text{Control}} = 6.19; F(1, 77) = 6.77, p = .011$). Within the female group, there are no main effects of pun use.

In addition, I find that there is a significant 3-way interaction between pun use, engagement level and gender on the enjoyment of checking out the product ($F(1, 172) = 6.00, p = .007$). Probing this interaction, I find that whereas there is no significant interaction between pun use and engagement level among male participants ($F(1, 75) = 2.23, p = .14$), there is a significant interaction between pun use and engagement level among female participants ($F(1, 100) = 4.40, p = .04$). Specifically, the use of pun reduces the enjoyment of checking out the product among those with high engagement but not among those with low engagement.

Discussion

The results of Study 4 yield important implications. First, using a different product, a different set of stimuli, and a different setting, Study 4 replicates the results in previous studies that the effect of pun use in brand names on the enjoyment of consumption experience depends on cognitive engagement as proposed in H3. Second, this study illustrates the double-edged-sword of pun use in brand names by showing that the effect of pun use can have a negative
Figure 21. Product Evaluation and Purchase Intention in Study 4 (Essay 2)

Figure 22. Enjoyment of Checking Out Product (Female Participants) (Essay 2)
impact on consumption experience. One possible explanation for the negative effect of pun use on consumption experience this that participants did not appreciate the pun in a stimulus used in the study, leading to a negative effect (Warren et al. 2018). Additionally, a concern with Study 4 is that the use of ties as a focal product may not be ideal in examining the impact of pun use on consumption experience because participants did not necessarily “consume” (e.g., wear the tie for a particular occasion) in the experiment. To have more in-depth insights into the findings in Study 4, I conducted Study 5 using a different product to better examine the effect of pun use in brand names on consumption experience.

**Study 5**

**Method**

*Participants and Design.* The primary objective of Study 5 is to further strengthen the findings in this research by addressing the concerns in Study 4 that participants did not really “consume” the focal product and that ties are more popular among men than women. Specifically, in Study 5, I used music as the focal product because music would be blind to gender while keeping the same set of stimuli used in Study 4 ("Forget-me-knots" and "Look-good-knots"). In addition, by letting participants listen to the music and then report their experience, Study 5 would provide more direct evidence about the relationship between pun use and consumption experience. Finally, if the negative effect of pun use in Study 4 was indeed due to the lack of appreciation for the pun stimulus, I would be able replicate such negative effect in this study. Given these objectives, Study 5 uses a randomized between-subject experimental design with two conditions: name with pun and name without pun. 119 Prolific participants participated in this study (64.7% Female, M_{Age} = 36.79 years).
Procedure. After consenting to be involved in the study, participants were randomly assigned to one of the two pun manipulation conditions. Participants were told that a company in gift craft is designing their website, which will feature a special tune created specifically for this company. The name of the website as well as the name of the musical tune that will be featured on the website is either "Forget-me-Knots" or “Look-good-Knots”. Participants then listened to a piece of music, and then indicated their music evaluation (4 items, $\alpha = .98$) and their intention to share the website with acquaintances. Then participants answered to questions about engagement level (3 items, $\alpha = .77$), perceived incongruity (2 items, $r = .59, p < .001$), and benign violation (2 items, $r = .58, p < .001$) as in previous studies. I also included manipulation check questions and the same four control variables used in previous studies (usualness, surprise, typicality, novelty). At the end of the survey, participants were asked demographic questions (age, gender, and ethnicity) and then debriefed.

Results

Manipulation Checks. The manipulation of puns in this study also worked as intended: participants in the pun condition perceived the name of the song to have a pun ($M_{\text{Pun}} = 7.92$; $M_{\text{Control}} = 4.72$; $F(1, 117) = 77.96, p < .001$) and to be more polysemous than that in the control condition ($M_{\text{Pun}} = 7.36$; $M_{\text{Control}} = 4.63$; $F(1, 117) = 55.91, p < .001$). And even though the two names were considered to be similar in terms of novelty ($M_{\text{Pun}} = 4.83$; $M_{\text{Control}} = 5.17$; $F(1, 117) = .795, p = .37$), they were significantly different in terms of surprise ($M_{\text{Pun}} = 4.39$; $M_{\text{Control}} = 5.22$; $F(1, 117) = 5.29, p = .023$), typicality ($M_{\text{Pun}} = 5.36$; $M_{\text{Control}} = 3.77$; $F(1, 117) = 24.27, p < .001$) and usualness ($M_{\text{Pun}} = 5.39$; $M_{\text{Control}} = 3.72$; $F(1, 117) = 23.41, p < .001$). Because of these differences, usualness, surprise, and typicality were added as control variables in all the analyses.
in this study along with incongruity, benign violation, and age to be consistent with Studies 3 and 4.

Effect of Pun Use. Similar to the previous studies, there is a marginally significant interaction between pun use in brand names and engagement level on music evaluation ($F(1, 109) = 3.71, p = .06$). As illustrated in Figure 23, Johnson-Neyman analysis reveals that when engagement is low, the use of pun in brand names reduces music evaluation, but when engagement is high, the use of pun has no impact on music evaluation.

In addition, there is a significant interaction between pun use in brand names and engagement level on sharing intention ($F(1, 109) = 4.54, p = .04$). As illustrated in Figure 24, Johnson-Neyman analysis reveals that when engagement is high, the use of pun in brand names significantly enhances consumers’ intention to share the website on social media, but when engagement is low, pun use does not have any impact on sharing intention. The direction of this interaction between pun use and engagement level is similar to those observed in Studies 2, 3 and 4. Finally, there was no three-way interactions among pun use, engagement level and gender in this study.

Discussion

Study 5 provides further evidence to support H3 that the effect of pun use in brand names on the enjoyment of the consumption experience depends on cognitive engagement. In addition, by using a different product from Study 4, Study 5 shows that the effect of pun use is not dependent on gender, but rather, the effect is likely to hold for those who are the appropriate target audience of the focal product. Furthermore, by using the same name stimuli and showing that the use of pun in names still has a positive impact on consumption experience (rather than a
Figure 23. Music Evaluation in Study 5 (Essay 2)

Figure 24. Sharing Intention in Study 5 (Essay 2)
negative impact as seen in Study 4), Study 5 highlights the risks associated with using puns in brand names: the valence of the effect can drastically change based on different factors, some of which may be unknown or unpredictable. In the case of Study 5, a change in participant population (online platforms rather than student platform) and focal product (music rather than ties) drastically flips the effect direction. To further deepen the understanding in this research, I conducted Study 6 using a different set of stimuli.

**Study 6**

**Method**

*Participants and Design.* The primary objective of Study 6 is to further generalize the findings in this research by using a different set of stimuli. Specifically, in Pre-test 2, I find another pair of stimuli (“The Lord of the Swing” vs “The Theme of the Swing”) that are comparable in terms of the four key dimensions (usualness, surprise, typicality, and novelty). Study 6 uses a randomized between-subject experimental design with two conditions: name with pun and name without pun. 209 student participants at the University of Tennessee in Knoxville participated in this study (55.5% Female, M_{Age} = 21 years).

*Procedure.* After consenting to be involved in the study, participants were randomly assigned to one of the two pun manipulation conditions. Participants were told to imagine that they were looking for a song to play at their upcoming weekend party and that they came across this song that is called either “The Lord of the Swing” or “The Theme of the Swing”. After listening to a piece of music, participants indicated the extent to which they enjoyed the music (3 items, α = .94) and how much they were willing to pay for the song. There are two major reasons that I measured willing-to-pay price in this study as a proxy to gauge participant consumption experience. First, willing-to-pay price is an indication of purchase intention, and previous
research has showed that customer satisfaction is a highly important antecedent to purchase intention (e.g., Dash et al. 2021). Thus, it is reasonable to assume that the higher the prices that participants are willing to pay to own the song in this study, the better their consumption experiences are when listening to the song (otherwise, it would be inappropriate to assume that participants are still willing to pay a high price for the song if their consumption experience is not favorable). Second, in line with recommendations in best research practices, I attempt to use dependent variables that not only bring realism to the study but also help draw managerially relevant implications (Morales et al. 2017). In this case, since previous research has shown that favorable consumption experience can positively enhance perceived brand value (Jiang et al. 2018), participants’ willing-to-pay price not only helps to tease out how favorable their consumption experience is but also reveals insights on how the use of puns in brand names can add value to firms. Participants also answered questions about engagement level (3 items, \( \alpha = .73 \)), perceived incongruity (2 items, \( r = .60, p < .001 \)), and benign violation (2 items, \( r = .40, p < .001 \)) as in the previous studies. I also included manipulation check questions and the same four control variables used in previous studies (usualness, surprise, typicality, novelty). At the end of the survey, participants were asked demographic questions (age, gender, and ethnicity) and then debriefed.

Results

Manipulation Checks. The manipulation of puns in this study also worked as intended: participants in the pun condition perceived the name of the song to have a pun (\( M_{\text{Pun}} = 5.46; M_{\text{Control}} = 4.43; F(1, 207) = 8.75, p = .003 \)) and to be more polysemous than that in the control condition (\( M_{\text{Pun}} = 5.72; M_{\text{Control}} = 4.55; F(1, 207) = 13.39, p < .001 \)). And even though the two names were considered to be similar in terms of usualness (\( M_{\text{Pun}} = 3.89; M_{\text{Control}} = 4.37; F(1, \)
207) = 2.18, p = .14), typicality (M_{Pun} = 4.63; M_{Control} = 4.74; F(1, 207) = .14, p = .71), and novelty (M_{Pun} = 5.01; M_{Control} = 4.66; F(1, 207) = 1.74, p = .19), they were significantly different in terms of surprise (M_{Pun} = 5.38; M_{Control} = 4.60; F(1, 207) = 7.21, p = .008). Because of these differences, surprise, incongruity, benign violation, and age were added as control variables in all of the analyses to be consistent with the previous studies.

**Effect of Pun Use.** I find that even though there is no significant interaction between pun use and cognitive engagement on music enjoyment (F(1, 201) = .05, p = .82), there is a significant interaction between pun use in brand names and cognitive engagement on the price that participants were willing to pay for the song (F(1, 201) = 8.43, p = .004). As illustrated in Figure 25, Johnson-Neyman analysis reveals that when engagement is low, the use of pun in brand names reduces the amount that people are willing-to-pay for the song, but when engagement is high, the use of pun really enhances people’s willingness to pay more for the song. This interaction between pun use and cognitive engagement is similar to those observed in the previous studies.

Because the dependent variable in this analysis (i.e., willing-to-pay price) is highly skewed (Skewness = 7.13), as a robust check for the finding above, I log-transformed this variable to reduce skewness (Skewness = .57 after log-transformation) and re-analyzed the data using the same procedure mentioned above. I find that there is a marginally significant interaction between pun use and cognitive engagement on willing-to-pay price (F(1, 201) = 3.07, p = .08) for the song such that whereas among those with low engagement, the use of puns in brand names does not impact willing-to-pay price (t = -.49, p = .62), among those with high engagement, the use of puns in brand names enhances willing-to-pay price (t = 2.14, p = .03). Based on this robustness check, I conclude that in this study, the use of puns in brand names
helps to increase willing-to-pay price among those who devote high cognitive engagement to the name but has no effect among those who do not devote enough cognitive engagement to the name.

Discussion

By using a different set of stimuli, Study 6 helps to generalize the findings in this research that the effect of pun use in brand names on the enjoyment of the consumption experience depends on engagement level such that at high engagement level, pun use can enhance willing-to-pay price, but at low engagement level, this positive effect does not really hold. In addition, Study 6 helps to show the managerially relevant insight for using puns in brand names: the use of puns in brand names can help to increase price premium for a song from 39 cents (for those who are moderately engaged in the name) to one dollar (for those who are highly engaged in the name) (see Figure 26). Given that a song can be bought millions of times by consumers around the world, such price premiums can translate into meaningful revenue streams for an artist or a company.

General Discussion

This research aims to explore the effect of pun use in brand names on consumption experience and the findings in this research are summarized in Table 8. Across seven studies, this essay teases out the bright- and dark- side effects of pun use in brand names on consumption experience. First, the pilot study using field data from Yelp shows that the use of puns in brand names can have both positive and negative impacts on consumption experience. Seven subsequent studies in this research further demonstrate the double-edged-sword effects of using
**Figure 25.** Johnson-Neyman Analysis in Study 6 (Essay 2)

**Figure 26.** Willing-to-Pay Price in Study 6 (Essay 2)
puns in brand names on consumption and identify cognitive engagement as an important factor in regulating these effects. Specifically, Study 1 provides initial evidence that the use of pun can enhance consumption experience, whereas Study 2 replicates this result and further shows that mood enhancement is the mechanism for this effect while providing preliminary evidence for the moderating role of cognitive engagement. Using a process-by-moderation approach, Study 3 further strengthens the findings in Study 2 by confirming the mediating role of mood enhancement and the moderating role of cognitive engagement. Studies 4, 5 and 6 extend the generalizability of this research by using different sets of stimuli, different focal products, different participant populations and different settings. Besides consistently providing more evidence for the moderating role of cognitive engagement, these studies further highlight the inherent risks in using puns in brand names. Together, the findings in this research make multiple contributions to theory and practice.

**Contributions to theory**

This research yields important contributions to marketing literature. First, this research extends previous works in humor in meaningful ways. Previous research in humor has shown that humor can increase favorable responses to marketing appeals such as ad attitude, brand attitude, attention, positive affect and purchase intention (Eisend 2009; Weinberger and Gulas 1992), and such effects depend on a variety of factors such as the existence of threatening information (Warren and McGraw 2016), motivation orientation (Warren and McGraw 2016), psychological distance (McGraw et al. 2012; McGraw et al. 2014), or the relevance of the humorous information (Krishnan and Chakravarti 2003). Despite such significant amount of work, there is limited understanding about how humor can influence the enjoyment of the consumption
Table 8. Effects of Pun Use in Brand Names Across Studies in Essay 2

<table>
<thead>
<tr>
<th>Study</th>
<th>Pun Manipulations</th>
<th>CE Moderation Evidence</th>
<th>Low CE</th>
<th>High CE</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>“The Lord of the Swing” vs “A Party Dance Song”</td>
<td>NA</td>
<td>+</td>
<td>+</td>
<td>Significant main effects of pun use on DVs.</td>
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<tr>
<td>*Study 2 (#84173)</td>
<td>“Get yourself fit to a tea” vs “Get yourself into a lot of hot tea”</td>
<td>Yes</td>
<td>No effect</td>
<td>+</td>
<td>• Significant main effects of pun use on physical reactions.</td>
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<td>• Significant index of mediation for mood enhancement.</td>
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<td>• Marginally significant interaction ($p = .056$) between pun use and engagement on music enjoyment.</td>
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<td>Significant 3-way interaction ($p = .05$) between pun use, engagement level and mood enhancement:</td>
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<td></td>
<td></td>
<td>• Neutral mood condition: significant interaction between pun use and engagement ($p = .05$)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Mood enhancement condition: no interaction between pun use and engagement</td>
</tr>
<tr>
<td>*Study 3 (#86753)</td>
<td>“Get yourself fit to a tea” vs “Get yourself into a lot of hot tea”</td>
<td>Yes</td>
<td>No effect</td>
<td>+</td>
<td>Females: Pun use significantly enhances consumption experience among female participants with low engagement and reduces consumption experience among female participants with high engagement.</td>
</tr>
<tr>
<td>*Study 4 (#87968) Female</td>
<td>“Forget-me-Knots” vs “Look-good-Knots”</td>
<td>Yes</td>
<td>+</td>
<td>-</td>
<td>Males: pun use in names has a significant main effect on product evaluation and purchase intention</td>
</tr>
<tr>
<td>*Study 4 (#87968) Male</td>
<td>“Forget-me-Knots” vs “Look-good-Knots”</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td>Significant interaction between pun use and engagement on sharing intention ($p = .04$): when engagement is high, the use of pun in brand names significantly enhances consumers’ intention to share the website on social media, but not when engagement is low.</td>
</tr>
<tr>
<td>*Study 5 (#87968)</td>
<td>“The Lord of the Swing” vs “The Theme of the Swing”</td>
<td>Yes</td>
<td>-</td>
<td>+</td>
<td>• Marginally significant interaction between pun use and engagement on music evaluation ($p = .06$): at low engagement, pun use in names reduces evaluation; at high engagement pun use in names has no impact.</td>
</tr>
<tr>
<td>*Study 6 (#84173)</td>
<td>“Get yourself fit to a tea” vs “Get yourself into a lot of hot tea”</td>
<td>Yes</td>
<td>No Effect</td>
<td>+</td>
<td>Pun use significantly enhances willing-to-pay amount among those with high engagement level. At low engagement level, pun use significantly reduces willing-to-pay amount.</td>
</tr>
</tbody>
</table>
experience. In a thorough review of the humor literature, Warren et al. (2018) emphasize that “consumer researchers...know relatively little about how humor influences consumers’ goal attainment” (p. 529). Their discussion and propositions leave open the question of when and how humor helps or hurts consumption experience. For example, would a healthy product with an interesting pun in the brand name (e.g., “Seeduction” – real brand name of whole-grain bread) make consumers feel more fulfilled in comparison with a brand name that does not have puns? Or would a restaurant with a pun in their name (e.g., “Thai Me Up” – Thai restaurant) make consumers have a more comfortable and relaxing dining experience? This research responds directly to such gaps by providing empirical evidence about the double-edged-sword effects of humorous stimuli (such as puns in the context of this research) on consumption experience and identifying a moderating factor that helps explain why the effects are noticeable in some cases and not in others. Thus, the findings in this research help lay the foundation for future works to further explore the impact of humor on consumption goals.

Second, this research also contributes to the brand identity literature. Whereas previous research has emphasized the importance of brand name in shaping brand identity (Baker 2003; Klink 2001; Maheswaran et al. 1992; Wänke et al. 2007; Yorkston and Menon 2004), no research has explored how puns in brand names shape consumers’ consumption experience. Because brand names are very important elements in marketing activities, any mistakes in coming up with the right brand names can lead to disastrous consequences. Given that using puns in brand names is not uncommon, this gap warrants research efforts to enrich understanding in this literature area. In contrast to previous works that mainly document the positive impacts of pun use in marketing, this research provides a more well-rounded, balanced perspective by highlighting both the positive and negative effects that featuring puns in brand names may entail.
In doing so, this research broadens the literature discussion about how different brand elements may shape consumption experience and influence long-term brand success.

Third, this research also offers new insights for researchers in the area of rhetorical figures. Specifically, previous research in this area has mainly examined the effects of rhetorical figures on *marketer* communication goals as the outcome variables, rather than on *consumer* consumption goals. Furthermore, the small number of studies that examine the use of puns (a specific type of rhetorical figures) has only focused on the use of puns in slogans, rather than in brand names (e.g., McQuarrie and Mick 2009; McQuarrie and Mick 1992; Phillips and McQuarrie 2002). In fact, besides research in linguistics that investigates the technical aspects of how puns are constructed and communicated (e.g., Gan 2015; Jing 2010), marketing research specifically related to the use of puns is still limited. Additionally, previous research has mainly documented the positive effects of pun use, creating the impression that these “artful deviations” just “cannot go wrong” (Story 2007). Against such backdrop, this research reveals refreshing insights into pun use in the contexts of brand names and portrays a more qualified view of the effects of this approach on consumption experience. It is clear from this research that pun use in marketing can easily enhance or dampen consumption experience, and such effects are definitely complicated enough to warrant more research in this area.

Fourth, this research also extends the consumption experience literature. Consumption experience is highly important to the success of almost any brands or businesses and therefore receives a lot of attention from marketers (Grewal et al. 2009). However, given that there is a myriad of factors that can influence consumption experience such as mode of provision, access conditions, or social contexts (Carù and Cova 2003), research in this area still has a lot of potential room to grow. For example, because consumption experience includes multiple stages
(Carù and Cova 2003), previous research has called for the investigation into consumption experience using different outcome variables and different settings (Tezer and Bodur 2020). This research responds to such calls by examining the effect of a marketing approach on consumption experience in a context that have not been examined before: the use of puns in brand names. Additionally, by using different stimuli and examine different outcome variables, the studies in this research also provide insights into how consumption experience can be influenced by different types of marketing stimuli.

**Implications for Practice**

This research also yields important practical implications. Previous research suggests that brand name helps shape consumer impressions of and attitudes toward firm offers (Baker 2003; Klink 2001; Maheswaran et al. 1992; Wänke et al. 2007; Yorkston and Menon 2004). Yet, coming up with a good brand name that can help facilitate brand success in the market is a challenging task (Robertson 1989). Therefore, academic marketing researchers have devoted a lot of effort to studying how different elements in brand names can influence consumer behavior (Argo et al. 2010; Keller et al. 1998). Even though it is not uncommon for marketers to use puns in their marketing activities (Phillips and McQuarrie 2002), there is no empirical evidence that brand names with puns can help enhance consumption experience. Against such background, the findings in this research suggest that featuring puns in brand names is a double-edged-sword approach that can either help or hurt the consumption experience. Thus, practitioners need to exert caution when deciding whether to feature puns in their brand names or not. Even though there is no one-size-fit-all answer to whether a company, a brand, an artist,… should use puns in their product names, this research reveals the bright- and dark- side effects of this approach and calls for a qualified perspective in deciding whether to move forward with this approach. These
findings are important given that previous works in pun have mainly documented the positive effects of pun use, and anecdotal evidence suggests that pun use is pervasive in advertising (Phillips and McQuarrie 2002). There are even reports of marketers who claim that pun use is such a safe approach that it just “cannot really fail” (Beck 2015). This research suggests that the effects of pun use is more complicated than the “cannot really fail” mindset, and that without in-depth understanding of the factors that drive such effects, blindly featuring puns in brand names is similar to taking on risks.

Second, consumption experience is one of the most important areas in marketing because it determines whether customers would come back, become loyal customers, or how they would talk about brands in various platforms, including social media. Therefore, attempts to understand what helps or hurts consumption experience is important in shaping brand success. This research therefore yields insights into how brands can use verbal communication to enhance consumption experience. Based on the findings of this research, marketers can review their activities and make necessary changes to improve their performance.

**Limitations and future research**

Like all scholarly work, this research has certain limitations. First, to reveal novel insights into the effect of puns, I tried to select stimuli that are comparable in different dimensions (e.g., usualness, novelty, typicality, surprise). Such strict selection results in a small set of stimuli used in this research. Additionally, due to the challenges of finding stimuli that are comparable in key dimensions, the stimuli used in this research may come across as not real or not ideal and therefore might have influenced the findings of the study. For example, the name “Get yourself fit to a tea” is potentially too long for a brand name and thus may be viewed as unrealistic. Future research can further extend the findings here by exploring more realistic
stimuli that are simultaneously comparable on key control dimensions. Second, this research tests the effect of pun use for only two product categories (music and ties). Future research can shed more light into this phenomenon by testing the effect of pun use in brand names on consumption experience for other products to enhance the generalizability of this research. Third, even though this research has identified cognitive engagement as a moderator for the effect of pun use in brand names, the existence of both positive and negative effects of pun use in this research suggests that there are other moderators/boundary conditions that regulate these effects. Thus, future research should further explore the other factors that determine the effects of pun use in brand names. Fourth, this research examines the use of puns in English and recruited participants from the USA. However, it is unclear as to whether pun use in different languages and cultures would provide the same effect. Future studies can extend this research by investigating the use of puns in different languages on consumption experience.

Conclusions

This research aims to explore the influence of pun use in brand names on consumption experience. Across seven studies, this research shows that the use of puns in brand names is metaphorically similar to a double-edged sword in that it can easily enhance or dampen the consumption experience. In addition, this research also identifies cognitive engagement as a moderator in the double-edge-sword effect of pun use in brand names on consumption experience. Whereas these findings provide important insights for both theory and practice, they are definitely only the beginning attempts to understand a phenomenon that is probably more complicated than we expect. Thus, I hope that this research will inspire future research to enrich our understanding in this area.
CONCLUSION

The two essays in this dissertation examines different aspects of marketing communications that have not yet been explored. Using both field and lab data from more than 3,000 participants, the two essays in this research reveal important insights that bear meaningful implications for both theory and practice.

Essay 1 examines the use of silhouettes in marketing. Converging evidence from five studies reveals that relative to the use of attractive models, the use of silhouettes can help to enhance communication effectiveness by mitigating self-threat perceptions. Furthermore, this effect holds only for appearance-related products and seems to increase as self-esteem about appearance decreases. Essay 2 examines the use of puns in brand names on consumption experience. Across seven studies, Essay 2 highlights bright- and dark- side effects of pun use in brand names on consumption experience and illustrates the potential benefits and risks associated with this marketing approach. In addition, Essay 2 also identifies the role of cognitive engagement as a moderator for the effects of pun use in brand names on consumption experience.

Together, the two essays reveal novel insights into the effects of different unexplored elements in marketing communications. Such insights not only help to enrich marketing literature but also suggest ideas for marketers to increase communication effectiveness and enhance social well-being.
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In Study 4, participants also answered questions about behavioral intention (2 items, $\alpha = .96$) and brand attitude (adapted from Shepherd et al. (2015) with 4 items, $\alpha = .94$) (the questions are reported in Appendix C). I conducted moderation analyses using SPSS PROCESS by Hayes (2017) (Model 3) to examine the three-way interaction between image type, self-esteem & threat priming on these variables. In each of these analyses, I used image type as the categorical independent variable that has the two focal ad conditions (silhouette and attractive model), the average of four items ($\alpha = .87$) that measured appearance self-esteem as the moderator (similar to Study 2 and Study 3), and attractiveness as the control variable (consistent with the previous studies). The results are as below.

First, for brand attitude, there was a significant 3-way interaction ($F(1, 336) = 4.66, p = .032$) such that in the no-threat (control) condition, there was a significant interaction between image type and self-esteem ($F(1, 336) = 4.57, p = .033$), but in the threat condition, there was no significant interaction between image type and self-esteem ($F(1, 336) = .87, p = .35$). To further examine the effect of image type on brand attitude at low – high levels of self-esteem (+/- 1SD from mean), I conducted spotlight analyses (Spiller et al. 2013) in each threat priming condition. I find that in the no-threat condition, participants with relatively low appearance self-esteem indicated significantly more favorable attitude toward the brand when the ad featured the silhouette image versus when the ad featured the model image ($\beta = 1.62, t(177) = 3.89, p < .001$). However, participants with high appearance self-esteem indicated similar levels of brand attitude irrespective of whether the ad featured a silhouette image or a model image ($\beta = .45, t(177) = 1.21, p = .23$). In the threat condition, a different pattern was observed: participants with low appearance self-esteem indicated similar levels of brand attitude irrespective of whether the ad featured a silhouette image or a model image ($\beta = .69, t(162) = 1.58, p = .12$). However, participants with high appearance self-esteem indicated significantly more favorable attitude toward the brand when the ad featured the silhouette image versus when the ad featured the model image ($\beta = 1.22, t(162) = 2.81, p = .006$). Figure A1 below visually depicts these differences.
Figure 27.  Brand Attitude in Study 4 (Essay 1)
Second, for behavioral intention, besides the variables used in the previous analyses, I also added “preference for using self-tanners” as a control variable to this analysis. The reason is that some people prefer natural tan to using artificial tanning products (Shunatona 2015), so this preference may influence their behavioral intention toward the products (even though they may like the ad and have a good impression of the brand). The results showed that there was no significant 3-way interaction ($F(1, 335) = 1.16, p = .28$). However, an examination into the lower two-way interactions revealed that in the no-threat (control) condition, there was a significant interaction between image type and self-esteem ($F(1, 335) = 4.67, p = .032$), but in the threat condition, there was no significant interaction between image type and self-esteem ($F(1, 335) = .37, p = .55$). Spotlight analyses (Spiller et al. 2013) revealed that in the no-threat condition, participants with relatively low appearance self-esteem indicated significantly higher behavioral intention when the ad featured the silhouette image versus when the ad featured the model image ($\beta = 1.71, t(174) = 3.72, p < .001$). On the other hand, participants with relatively high appearance self-esteem indicated similar levels of behavioral intention irrespective of when the ad featured the silhouette image or when the ad featured the model image ($\beta = .36, t(174) = .87, p = .39$). In the threat condition, participants with relatively low appearance self-esteem indicated marginally higher behavioral intention when the ad featured the silhouette image versus when the ad featured the model image ($\beta = .80, t(159) = 1.68, p = .094$). On the other hand, participants with relatively high appearance self-esteem indicated similar levels of behavioral intention irrespective of when the ad featured the silhouette image or when the ad featured the model image ($\beta = .39, t(159) = .82, p = .41$). Figure A2 below visually depicts these differences.
Figure 28. Behavioral Intention in Study 4 (Essay 1)
Appendix B. Examples of Using Silhouettes by Different Brands in Practice
Appendix C. Stimuli & Questions used in this research

Study 1A

Stimuli:

<table>
<thead>
<tr>
<th>Attractive Model</th>
<th>Silhouette</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Attractive Model Image" /></td>
<td><img src="image2" alt="Silhouette Image" /></td>
</tr>
<tr>
<td><strong>MILTON</strong></td>
<td><strong>MILTON</strong></td>
</tr>
<tr>
<td>Insulated Hot &amp; Cold Water Bottle</td>
<td>Insulated Hot &amp; Cold Water Bottle</td>
</tr>
<tr>
<td><strong>Sweat plus Sacrifice Equals Success</strong></td>
<td><strong>Sweat plus Sacrifice Equals Success</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Control Image" /></td>
</tr>
<tr>
<td><strong>MILTON</strong></td>
</tr>
<tr>
<td>Insulated Hot &amp; Cold Water Bottle</td>
</tr>
<tr>
<td><strong>Sweat plus Sacrifice Equals Success</strong></td>
</tr>
</tbody>
</table>

**Purchase Intention:**
- To what extent do you feel like you want to buy the product in the ad? (1 = not at all, 7 = very much)
- How likely are you to purchase the water bottle? (1 = not likely at all, 7 = highly likely)

To which extent would you agree with these statements (Adapted from Chandon, Morwitz, and Reinartz (2005))?
- “I am thinking of buying the product in the ad” (1 = “completely disagree” and 7 = “completely agree.”)
- “I am thinking that I will like using the product in the ad” (1 = “completely disagree” and 7 = “completely agree.”)
- “I feel confident that I will make a good decision if I buy the product in the ad” (1 = “completely disagree” and 7 = “completely agree.”)
Study 1B

Stimuli:

<table>
<thead>
<tr>
<th></th>
<th>Silhouette</th>
<th>Attractive Model</th>
<th>Supplemental picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swimwear</td>
<td><img src="image1" alt="Swimwear Silhouette" /></td>
<td><img src="image2" alt="Swimwear Model" /></td>
<td><img src="image3" alt="Swimwear Supplemental" /></td>
</tr>
<tr>
<td>Resort</td>
<td><img src="image4" alt="Resort Silhouette" /></td>
<td><img src="image5" alt="Resort Model" /></td>
<td><img src="image6" alt="Resort Supplemental" /></td>
</tr>
</tbody>
</table>

Ad evaluation:
- What is your overall opinion of the ad? (9-point bipolar scale) (McQuarrie and Mick 1999)
  - Highly unfavorable / Highly favorable
  - Disliked / Liked
  - Unpleasant / Pleasant
  - Did not enjoy / Enjoyed

Trial Intention:
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  - I am interested in this swimwear brand/this beach resort.
  - I want to check out the brand’s website/the resort’s website to learn more about their products/amenities.
  - I am willing to give this swimwear brand/this beach resort a try.
  - If the prices of this swimwear brand/the rates of this beach resort are affordable to me, I would definitely want to buy from this swimwear brand/stay at this beach resort.

Image Type Manipulation Check
Which of the following options best describes the ad that you saw?
- I saw an ad that featured a black silhouette of a woman
- I saw an ad that featured a female model wearing a pink bikini
- I saw an ad that did not include any human images
Model Attractiveness
How would you rate the attractiveness (appearance) of the model in the ad? (1 = Not attractive at all; 9 = Highly attractive)

Product Type
The ad that you saw was definitely about… (9-point bipolar scale)
- a tangible product/an intangible service
- an appearance-related product or service/a non-appearance-related product or service

Study 2

Stimuli:

<table>
<thead>
<tr>
<th>Silhouette</th>
<th>Model</th>
</tr>
</thead>
</table>

This information appeared below the ads:

Imagine getting some eyebrows as you proudly walk along the beach! PRAIA offers a variety of well-designed, comfortable swimwear that makes you look and feel great. Our products perform well in the water, dry quickly, and hold up well even with heavy washes. With PRAIA, your beach days will be taken to the next level!

Ad evaluation:
- What is your overall opinion of the ad? (9-point bipolar scale) (McQuarrie and Mick 1999)
  - Highly unfavorable / Highly favorable
  - Disliked / Liked
  - Unpleasant / Pleasant
  - Did not enjoy / Enjoyed

Purchase Intention:
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  I am interested in this swimwear brand.
I want to check out the brand’s website to learn more about their products. I am willing to give this swimwear brand a try. If the prices of products from this swimwear brand are affordable to me, I would definitely want to buy from this brand.

**Self-threat (Adapted from Park and Maner (2009)):**
- “How did the model in the ad make you feel about yourself?” (1 = very bad about myself to 9 = very good about myself)
- “After seeing the model in the ad, what was your mood?” (1 = very negative mood to 9 = very positive mood).

**Manipulation Checks:**

**Image Type:**
Which of the following options best describes the ad that you saw?
- I saw an ad that featured a black silhouette of a man
- I saw an ad that did not include any human images
- I saw an ad that featured a male model wearing a piece of grey swimwear.

**Attractiveness**
How would you rate the attractiveness (appearance) of the model in the ad? (1 = Not attractive at all; 9 = Highly attractive)

**Product Type**
The ad that you saw was definitely about… (9-point bipolar scale)
- a non-appearance-related product
- an appearance-related product

**Self-esteem measure (also used in Study 3 & Study 4):**
To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”) (Heatherton and Polivy 1991)
1. I feel satisfied with the way my body looks right now.
2. I feel that others respect and admire me.
3. I am dissatisfied with my weight.
4. I feel good about myself.
5. I am pleased with my appearance right now.
6. I feel unattractive.
7. I feel confident about my abilities
8. I feel frustrated or rattled about my performance
9. I feel that I am having trouble understanding things that I read.
10. I feel as smart as others.
11. I feel confident that I understand things.
12. I feel that I have less scholastic ability right now than others.
13. I feel like I'm not doing well.
14. I am worried about whether I am regarded as a success or failure.
15. I feel self-conscious.
16. I feel displeased with myself.
17. I am worried about what other people think of me.
18. I feel inferior to others at this moment.
19. I feel concerned about the impression I am making.
20. I am worried about looking foolish.

**Study 3**

**Stimuli:**

<table>
<thead>
<tr>
<th>Silhouette</th>
<th>Model</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Silhouette" /></td>
<td><img src="image2" alt="Model" /></td>
<td><img src="image3" alt="Control" /></td>
</tr>
</tbody>
</table>

Participants also saw this product along with one of the three ads:

**Ad evaluation:**
- What is your overall opinion of the ad? (9-point bipolar scale) (McQuarrie and Mick 1999)
  - Highly unfavorable / Highly favorable
  - Disliked / Liked
  - Unpleasant / Pleasant
  - Did not enjoy / Enjoyed

**Purchase Intention:**
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
I am interested in this new swimwear brand. I want to check out the brand’s website to learn more about their products. I am willing to try out the products of this swimwear brand.

Signal of beauty standards (Argo and Dahl 2018):

*For silhouette & model conditions:*
“To what extent do you think the model image in the ad symbolizes the standard for beauty that society endorses?” (1 = to a very small extent, 9 = to a very large extent)

“To what extent do you think that the model image in the ad symbolizes the standard for the female body that society endorses?” (1 = to a very small extent, 9 = to a very large extent)

*For control condition:*
“To what extent do you think the image in the ad symbolizes the standard for beauty that society endorses?” (1 = to a very small extent, 9 = to a very large extent)

“To what extent do you think that the image in the ad symbolizes the standard for the female body that society endorses?” (1 = to a very small extent, 9 = to a very large extent)

Fear of rejection (Argo and Dahl 2018)
To what extent are you currently worried about being socially rejected?” (1= not at all worried, 9 = very worried).

Derogation (Richins 1991)
In general, to what extent do you think that the model in the ad is (1= not at all, 9 = very much).
- inexperienced/experienced,
- unknowledgeable/knowledgeable
- not trustworthy/trustworthy
- dishonest/honest
- incompetent/competent

Self-threat (Dommer and Swaminathan 2013)
“In comparison with other people, what is your opinion of yourself wearing the bikini from the brand in the ad?” (1 = “very negative,” and 9 = “very positive”)
“In comparison with other people, how do you view the image of yourself wearing the bikini from the brand in the ad?” (1 = “very negative,” and 9 = “very positive”)

Manipulation Checks:
*Image Type*
Which of the following options best describes the ad that you saw?
- I saw an ad that featured a black silhouette of a woman
- I saw an ad that featured a female model wearing a pink bikini
• I saw an ad that did not include any human images

**Attractiveness**
How would you rate the attractiveness (appearance) of the model in the ad? (1 = Not attractive at all; 9 = Highly attractive)

**Appearance-relatedness**
To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
- “Bikinis influence how attractive a person looks”
- “Bikinis help to enhance the attractiveness for some people”

**Ad Design (Cian et al. 2014)**
• To which extent would you agree with these statements: (1 = “strongly disagree,” and 7 = “strongly agree”):
  - “I like the way the ad looks,”
  - “The ad is visually appealing.”

**Study 4**

**Appearance-threat Manipulation (Adapted from Park and Maner (2009))**

In the appearance threat condition, participants saw the following instructions on their screens:

“We all have parts of our body or physical appearance that we are dissatisfied with or feel insecure about. Please take a moment to think about one aspect of your physical appearance/body/face that you do not like about yourself and write a brief essay about it in the space provided below.

In your essay, please describe what aspect of your body or your physical appearance that you are dissatisfied about or feel insecure about and why you feel this way. You will have up to 3 minutes to complete this task. After 3 minutes, the screen will automatically move to the next part of the survey.”

In the control condition, participants saw the following instructions on their screens:

“If you look around, there are many objects in the room you are in. Please take a moment to think about all the objects you see in the room and list them in the spaces below.”
Ad Stimuli:

<table>
<thead>
<tr>
<th>Silhouette</th>
<th>Model</th>
</tr>
</thead>
</table>

This information appeared below the ads:

Imagine yourself on the beach with a perfect, golden tan! Free of fragrances, dyes, and totally safe even for sensitive skin, self-tanning products from PRAIA will give you that sun-kissed color skin tone that you have always dreamt of. Take your beach day look to the next level with PRAIA!

Ad evaluation:
- What is your overall opinion of the ad? (9-point bipolar scale) (McQuarrie and Mick 1999)
  - Highly unfavorable / Highly favorable
  - Disliked / Liked
  - Unpleasant / Pleasant
  - Did not enjoy / Enjoyed

Brand Attitude (Shepherd et al. 2015)
- What is your overall impression of the brand in the ad? (9-point bipolar scale)
  - good/bad,
  - negative/positive,
  - worthless/valuable,
  - low quality/high quality

Product Attitude
- In your opinions, the self-tanning products of the brand in the ad will be (9-point bipolar scale)
  - Of inferior quality / of high quality
  - Cheap / Expensive
  - Very bad/ very good
  - Highly undesirable/highly desirable
  - Disliked/liked
Behavioral Intention:
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  - I am interested in this self-tanning brand.
  - I want to check out the brand’s website to learn more about their products.

Manipulation Checks:
Image Type:
Which of the following options best describes the ad that you saw?
- I saw an ad that featured a black silhouette of a woman
- I saw an ad that did not include any human images
- I saw an ad that featured a female model wearing a pink bikini

Attractiveness
How would you rate the attractiveness (appearance) of the model in the ad? (1 = Not attractive at all; 9 = Highly attractive)

Appearance-relatedness
In your opinions, self-tanning products are… (9-point bipolar scale)
  - non-appearance-related/appearance-related

Self-tanning products usage:
To what extent would you agree with this statement: “I typically don’t like to use self-tanning products” (1= Strongly Disagree, 9 = Strongly Agree).
### Appendix D.

Table 9. Descriptive Statistics in Study 3 (Essay 1)

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** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).
Appendix E. Results of moderated mediation analyses in Study 3 (PROCESS Model 7)

Table 10. Regression Results in Study 3 (Essay 1)

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<td>-.7519</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-esteem (W)</td>
<td>.2004</td>
<td>.0676</td>
<td>2.9642</td>
<td>.0036</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X*W</td>
<td>.0247</td>
<td>.0956</td>
<td>.2587</td>
<td>.7963</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attractiveness</td>
<td>.3984</td>
<td>.0720</td>
<td>5.5310</td>
<td>&lt;.0001</td>
<td>.1605</td>
<td>.1506</td>
<td>1.0657</td>
</tr>
<tr>
<td></td>
<td>Derogation (M)</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>1.0237</td>
<td>.1570</td>
<td>6.5196</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>
Table 11. Indices of Moderated Mediation in Study 3 (Essay 1)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Index of Moderated Mediation</th>
<th>90% CI</th>
<th>Significant</th>
<th>DV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Index (SE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal of Beauty Standards</td>
<td>-.004 (.04)</td>
<td>-.0783, .0343</td>
<td>No</td>
<td>Ad Evaluation</td>
</tr>
<tr>
<td>Fear of rejection</td>
<td>-.02 (.04)</td>
<td>-.0968, .0133</td>
<td>No</td>
<td>Ad Evaluation</td>
</tr>
<tr>
<td>Derogation</td>
<td>.02 (.09)</td>
<td>-.1290, .1563</td>
<td>No</td>
<td>Ad Evaluation</td>
</tr>
<tr>
<td><strong>Self-threat</strong></td>
<td><strong>-.14 (.08)</strong></td>
<td><strong>-.2707, -.0177</strong></td>
<td>Yes</td>
<td><strong>Ad Evaluation</strong></td>
</tr>
<tr>
<td>Signal of Beauty Standards</td>
<td>.004 (.04)</td>
<td>-.0952, .0334</td>
<td>No</td>
<td>Purchase Int.</td>
</tr>
<tr>
<td>Fear of rejection</td>
<td>-.03 (.05)</td>
<td>-.1300, .0233</td>
<td>No</td>
<td>Purchase Int.</td>
</tr>
<tr>
<td>Derogation</td>
<td>.03 (.10)</td>
<td>-.1492, .1686</td>
<td>No</td>
<td>Purchase Int.</td>
</tr>
<tr>
<td><strong>Self-threat</strong></td>
<td><strong>-.21 (.12)</strong></td>
<td><strong>-.4035, -.0246</strong></td>
<td>Yes</td>
<td><strong>Purchase Int.</strong></td>
</tr>
</tbody>
</table>

Notes: Confidence intervals come from bootstrapping for all indirect effects at 5,000 trials
## Appendix F

### Table 12. Descriptive Statistics in Study 4 (Essay 1)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad Evaluation</td>
<td>1</td>
<td>5.37</td>
<td>2.08</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Attitude</td>
<td>2</td>
<td>5.69</td>
<td>1.95</td>
<td>.830**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Attitude</td>
<td>3</td>
<td>6.05</td>
<td>1.69</td>
<td>.718**</td>
<td>.817**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral Intention</td>
<td>4</td>
<td>3.91</td>
<td>2.64</td>
<td>.717**</td>
<td>.670**</td>
<td>.645**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE Appearance</td>
<td>5</td>
<td>4.79</td>
<td>2.03</td>
<td>0.103</td>
<td>0.103</td>
<td>0.087</td>
<td>0.053</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE Performance</td>
<td>6</td>
<td>6.62</td>
<td>1.31</td>
<td>0.042</td>
<td>0.055</td>
<td>0.105</td>
<td>.139**</td>
<td>.343**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE Social</td>
<td>7</td>
<td>5.39</td>
<td>1.70</td>
<td>-0.083</td>
<td>-0.094</td>
<td>-0.064</td>
<td>-.108*</td>
<td>-.503**</td>
<td>-.579**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Self-tanners Usage</td>
<td>12</td>
<td>7.06</td>
<td>2.66</td>
<td>-.423**</td>
<td>-.337**</td>
<td>-.330**</td>
<td>-.634**</td>
<td>-.106*</td>
<td>-.126*</td>
<td>.159**</td>
<td>1</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>13</td>
<td>7.08</td>
<td>1.67</td>
<td>-.207**</td>
<td>-.243**</td>
<td>-.290**</td>
<td>-.223**</td>
<td>0.063</td>
<td>.109*</td>
<td>-.045</td>
<td>0.101</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
### Table 13. ANCOVA Results 1 in Study 1B (Essay 1)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Model</td>
<td>107.017</td>
<td>2</td>
<td>53.508</td>
<td>15.404</td>
<td>&lt;.001</td>
<td>168.341</td>
<td>2</td>
<td>84.171</td>
<td>20.728</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Intercept</td>
<td>130.717</td>
<td>1</td>
<td>130.717</td>
<td>37.631</td>
<td>&lt;.001</td>
<td>14.172</td>
<td>1</td>
<td>14.172</td>
<td>3.49</td>
<td>0.063</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>105.858</td>
<td>1</td>
<td>105.858</td>
<td>30.474</td>
<td>&lt;.001</td>
<td>140.805</td>
<td>1</td>
<td>140.805</td>
<td>34.674</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Product Type</td>
<td>6.127</td>
<td>1</td>
<td>6.127</td>
<td>1.764</td>
<td>0.186</td>
<td>61.111</td>
<td>1</td>
<td>61.111</td>
<td>15.049</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Error</td>
<td>639.154</td>
<td>184</td>
<td>3.474</td>
<td></td>
<td></td>
<td>722.819</td>
<td>178</td>
<td>4.061</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11291.188</td>
<td>187</td>
<td></td>
<td></td>
<td></td>
<td>7344.313</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>746.171</td>
<td>186</td>
<td></td>
<td></td>
<td></td>
<td>891.16</td>
<td>180</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Table 14. ANCOVA Results 2 in Study 1B (Essay 1)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Model</td>
<td>84.147</td>
<td>2</td>
<td>42.073</td>
<td>10.847</td>
<td>&lt;.001</td>
<td>173.632</td>
<td>2</td>
<td>86.816</td>
<td>12.864</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Intercept</td>
<td>151.614</td>
<td>1</td>
<td>151.614</td>
<td>39.086</td>
<td>&lt;.001</td>
<td>2.018</td>
<td>1</td>
<td>2.018</td>
<td>0.299</td>
<td>0.585</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>80.051</td>
<td>1</td>
<td>80.051</td>
<td>20.637</td>
<td>&lt;.001</td>
<td>142.328</td>
<td>1</td>
<td>142.328</td>
<td>21.09</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Product Type</td>
<td>1.276</td>
<td>1</td>
<td>1.276</td>
<td>0.329</td>
<td>0.567</td>
<td>66.753</td>
<td>1</td>
<td>66.753</td>
<td>9.892</td>
<td>0.002</td>
</tr>
<tr>
<td>Error</td>
<td>713.731</td>
<td>184</td>
<td>3.879</td>
<td></td>
<td></td>
<td>1201.239</td>
<td>178</td>
<td>6.749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10926.563</td>
<td>187</td>
<td></td>
<td></td>
<td></td>
<td>6066.375</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>797.878</td>
<td>186</td>
<td></td>
<td></td>
<td></td>
<td>1374.871</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion about how ad evaluation differs across conditions in Study 1B

There is a marginally significant interaction between image type and product type in prediction of ad evaluation ($F(1, 363) = 5.86, p = .092$)\(^6\), a significant main effect of Image Type on ad evaluation ($F(1, 363) = 14.30, p < .001$), and a significant main effect of Product Type on ad evaluation ($F(1, 363) = 55.46, p < .001$). Given a marginal interaction and significant main effects for both predictors, I examined the effect of image type within each level of product type to directly test my hypothesis (H1) that the effect of silhouettes holds mainly for appearance-related products and not for non-appearance-related products. Focusing on the non-appearance-related product condition (i.e., selecting only the cases in this condition), I performed an ANCOVA (controlling for attractiveness) with image type as the main predictor and find that image type doesn’t influence ad evaluation ($M_{Model} = 7.26; M_{Silhouette} = 7.71; F(1, 184) = 1.76, p = .19$). However, using this same procedure, I find that image type significantly influences ad evaluation for appearance-related products such that ad evaluation in the silhouette condition is significantly higher than in the attractive model condition ($M_{Model} = 5.40; M_{Silhouette} = 6.55; F(1, 178) = 15.05, p < .001$). These results thus support H1 which posits that the effect of silhouettes (relative to attractive models) on marketing communication effectiveness holds primarily for appearance-related products (but not for non-appearance-related products)\(^7\). Figure G1 below illustrates how ad evaluation differs across conditions. ANCOVA results on ad evaluation for each product type are reported above in this Appendix G.

---

\(^6\) This interaction effect became significant at traditional levels ($p<.05$) when attractiveness was removed from the model: $F(1, 364) = 20.23, p = .03$

\(^7\) It’s worth noting here that even though the effect of silhouettes (relative to attractive models) differs across product types, the interaction between Image Type and Product Type is not significant at the conventional level ($p < .05$) because I controlled for attractiveness level (in fact, this interaction becomes significant if attractiveness level is not controlled for: $F(1, 364) = 20.23, p = .03$). Thus, the results presented here, even though quite conservative, show the effect of silhouette use above and beyond the effect of attractiveness.
Figure 29.  Ad Evaluation in Study 1B (Essay 1)
Appendix H. Mediation Analysis Results in Study 2

**Ad Evaluation**

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Self-threat reduction (M)</th>
<th>Ad Evaluation (Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>SE</td>
</tr>
<tr>
<td>Image Type (X)</td>
<td>$a$</td>
<td>0.5405</td>
</tr>
<tr>
<td>Self-threat reduction (M)</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>0.2156</td>
<td>0.0583</td>
</tr>
<tr>
<td>Constant</td>
<td>3.3598</td>
<td>0.4472</td>
</tr>
</tbody>
</table>

$R^2 = .0769$  
$F (2, 192) = 7.9958, p = .0005$  

**Purchase Intentions**

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Self-threat reduction (M)</th>
<th>Purchase Intentions (Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>SE</td>
</tr>
<tr>
<td>Image Type (X)</td>
<td>$a$</td>
<td>0.5405</td>
</tr>
<tr>
<td>Self-threat reduction (M)</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>0.2156</td>
<td>0.0583</td>
</tr>
<tr>
<td>Constant</td>
<td>3.3598</td>
<td>0.4472</td>
</tr>
</tbody>
</table>

$R^2 = .0769$  
$F (2, 192) = 7.9958, p = .0005$  

$R^2 = .4341$  
$F (3, 191) = 48.8394, p < .001$
Appendix of Essay 2

Appendix A1. Previous Research in Puns and Examples of Pun Use in Brand Names

Table 15. Relevant Research in Puns in Marketing

<table>
<thead>
<tr>
<th>No.</th>
<th>Authors</th>
<th>Article Name</th>
<th>Journal</th>
<th>Year</th>
<th>Boundary Conditions Examined</th>
<th>Marketers’ Perspective</th>
<th>Consumers’ Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Summerfelt et al.</td>
<td>The Effect of Humor on Memory: Constrained by the Pun</td>
<td>The Journal of General Psychology</td>
<td>2010</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>McQuarrie and Mick</td>
<td>A laboratory study of the effect of verbal rhetoric versus repetition when consumers are not directed to process advertising</td>
<td>International Journal of Advertising</td>
<td>2009</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>Lazović</td>
<td>How to P (I) ay with Words? The Use of Puns in Online Bank Advertisements in English and Serbian in Light of Relevance Theory</td>
<td>ELOPE: English Language Overseas Perspectives and Enquiries</td>
<td>2018</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>No.</td>
<td>Authors</td>
<td>Article Name</td>
<td>Journal</td>
<td>Year</td>
<td>Boundary Conditions Examined</td>
<td>Marketers' Perspective</td>
<td>Consumers' Perspective</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>------</td>
<td>------------------------------</td>
<td>------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>5</td>
<td>McQuarrie and Mick</td>
<td>On resonance: A critical pluralistic inquiry into advertising rhetoric</td>
<td>JCR</td>
<td>1992</td>
<td>Tolerance for ambiguity</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>McQuarrie and Mick</td>
<td>Visual rhetoric in advertising: Text-interpretive, experimental, and reader-response analyses</td>
<td>JCR</td>
<td>1999</td>
<td>Cultural Competency</td>
<td></td>
<td>✓</td>
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<td>8</td>
<td>Leigh</td>
<td>The Use of Figures of Speech in Print Ad Headlines</td>
<td>Journal of Advertising</td>
<td>1994</td>
<td></td>
<td></td>
<td>✓</td>
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<tr>
<td>9</td>
<td>Van Mulken et al.</td>
<td>Puns, relevance, and appreciation in advertisements</td>
<td>Journal of Pragmatics</td>
<td>2005</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>10</td>
<td>Choi et al.</td>
<td>Do Resonant Advertisements Resonate with Consumers?</td>
<td>Journal of Advertising Research</td>
<td>2017</td>
<td>Regulatory focus (Promotion vs Prevention); Need for Cognition</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>11</td>
<td>This Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
Figure 30. Examples of Puns in Brand Names
Appendix B1. Pilot Study Results

Table 16. Establishment Names in Pilot Study (Essay 2)

<table>
<thead>
<tr>
<th>Establishment Name</th>
<th>Total Reviews</th>
<th>Reviews mentioned name</th>
<th>% of Reviews mentioned name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crabby Dick’s</td>
<td>269</td>
<td>34</td>
<td>12.64%</td>
<td>DE, USA</td>
</tr>
<tr>
<td>Frying Nemo</td>
<td>3</td>
<td>1</td>
<td>33.33%</td>
<td>Northern Territory, Australia</td>
</tr>
<tr>
<td>Lettuce Eat</td>
<td>10</td>
<td>0</td>
<td>0.00%</td>
<td>KS, USA</td>
</tr>
<tr>
<td>Lord of the Fries</td>
<td>30</td>
<td>3</td>
<td>10.00%</td>
<td>Sydney, Australia</td>
</tr>
<tr>
<td>Pete's Za</td>
<td>6</td>
<td>0</td>
<td>0.00%</td>
<td>ND, USA</td>
</tr>
<tr>
<td>Pho Bulous</td>
<td>94</td>
<td>4</td>
<td>4.26%</td>
<td>OK, USA</td>
</tr>
<tr>
<td>Pho Shizzle</td>
<td>263</td>
<td>17</td>
<td>6.46%</td>
<td>WA, USA</td>
</tr>
<tr>
<td>Thai Me Up</td>
<td>233</td>
<td>11</td>
<td>4.72%</td>
<td>PA, USA</td>
</tr>
<tr>
<td>ThaiTanic Streetfood</td>
<td>188</td>
<td>15</td>
<td>7.98%</td>
<td>CA, USA</td>
</tr>
<tr>
<td>The Codfather</td>
<td>207</td>
<td>1</td>
<td>0.48%</td>
<td>NV, USA</td>
</tr>
<tr>
<td>Via Agra</td>
<td>2</td>
<td>2</td>
<td>100.00%</td>
<td>London, UK</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1305</strong></td>
<td><strong>88</strong></td>
<td><strong>6.74%</strong></td>
<td></td>
</tr>
</tbody>
</table>
Table 17. Coding Results in Pilot Study (Essay 2)

<table>
<thead>
<tr>
<th>Categories</th>
<th>No of reviews</th>
<th>%/Total reviews mentioning names</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive reactions to names</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name generates positive affect</td>
<td>39</td>
<td>44.32%</td>
</tr>
<tr>
<td>Name enhances image</td>
<td>3</td>
<td>3.41%</td>
</tr>
<tr>
<td>Name generates attention</td>
<td>2</td>
<td>2.27%</td>
</tr>
<tr>
<td>Name generates trial intention</td>
<td>12</td>
<td>13.64%</td>
</tr>
<tr>
<td>Name facilitates good experience</td>
<td>4</td>
<td>4.55%</td>
</tr>
<tr>
<td>Play on name to compliment</td>
<td>17</td>
<td>19.32%</td>
</tr>
<tr>
<td><strong>Negative reactions to names</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name generates negative affect</td>
<td>6</td>
<td>6.82%</td>
</tr>
<tr>
<td>Name deters trial intention</td>
<td>3</td>
<td>3.41%</td>
</tr>
<tr>
<td>Name raises questions about quality</td>
<td>4</td>
<td>4.55%</td>
</tr>
<tr>
<td>Name facilitates bad experience</td>
<td>2</td>
<td>2.27%</td>
</tr>
<tr>
<td>Play on name to criticize</td>
<td>15</td>
<td>17.05%</td>
</tr>
<tr>
<td>Inappropriate in some way</td>
<td>8</td>
<td>9.09%</td>
</tr>
<tr>
<td>Name is &quot;too much&quot;</td>
<td>2</td>
<td>2.27%</td>
</tr>
</tbody>
</table>

Figure 31. Customer Reactions in Pilot Study (Essay 2)
Figure 32. Major Contents in Reviews in Pilot Study (Essay 2)

Table 18. Customer Overall Experience in Pilot Study (Essay 2)

<table>
<thead>
<tr>
<th>Customer reactions to names</th>
<th>Customer overall experience (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative</td>
<td>Neutral</td>
</tr>
<tr>
<td>Negative reactions</td>
<td>53.33%</td>
<td>23.33%</td>
</tr>
<tr>
<td>Neutral reactions</td>
<td>0.00%</td>
<td>25.00%</td>
</tr>
<tr>
<td>Positive reactions</td>
<td>7.41%</td>
<td>12.96%</td>
</tr>
</tbody>
</table>

Table 19. Customer Intention to Return in Pilot Study (Essay 2)

<table>
<thead>
<tr>
<th>Customer reactions to names</th>
<th>Intention to Return (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Negative reactions</td>
<td>62.50%</td>
<td>37.50%</td>
</tr>
<tr>
<td>Neutral reactions</td>
<td>0.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Positive reactions</td>
<td>16.67%</td>
<td>83.33%</td>
</tr>
</tbody>
</table>
Appendix C1: Questions and Ad Stimuli in All Studies in Essay 2

Study 1
After consenting to participate, participants will be randomly assigned to one of the two following conditions:

No Puns:
Participant will read this description:
Imagine that you are planning a weekend party with your friends. You want to the atmosphere of the party to be really relaxing so that everyone can chill out, dance, and have fun. You are looking for some music to play at the party, and you come across this song called “A Party Dance Song”.
Please click “Next” to listen to an excerpt from this song. For the purpose of this research, we have removed the words from this song to avoid distraction. Please make sure that your device allows you to listen to music/sound properly. This piece of music has a confirmation code, which you will need to note down to answer survey questions later on.
Participants will then listen to a piece of music that lasts about 45 seconds.

Puns:
Participant will read this description:
Imagine that you are planning a weekend party with your friends. You want to the atmosphere of the party to be really relaxing so that everyone can chill out, dance, and have fun. You are looking for some music to play at the party, and you come across this song called “The Lord of the Swing”.
Please click “Next” to listen to an excerpt from this song. For the purpose of this research, we have removed the words from this song to avoid distraction. Please make sure that your device allows you to listen to music/sound properly. This piece of music has a confirmation code, which you will need to note down to answer survey questions later on.
Participants will then listen to a piece of music that lasts about 45 seconds.
After listening to the music, participants will respond to the following questions:

Enjoyment (Tezer and Bodur 2020):
To what extent did you enjoy listening to the music? (1= not at all, 9 = very much)

Music evaluation:
What is your overall opinion of the piece of music that you listened to? (9-point bipolar scale) (McQuarrie and Mick 1999)
- Highly unfavorable / Highly favorable
- Disliked / Liked
- Unpleasant / Pleasant
- Did not enjoy / Enjoyed

Behavioral Responses:
- To what extent did you move your body (e.g., nodding your head, moving your arms, tapping your feet, moving your torso) while listening to the music? (1= not at all, 9 = very much)
- To what extent did you have facial expressions (e.g., smile/laugh/close eyes) when you listened to the music? (1= not at all, 9 = very much)

Intentions:
To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
It’s likely that the next time I organize a party, I will include this song in the play list.
If the price of the song is affordable, I would want to buy it for my party.

Sharing Intention:
How willing you are to tell your friends about the song? (1= not at all, 9 = very much)

Study 2

Design:
After consenting to participate, participants will be asked the following questions:
To what extent do you currently feel (Zhu and Argo 2013): (1= not at all, 9 = very much)
- Happy
- Merry
- Relaxed
- Comfortable
- Stressed
- Unpleasant
- Worried
- Uneasy)

Then, participants will be randomly assigned to one of the two following conditions:

No Puns:
Participants will read this description:
A global beverage company plans to launch a new brand of tea. They want to have customer opinion of the music that will be used in the TVC of this tea. This music is called “Get yourself into a lot of hot tea”.

Puns:
Participants will read this description:
A global beverage company plans to launch a new brand of tea. They want to have customer opinion of the music that will be used in the TVC of this tea. This music is called “Get yourself fit to a tea”.

Next, participants will see this prompt:
“Please click “Next” to listen to an excerpt from this song. For the purposes of this study, we have removed the words from the song to avoid distraction. Please make sure that your device allows you to listen to music/sound properly. This piece of music has a confirmation code, which you will need to note down to answer survey questions later on.”

Participants will then listen to a piece of music that lasts about 45 seconds.

After listening to the music, participants will respond to the following questions:
Please enter the confirmation code in the music: [Box to fill in]

Behavioral Responses:
- To what extent did you move your body (e.g., nodding your head, moving your arms, tapping your feet, moving your torso) while listening to the music excerpt? (1= not at all, 9 = very much)
- To what extent the music gave you relaxation? (1= not at all, 9 = very much)

Cognitive Engagement:
• To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”) (McQuarrie and Mick 1999; Spielmann 2014).

When I first read the song’s name, I….  
  o Had many thoughts  
  o Found it to be thought provoking  
  o Thought it was clever  

**Signals of intelligence:**  
• To what extent do you think of yourself as…? (1 = “Not at all” and 9 = “Very much.”)  
  (Adapted from Weisfeld et al. (2011))  
  o Smart  
  o Sharp  
  o Intelligent  

• To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)  
  o The name of the song involves a form of wordplay.  
  o The name of the song is totally acceptable.  

**Study 3**  

**Mood Enhancement Condition:**  
Following the approach used by White and McFarland (2009), participants will be asked to describe a positive life event.  
“In the box below, please tell us about a positive life event that made you very happy at the time and that you still remember”. [Box to write]  
Then, participants listened to a piece of upbeat music.  

**Control Condition:**  
Following Batra and Stayman (1990), participants in the control condition will not be asked to engage in any manipulation exercises to avoid their moods getting affected. Participants in the control conditions will be told to list any 10 objects in their room.  
After the mood manipulation exercise, participants will indicate their mood with the same scale:  
To what extent do you currently feel (Zhu and Argo 2013): (1= not at all, 9 = very much)  
  o Happy  
  o Merry  
  o Relaxed  
  o Comfortable  
  o Stressed  
  o Unpleasant  
  o Worried  
  o Uneasy  

After the mood manipulation exercise, participants will be randomly assigned to one of the two following conditions:  

**No Puns:**  
Participants will read this description:
A global food and beverage company will introduce a new tea product to the market. An artist has composed a song specifically for the TV commercial (TVC) that will be used to launch the product.

The artist has named the song "Get yourself into a lot of hot tea".

Puns:
Participants will read this description:
A global food and beverage company will introduce a new tea product to the market. An artist has composed a song specifically for the TV commercial (TVC) that will be used to launch the product.

The artist has named the song "Get yourself fit to a tea".

Then, all participants will answer this question:
What do you think about the name of the song that will be used in the advertisement? Please write down your thoughts in box below. [Box to write]

Next, participants will see this prompt:
"You will next listen to an excerpt from the song [Song Name as appeared above] that will be used in the TVC of the new tea product. Please make sure that your device allows you to listen to music/sound properly, and that you adjust the volume of your device loud enough so that you can hear the music clearly.

This piece of music has a confirmation code, which you will need to note down to answer survey questions later on.

When you are ready, click "Next" to listen to the excerpt of the song.”

Participants will then listen to a piece of music that lasts about 45 seconds.

After listening to the music, participants will respond to the following questions:

Code confirmation:
Please enter the confirmation code in the music: [Box to fill in]

Dependent Variables:

Enjoyment (Tezer and Bodur 2020):
To what extent did you enjoy listening to the music excerpt? (1= not at all, 9 = very much)
Music evaluation:
What is your overall opinion of the piece of music excerpt that you listened to? (9-point bipolar scale) (McQuarrie and Mick 1999)
- Highly unfavorable / Highly favorable
- Disliked / Liked
- Unpleasant / Pleasant
- Did not enjoy / Enjoyed

Others:

Cognitive Engagement:
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”) (McQuarrie and Mick 1999; Spielmann 2014).
  When I first read the song’s name, I…
  - Had many thoughts
  - Found it to be thought provoking
  - Thought it was clever

Incongruity resolution (Spielmann 2014):
● To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
● When I first read the song’s name…
  o I initially felt uncertain about it but then figured it out
  o I initially felt uncomfortable but then felt good about it
  ● To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
    o The name of the song involves a form of wordplay.
    o The name of the song is totally acceptable.

Manipulation check:
Pun manipulation:
  ● To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
    The name of the song has a pun in it.
    The name of the song has more than one meaning.

Control variables:
  ● In your opinion, the name of the song is… (9-point bipolar scale)
    o Very unusual/Very usual
    o Not surprising at all/Very surprising
    o Highly atypical/Highly typical
    o Not novel at all/Highly novel

Study 4

No Puns:
Participants will read this description:
An apparel company will introduce a new brand of ties to the market. The name of this brand is "Look-good-Knots".

Puns:
Participants will read this description:
An apparel company will introduce a new brand of ties to the market. The name of this brand is "Forget-me-Knots".
Then, all participants will answer this question:
What do you think the name of the brand means? Please write down your thoughts in the box below. [Box to write]
Next, participants will see this prompt:
Next, a sample product from the brand is available in the paper bag on your desk. Please take this tie out of the bag and check it out as you would if you are shopping for ties (either for yourself or as a gift to someone else).
After you have examined the product, please put the tie back into the bag and click "Next" to proceed.
Then, participants will respond to the following questions:

Dependent Variables:
Enjoyment (Tezer and Bodur 2020):
To what extent did you enjoy checking out product from this brand? (1 = not at all, 9 = very much)
To what extent did you feel excited to check out product from this brand? (1 = not at all, 9 = very much)
How would you evaluate the product from this brand on each of the following dimensions? (1= Dislike a lot, 9 = Like a lot): Overall design; Fabric feels

**Others:**
Cognitive Engagement:
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”) (McQuarrie and Mick 1999; Spielmann 2014).
  - When I first read the brand’s name, I…
    - Had many thoughts
    - Found it to be thought provoking
    - Thought it was clever

Incongruity resolution (Spielmann 2014):
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  - When I first read the brand’s name…
    - I initially felt uncertain about it but then figured it out
    - I initially felt uncomfortable but then felt good about it

- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  - The name of the brand involves a form of wordplay.
  - The name of the brand is totally acceptable.

**Manipulation check:**
Pun manipulation:
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  - The name of the brand has a pun in it.
  - The name of the brand has more than one meaning.

**Control variables:**
- In your opinion, the name of the brand is… (9-point bipolar scale)
  - Very unusual/Very usual
  - Not surprising at all/Very surprising
  - Highly atypical/Highly typical
  - Not novel at all/Highly novel

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**Study 5**

No Puns:
Participants will read this description:
A start-up company in gift craft is designing their website where customers could buy a variety of special gift-related products for the ones who are important in their lives. This website will feature a special tune created specifically for this company. Upon going to the website,
customers will hear this tune played automatically. This musical tune composed by a professional artist is called "Look-good-Knots".

**Puns:**
Participants will read this description:
A start-up company in gift craft is designing their website where customers could buy a variety of special gift-related products for the ones who are important in their lives. This website will feature a special tune created specifically for this company. Upon going to the website, customers will hear this tune played automatically. This musical tune composed by a professional artist is called "Forget-me-Knots".

Then, all participants will answer this question:
What do you think the name of the music implies? Please write down your thoughts in box below. [Box to input]

Next, participants will see this prompt:
“You will next listen to an excerpt from the tune. Please make sure that your device allows you to listen to music/sound properly, and that you adjust the volume of your device loud enough so that you can hear the music clearly. When you are ready, click "Play" to listen to the excerpt of the tune.”

Participants will then listen to a piece of music that lasts about 40 seconds. (This song is named “Stimulus Study 4” and is attached to this amendment for your review)

After listening to the music, participants will respond to the following questions:

**Dependent Variables:**

**Music evaluation:**
What is your overall opinion of the piece of music excerpt that you listened to? (9-point bipolar scale) (McQuarrie and Mick 1999)
- Highly unfavorable / Highly favorable
- Disliked / Liked
- Unpleasant / Pleasant
- Did not enjoy / Enjoyed

**Behavioral Responses:**
- To what extent did you move your body (e.g., nodding your head, moving your arms, tapping your feet, moving your torso) while listening to the music excerpt? (1= not at all, 9 = very much)

**Others:**

**Incongruity resolution (Spielmann 2014):**

- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
- When I first read the song’s name…
  - I initially felt uncertain about it but then figured it out
  - I initially felt uncomfortable but then felt good about it
  - Intelligent

**Benign violation (McGraw and Warren 2010; Warren and McGraw 2015):**

- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  - The name of the song involves a form of wordplay.
  - The name of the song is totally acceptable.
Manipulation check:
Pun manipulation:
- To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  - The name of the song has a pun in it.
  - The name of the song has multiple meanings.

Control variables:
- In your opinion, the name of the song is… (9-point bipolar scale)
  - Very unusual/Very usual
  - Not surprising at all/Very surprising
  - Highly atypical/Highly typical
  - Not novel at all/Highly novel

Study 6
No Puns:
Participants will read this description:
Imagine that you are planning a weekend party with your friends. You want the atmosphere of the party to be really relaxing so that everyone can chill out, dance, and have fun. You are looking for some music to play at the party, and you come across this song called “The Theme of The Swing”.

Puns:
Participants will read this description:
Imagine that you are planning a weekend party with your friends. You want the atmosphere of the party to be really relaxing so that everyone can chill out, dance, and have fun. You are looking for some music to play at the party, and you come across this song called “The Lord of The Swing”.

Then, all participants will answer this question:
As an attention check, please type in the name of the song that you saw. [Box to input]
Next, participants will see this prompt:
“Please click “Next” to listen to an excerpt from this song. For the purposes of this study, we have removed the words from the song to avoid distraction. Please make sure that your device allows you to listen to music/sound properly. This piece of music has a confirmation code, which you will need to note down to answer survey questions later on.”
Participants will then listen to a piece of music that lasts about 45 seconds.
After listening to the music, participants will respond to the following questions:
Manipulation Check 1:
Please enter the confirmation code in the music: [Box to fill in]

Focal Questions:
Enjoyment (Tezer and Bodur 2020):
To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
- The music offers me relaxation
- The music gives me enjoyment
- The music makes me feel good
● How much would you be willing to pay to purchase this song? [Scale to slide]

Cognitive Engagement:
● To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”) (McQuarrie and Mick 1999; Spielmann 2014).
● When I first read the song’s name, I….
  ○ Had many thoughts
  ○ Found it to be thought provoking
  ○ Thought it was clever

Incongruity resolution (Spielmann 2014):
● To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
● When I first read the song’s name…
  ○ I initially felt uncertain about it but then figured it out
  ○ I initially felt uncomfortable but then felt good about it

● To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  ○ The name of the song involves a form of wordplay.
  ○ The name of the song is totally acceptable.

Manipulation check:
Pun manipulation:
● To what extent would you agree with these statements (1 = “completely disagree” and 9 = “completely agree.”)
  The name of the song has a pun in it.
  The name of the song has multiple meanings.

Control variables:
● In your opinion, the name of the song is… (9-point bipolar scale)
  ○ Very unusual/Very usual
  ○ Not surprising at all/Very surprising
  ○ Highly atypical/Highly typical
  ○ Not novel at all/Highly novel
VITA

Can Trinh received a bachelor’s in economics and a Master of Business Administration degree with a concentration on Finance. Before joining the doctoral program at the University of Tennessee, Knoxville, he used to work as a professional marketer in the field of marketing and advertising for global companies. He chose to attend the University of Tennessee, Knoxville to pursue a Doctor of Philosophy degree in Business Administration with a concentration in Marketing. His research interest includes studying consumption trends across cultures, the influence of marketing communications on consumption experience, the impact of arising technology on marketing landscape, and initiatives to help enhance social well-being. After graduation, he will begin his new position as an assistant professor at Troy University.