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Published in:
With Design: Reinventing Design Modes

DOI:
10.1007/978-981-19-4472-7_41

Published: 06/11/2022

Document Version
Peer-reviewed accepted author manuscript, also known as Final accepted manuscript or Post-print

Please cite the original version:
Yoon, N., Joo, J., & Park, W. (2022). Dark Side of Cuteness : Effect of Whimsical Cuteness on New Product Adoption. In G. Bruyns, & H. Wei (Eds.), *With Design: Reinventing Design Modes: Proceedings of the 9th Congress of the International Association of Societies of Design Research (IASDR 2021)* (pp. 617-633). Springer. https://doi.org/10.1007/978-981-19-4472-7_41

Dark Side of Cuteness: Effect of Whimsical Cuteness on New Product Adoption

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A wide range of businesses actively use cute characters such as the globally popular LINE FRIENDS characters for product design to increase consumers' product adoption. Prior research has found that whimsical cuteness—which elicits fun and playful mental representations—can lead to higher product adoption. The effectiveness, however, has been investigated mostly in indulgent contexts. This article aims to uncover the opposite phenomenon, that is, whimsical cuteness could be detrimental for product adoption, in particular, in a non-indulgent context. In a pre-test, we measured the different types of cuteness of nine LINE FRIENDS characters, selecting one pair of characters differed only in terms of whimsical cuteness. Additionally considering product newness, the main study tested whether product adoption differed depending on the level of whimsical cuteness and product newness. The results demonstrate that participants were less likely to adopt a non-indulgent product when it was highly whimsically cute compared to less whimsically cute because the indulgence provoked by fun and playful mental representations conflicted against the restraint reinforced by a product for self-control. The adverse effect increases when the product has lower product newness whereas high product newness dampens the effect. The findings suggest that practitioners should carefully consider product nature and newness when applying whimsically cute features to product design and marketing promotions. This study has originality in that it is the first to demonstrate the adverse effect of whimsical cuteness on new product adoption and verify the moderating effect of product newness.

Keywords: whimsical cuteness; new product adoption; product newness; self-control; LINE FRIENDS

1 Introduction

Whimsical cuteness—which stimulates fun and playful mental representations—has been widely adopted in product design, typically in the form of cute characters. For instance, the character and entertainment business's global market size has reached $128.4 billion U.S. dollars in sales in 2019 (Licensing International 2020). The effectiveness of whimsical cuteness on product adoption has been proven in academic research. For example, Nenkov & Scott's (2014) study demonstrated that fun and playful mental representations activated by whimsical cuteness motivate consumers to engage in product consumption.

However, extant research on whimsical cuteness has concentrated on indulgent consumption. Previous research has not investigated the impact of whimsical cuteness on the adoption of other product categories, which especially do not relate to indulgence. Only recent research by Shin & Mattila (2021) examined how whimsical cuteness influenced consumers' prosocial product choice in a non-indulgent context. However, it is still unclear how the influence of whimsical cuteness varies depending on different product characteristics. Our study aims to fill this gap by exploring the effect of whimsical cuteness on adopting non-indulgent products and how product newness moderates this effect. We focus on the adoption of product assisting self-control, which refers to the capacity to withstand a temptation to achieve valued goals (Fishbach & Hofmann 2015). For example, alarm clock is a typical self-control product that helps people resist to oversleep. Since self-control is contrasting force to indulgence and whimsical cuteness has been extensively discussed in the indulgent context (Nenkov & Scott 2014), this study about the whimsical cuteness in the context of self-control will add novel flavors to the existing literature.

We posit that whimsical cuteness adversely influences new product adoption when the product relates to self-control. Our expectation is based on the insight that indulgence caused by fun and playfulness—the key mental representations elicited by whimsical cuteness—might conflict with the restraint that a non-indulgent product facilitates, thus impeding product adoption. In particular, the negative effect increases when the product has lower product newness due to its high feasibility (Hoeffler 2003), leading consumers to focus on the conflict. When adopting a highly new product, whimsical cuteness's negative effect does not occur due to the extremely low feasibility (Hoeffler 2003), which may veil the conflict.

Our research contributes to academic discussions in three aspects. Firstly, the findings provide a novel understanding that whimsical cuteness does not always increase product adoption, contrary to the previous studies (Lee et al. 2018; Nenkov & Scott 2014) and complementing Shin & Mattila's (2021) research. Secondly, our research introduces product newness as a new moderator that can increase or eliminate the effect of whimsical cuteness on product adoption. Specifically, our findings suggest that the high feasibility of a product having a lower level of newness strengthens the adverse effect of whimsical cuteness, and the low feasibility of a highly new product dampens the effect. Lastly, the findings of our study add to self-control literature related to self-control failure and improvement studies (e.g., Fishbach & Labroo 2007; Hofmann, Friese & Strack 2009; Inzlicht, Legault & Teper 2014), by introducing whimsical cuteness as a new variable that could hamper the adoption of products requiring self-control.

Our study also provides significant implications for product designers and marketers. By considering whimsical cuteness's potential adverse effect, practitioners can avoid a possible mismatch between whimsically cute product design and product nature, resulting in more finely tuned new product development and marketing. Moreover, our research insights can be directly applied to practice since the LINE FRIENDS characters—the stimuli used in our experiments—have already been used in a wide range of products and services worldwide, which provides external validity to our findings.

2 Literature Review

2.1 New Product Adoption

New product adoption is determined by two barriers to the adoption: functional and psychological barriers (Claudy, Garcia & O'Driscoll 2015). The former refers to impediments related to functional

aspects of new products such as usage, value, and the uncertainties that consumers evaluate when adopting them (Claudy, Garcia & O'Driscoll 2015). The latter arises through conflicts with consumers' prior beliefs related to tradition and image (Antioco & Kleijnen 2010; Kleijnen, Lee & Wetzels 2009). Laukkanen (2016) found that psychological barrier could significantly hinder consumers' new product adoption, compared to functional barriers.

With the growing attention to the psychological barriers, consumer researchers have examined factors that influence the impediments. Barriers regarding tradition arise when new products deviate from established traditions or accepted societal norms (Antioco & Kleijnen 2010). Image barriers are related to image perceptions that consumers have of the new product (Antioco & Kleijnen 2010). When a new product reminds consumers of an unfavorable image, consumers likely decide not to adopt it. For instance, negative media coverage (Kleijnen, Lee & Wetzels 2009) and traditionally unfavored product features such as screw caps of wine bottles (Garcia, Bardhi & Friedrich 2007) could be factors increasing psychological barriers.

Product design has been examined as an important factor that influences psychological impediments. Particularly, previous research in this vein has examined its effects on psychological product perception and subsequent adoption. For instance, Bloch (1995) emphasized the importance of product design in consumer behaviour, showing that positive psychological responses to a product design can cause consumers to engage in product-related activities and finally purchase the product. Page & Herr (2002) found that the product form leads to an affective response while a product's quality is based on a more cognitive evaluation. With a holistic view, Noble & Kumar (2010) suggested product design as a tool that has emotional value and can lead to positive psychological responses from consumers, extending Don Norman's (2002) research that explains the effect of emotional design on consumers' product perception. El Amri & Akrout (2020) recently found that perceived product design affordance—the notion that people understand objects by direct perception of them rather than evaluation of qualities or properties (Gibson 1979)—positively influences perceived product quality and purchase intention.

Prior research, however, still provides little understanding about what specific mental representations are elicited from product design and how they affect consumers' new product adoption. Extant studies have merely focused on the roles of product form in consumers' product choice (Creusen & Schoormans 2005) or ways to product designs that increase consumers' aesthetic preferences (Hekkert, Snelders & Van Wieringen 2003). Although Lee (2020) demonstrated the effect of visual typicality of wearable design on consumers' psychological antecedents of product adoption, the study is limited to the relationship between product design and predefined four antecedents, not investigating mental representations provoked by the wearable design. Nenkov & Scott's (2014) study provides insights into a previously neglected research area by showing that fun and playful mental representations elicited by product design can lead to indulgent consumption. Considering that various mental representations can influence psychological barriers and determine new product adoption, it is essential to examine further the psychological influences of product design and their effects on consumers' new product adoption.

2.2 Whimsical Cuteness

Although the concept of cuteness is complicated and varies across generations and on a person-to-person basis (Nittono et al. 2012), cuteness can be categorized into two types: whimsical cuteness and Kindchenschema. Kindchenschema cuteness—also called baby schema cuteness—

highlights infantility, demonstrated by the collective physical and behavioural features of babies such as a round face, large eyes, and chubby body shape (Glocker et al. 2009; Miesler, Leder & Herrmann 2011). Behavioural research has shown that exposure to stimuli featuring Kindchenschema yields less indulgent behaviour since it increases careful, caretaking, and protective responses (Glocker et al. 2009; Sherman et al. 2013; Shin & Mattila 2021).

On the other hand, whimsical cuteness is associated with mental representations of fun and an inanimate object's playfulness (Nenkov & Scott 2014). Nenkov & Scott (2014) proposed that whimsical cuteness's psychological consequences motivate consumers to focus on desirable rewards for themselves, resulting in more indulgent behaviour. They conducted four experiments to investigate consumers' product perceptions and behaviours triggered by different types of cute stimuli (whimsical vs. Kindchenschema cuteness) using indulgent goods (e.g., ice cream scoops, gift cards, and cookies).

Notably, whimsical cuteness may increase new product adoption due to its positive influence on individuals' self-reward focus that increases intention to purchase a product. Specifically, the participants in Nenkov & Scott's (2014) experiment who used whimsically cute gift cards were more inclined to pick lowbrow movies, which are considered more indulgent than highbrow movies, than participants who used a Kindchenschema-oriented cute or neutral gift card. Lee et al. (2018) also verified that self-indulgence tends to be stimulated by whimsical cuteness in food context. Thus, whimsical cuteness positively influences consumers' product adoption in an indulgent context.

The effect of whimsical cuteness on indulgent behaviour can be eliminated when the product is framed as a children's product using Kindchenschema cuteness marketing positioning (Nenkov & Scott 2014). The findings indicate that consumers' self-reward focus might be reduced by inconsistent mental representations, such as those of Kindchenschema cuteness, that may interrupt or override the fun, playful mental representations of whimsical cuteness. This shows that the whimsical cuteness effect might vary depending on the positioning of products, and thus the result would differ across different product types.

Whimsical cuteness needs to be examined further in the context of adopting non-indulgent products, especially in relation to self-control. Even if consumers were less likely to use a whimsically cute product for non-indulgent tasks (Nenkov & Scott 2014), the study was merely about product usage (i.e., utilizing a whimsically cute stapler for fun, rather than work) but did not indicate consumers' actual adoption of a non-indulgent product. Using non-indulgent products, Shin & Mattila (2021) demonstrated whimsical cuteness's marginal influence on consumers' prosocial responses, but the context is limited to prosocial behaviour related to self-sacrifice, not explaining how whimsical cuteness influences the adoption of products for self-control.

We expect that whimsical cuteness would negatively influence the adoption of non-indulgent products, contrary to its positive effect on indulgent products' adoption. The reasoning behind the assumption is that whimsical cuteness might reduce product adoption when the fun and playful mental representations hinder or conflict with other mental representations that are substantial in adopting non-indulgent products. For instance, a significant decrease in the adoption of a self-control product—a non-indulgent product to avoid indulgent behaviour—might occur since indulgence is an impelling force that competes with the restraining one of self-control (Hofmann, Friese & Strack 2009). It is possible that product adoption more likely decreases when the product is

more whimsically cute due to the increasing mismatch between the whimsically cute nature and non-indulgent nature.

H1*: Consumers' adoption of non-indulgent products will decrease when the product is more whimsically cute than less whimsically cute*.

2.3 Product Newness

Product newness is a critical psychological factor that influences consumers' new product adoption. From a psychological perspective, feasibility determines product newness. Feasibility is related to previous product knowledge, indicating necessary behavioural changes to benefit from a new product (Hoeffler 2003). Thus, a new product with low product newness (e.g., a refinement of existing products) has high feasibility. On the contrary, the newer the product is, the lower feasibility it has due to the inapplicability to apply existing product knowledge to understand the product (Hoeffler 2003; Min, Kalwani & Robinson 2006; Moreau et al. 2001). Instead, a highly new product has high desirability, which indicates the ability to enable individuals to attain new benefits or conduct new ways to enjoy existing benefits (Hoeffler 2003).

When evaluating a new product, feasibility is important when the product has lower product newness. Construal Level Theory (CLT) suggests that high feasibility leads consumers to consider product adoption at a low level, highly related to specific aspects of the adoption (Alexander, Lynch & Wang 2008; Trope & Liberman 2003; Wang, Dacko & Gad 2008). In particular, consumers tend to focus on specific features that concretely indicate the new product's costs and benefits. For instance, it would be easier for consumers to find a potential mismatch between product design and product attributes when product adoption is construed at a low level. Such inconsistency between the product design nature and expected behavioural change entails costs. Since consumers weigh perceived benefits against the perceived costs of high feasibility (Alexander, Lynch & Wang 2008), they might be unlikely to adopt a less new product when feasibility concerns outweigh desirability.

However, feasibility becomes not substantial when deciding on adopting a product with high newness since it is difficult to evaluate the product cost and specific nature due to a lack of baseline product knowledge (Alexander, Lynch & Wang 2008; Hoeffler 2003). For instance, consumers might be uncertain about the behavioural changes needed to enjoy the new product's benefits and whether the product design matches the product's nature. The lower level of feasibility of highly new products makes consumers construe the adoption action at a high level (Alexander, Lynch & Wang 2008). Consequently, the desirability of product attributes that enable consumers to try new things is more salient than feasibility when considering the adoption of brand-new products (Wang, Dacko & Gad 2008). As a result, concrete feasibility does not influence the adoption of a product with a high newness level. Instead, the adoption depends on abstract desirability considerations.

By combining Hoeffler's (2003) studies and CLT research, we deduce that whimsical cuteness decreases the adoption of the less new product since its high feasibility highlights the potential negative effect of whimsical cuteness on product adoption. It would be easier for consumers to find a mismatch between the indulgence caused by whimsical cuteness and the restraining force for self-control, an important benefit of the non-indulgent product, when adopting a less new product. Thus, the negative effect of whimsical cuteness on non-indulgent product adoption might be reinforced by low product newness that has high feasibility.

In terms of adopting a product with high newness, whimsical cuteness might not decrease the adoption since the product's low feasibility dampens the possible negative effect of whimsical cuteness on product adoption. Contrary to adopting a less new product, it is possible that limited product knowledge about the highly new product makes consumers overlook the conflicts between whimsical cuteness and non-indulgent product nature. Moreover, whimsical cuteness does not provide information about the product's ability to make consumers engage in trying new things (i.e., desirability). Therefore, the influence of whimsical cuteness would not be significant in adopting a highly new product.

H2a*: When a product has low product newness, consumers' product adoption will decrease when the product is more whimsically cute than less whimsically cute.*

H2b*: When a product has high product newness, whimsical cuteness will not decrease product adoption.*

3 Method

3.1 Study Overview

We present a pre-test and a main study in which we test our hypotheses, propose the effect of whimsical cuteness on new product adoption in a non-indulgent context, and present the moderating effect of product newness on the main effect. In the pre-test, we rigorously manipulated whimsical cuteness by measuring the cuteness levels of each LINE FRIENDS character. As a result, we selected one pair of characters that were different only in terms of whimsical cuteness. For the main study, we employed a 2 (Whimsical cuteness: Low vs. High) x 2 (Product newness: Low vs. High) between-subjects experiment. The purpose of employing a between-subjects design is to prevent participants from inferring hypotheses before answering questions. If we conducted a within-subjects design study, participants were exposed to subtly manipulated, multiple stimuli sequentially and then could infer the intentions of experimenters and their hypotheses. If hypotheses were "leaked," participants could change their responses.

Notably, our study measured the different cuteness types of LINE FRIENDS characters (see Figure 1). The purpose of using the characters was twofold. First, the nine characters of LINE FRIENDS respectively have unique visuals and characteristics, which provides opportunity to measure different levels of cuteness types. As our pre-test results present, we were able to examine how participants differently perceived characters in terms of four types of cuteness, resulting in the selection of stimuli for our main study. Second, we apply insights from this study to a wide range of practices. The characters were developed especially for LINE, a mobile message application with roughly 200 million active users worldwide (LINE FRIENDS Inc. 2021). Furthermore, physical LINE FRIENDS character products have been distributed in more than 140 offline stores and 14 online marketplaces, including those in the U.S. and China (LINE FRIENDS Inc. 2021). Thus, we estimated that LINE FRIENDS characters would be suitable stimuli for our study.

Figure 1. LINE FRIENDS Characters. Source: LINE FRIENDS Inc.

3.2 Pre-test for Cute Manipulation

We conducted a pre-test for cuteness manipulation (n = 20; 59% female). The purpose was to select one pair of characters that differ only in terms of whimsical cuteness. During the pre-test, Chinese students residing in South Korea viewed nine LINE FRIENDS characters. We specifically examine the perception of Chinese participants for our pre-test and main study to maintain the same level of customer familiarity to the characters since the degree of customer familiarity influences the evaluation of new product (Calantone, Chan & Cui 2006). This study focuses on the perception of cuteness of characters from Chinese point of view with high familiarity to the characters, positing

that Chinese might be familiar with LINE Friends characters through wide accessibility to the characters via online and offline LINE Friends stores.

Participants rated the extent of four types of cuteness based on 11 questions adapted from Nenkov & Scott's (2014) whimsical cuteness research (see Table 1). All questions were measured on a 6-point scale (0 = strongly disagree, 5 = strongly agree). The images of the nine characters were attached to the survey questionnaire for participants' convenience. This survey was conducted in a paper and pencil format to make sure the shape and color of our prepared stimuli exposed to participants appropriately. We printed out visual stimuli in color rather than uploaded their images on data collection websites to avoid a chance that participants answered questions without paying sufficient attention to the characters.

Table 1 Survey questionnaire about cuteness

Item	Question
Cuteness 1	The product with this character is cute.
Cuteness 2	The product with this character is adorable.
Cuteness 3	The product with this character is endearing.
Whimsical cuteness 1	The product with this character looks whimsical.
Whimsical cuteness 2	The product with this character looks playful.
Whimsical cuteness 3	The product with this character looks fun.
Kindchenschema cuteness 1	The product with this character looks vulnerable.
Kindchenschema cuteness 2	The product with this character looks naïve.
Kindchenschema cuteness 3	The product with this character is caretaking.
Likability 1	I like the product with this character.
Likability 2	The product with this character is attractive.

Source: items adapted from Nenkov & Scott (2014).

We conducted 144 paired sample t-tests to select a pair of characters that differ only in whimsical cuteness but have no significant difference in other cuteness items (general cuteness, Kindchenschema cuteness, and likability). Participants indicated that Moon was whimsically cuter than Brown (M_{Moon} = 3.633 vs. M_{Brown} = 2.583, t (19) = 2.994, p = 0.007). However, they had no significant difference in the other three types of cuteness including cuteness (M_{Moon} = 3.133 vs. M_{Brown} = 2.983, t (19) = 0.560, p = 0.582), Kindchenschema cuteness (M_{Moon} = 2.983 vs. M_{Brown} = 2.567, t (19) = 1.385, p = 0.182), and likability (M_{Moon} = 3.175 vs. M_{Brown} = 3.075, t (19) = 0.360). As a result, we selected Moon and Brown for our main study's stimuli since they met our requirements.

3.3 Main Study

To test Hypothesis 1, we examined the effect of whimsically cute character products on non-indulgent product adoption. We also investigated whether product newness moderates the influence of whimsical cuteness on new product adoption, testing Hypotheses 2a and 2b.

3.3.1 Stimuli

We used a pair of alarm clocks available in the market to attain external validity. We chose two alarm clocks differing in terms of product newness and tested whether the perceived product newness is significantly different between the two clocks. Specifically, one alarm clock had merely the additional function of a piggybank. Since the piggybank is already well-known and has concrete features, the alarm clock with the piggybank function had high feasibility and thus had low product newness. The other one had low feasibility due to additional functions such as exclusive sound,

which are more abstract than a piggybank function. Thus, the alarm clock with an exclusive sound had lower feasibility and consequently, had higher product newness than the other.

Our assumptions were verified through a test which measured the product newness of each clock. We asked participants to report on perceived product newness by answering 4 questions adopted from Alexander, Lynch & Wang's (2008) study on a 5-point scale (1 = strongly disagree, 5 = strongly agree). The questions are about the perceived feasibility of a product, indicating the degree of perceived newness. For instance, we coded scores to a question "Using this new product would allow me to do things that I can't easily do now," reversely coded scores to a question "I feel quite certain of the benefits I could expect to get if I adopted this product." (Alexander, Lynch & Wang 2008, p. 8) and calculated the total scores of the 4 questions. The higher feasibility scores mean lower product newness.

The test results confirmed our assumption that the piggybank alarm clock has lower product newness than the alarm clock with an exclusive sound. Our independent samples t-test revealed that the product with a low feasibility (i.e., the alarm clock with an exclusive sound) has higher product newness than the product having high feasibility (i.e., the alarm clock with a piggybank function) ($M_{\text{high product newness}} = 3.050$ vs. $M_{\text{low product newness}} = 2.845$, $t(83) = 2.061$, $p = 0.042$). Levene's test presented unequal variances ($F = 5.904$, $p = 0.017$), thus degrees of freedom were adjusted from 98 to 83. The results validated our product newness manipulation. Thus, we determined the stimuli for our main study as follows (see Table 2).

Table 2 Stimuli differing in whimsical cuteness and product newness

	Whimsical cuteness: Low[a]	Whimsical cuteness: High[a]
Product newness: Low[b]		
Product newness: High[b]		

[a] *Whimsical cuteness: Low = 2.583 vs. High = 3.633, p = 0.007.*

[b] *Product newness: Low = 2.845 vs. High = 3.050, p = 0.042.*

3.3.2 Participants and Procedure

Participants were 100 undergraduates at the Heilongjiang University of Finance and Economics in China (73% female) who volunteered to participate in our experiment. We recruited college students because they need our stimuli because research suggests that the peak-time for younger adults is evening (May 1999). Therefore, they are highly likely to face a self-control problem of waking up in the morning. This suggests that they are highly involved with our stimuli (alarm clocks). In contrast, older adults whose peak time is morning may not have a self-control problem of waking up in the morning and thus do not need alarm clocks.

Participants were randomly assigned to one of the four conditions in which they viewed one of the four alarm clock images along with a brief product description. They were asked to indicate their willingness to adopt the product by answering the two questions employed in Wang, Dacko & Gad (2008, pp.420) on a 7-point scale (1 = not at all, 7 = very much):

1. "How interested would you adopt the new alarm clock after it is available?"
2. "What is the likelihood that you will be one of the early adopters of this alarm clock after it is available?"

Then we collected demographic information about participants. The survey was also conducted in a paper and pencil form as we did in pre-test with the same purpose, which is to avoid that participants answer the questions mindlessly.

3.3.3 Results

We tested whether participants' new product adoption differed depending on the degrees of whimsical cuteness and product newness. Our two-way ANOVA revealed a significant main effect of whimsical cuteness on new product adoption, showing that consumers were less likely to adopt the new product in a non-indulgent context when the product has higher whimsical cuteness (M_{high} = 3.710) than when it has lower whimsical cuteness (M_{low} = 4.300; F (1,96) = 4.139, p = 0.045). Moreover, we found that there is no significant main effect of product newness on new product adoption (M_{high} = 4.220 vs. M_{low} = 3.790, F (1,96) = 2.198, p = 0.141).

Interestingly, the results presented a significant interaction effect of whimsical cuteness and product newness (F (1,96) = 6.688, p = 0.011) (see Figure 2). Specifically, it is less likely to adopt a new product having low product newness when the product is more whimsically cute (M_{high} = 3.120) than less whimsically cute (M_{low} = 4.460) (F (1,96) = 10.674, p = 0.002). When the product has high product newness, there is no significant effect of whimsical cuteness on new product adoption ($M_{low\ whimsical\ cuteness}$ = 4.140, $M_{high\ whimsical\ cuteness}$ = 4.300, F (1,96) = 0.152, p = 0.697).

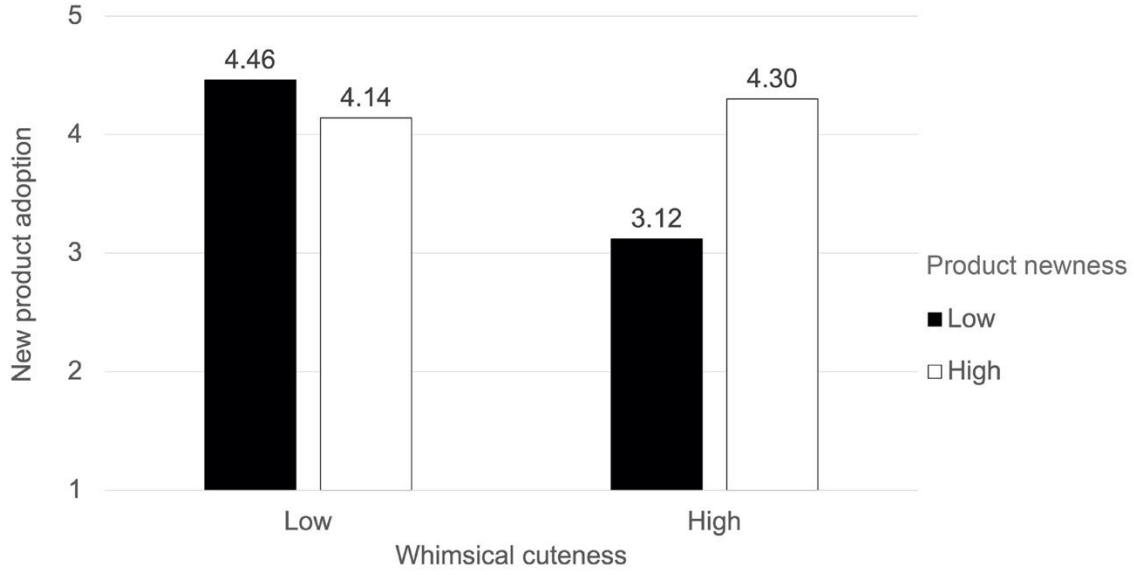

Figure 2. Interaction Effect of Whimsical Cuteness and Product Newness on New Product Adoption.

3.4 Discussion

Our study results provide evidence that a product having higher whimsical cuteness leads to less adoption of the non-indulgent product compared to a product with lower whimsical cuteness, supporting Hypothesis 1. Our findings indicate that the mismatch between fun and playful mental representations and a non-indulgent product nature might decrease product adoption. The finding is in line with the research of Nenkov & Scott (2014) and Shin & Mattila (2021) that showed that whimsical cuteness has little impact on conducting non-indulgent tasks and self-sacrifice behaviour respectively. Our research verified further the negative effect of whimsical cuteness on product adoption in a non-indulgent context, going beyond the effect on task execution and prosocial choice.

Our findings support Hypotheses 2a and 2b by explicating the moderating effect of product newness. Interestingly, the negative effect of whimsical cuteness only appeared in adopting the less new product, demonstrating that low product newness reinforces the negative effect of whimsical cuteness, whereas high product newness dampens the effect. The level of product newness differs depending on feasibility, which makes consumers focus on constraints that hinder product adoption (Alexander, Lynch & Wang 2008; Hoeffler 2003; Wang, Dacko & Gad 2008). Our findings suggest that the high feasibility of a less new product highlights the conflicting mental representations (i.e., fun and playful mental representations vs. the restraining force of self-control) and consequently fortifies the negative effect of whimsical cuteness on product adoption. On the contrary, consumers are not influenced by whimsical cuteness when adopting a highly new product due to the low feasibility.

4 Conclusion and Discussions

Our study is the first to uncover the “dark side of cuteness” —the adverse effect of whimsical cuteness on new product adoption in a non-indulgent context—and verify the moderating effect of product newness. The experimental findings provide evidence that a higher whimsical cuteness level leads to lower adoption of the non-indulgent product. Importantly, the negative effect increases when adopting a product with lower newness, but the effect is eliminated in adopting a highly new product. Combining the findings, we conclude that whimsical cuteness can be detrimental to non-indulgent product adoption. In this case, the adverse effect is exacerbated by low product newness that makes the product more feasible and leads consumers to focus on the conflicts between the whimsical nature of characters and the restraining force of a non-indulgent product that especially requires self-control. However, the negative effect of whimsical cuteness is removed when adopting a product with high newness due to the low feasibility that veils such an inconsistency.

4.1 Academic Contributions

Our research extends Nenkov & Scott’s (2014) findings of whimsical cuteness, who focused on the positive effect that fun and playful mental representations have, provoking indulgent self-rewarding behaviour concerning product choice. The positive effect on indulgent consumption was also verified in a food context (Lee et al. 2018). Addressing that the prior research has mostly concentrated on hedonic or indulgent consumption, we filled the research gap by broadening the product category to the non-indulgent product, especially highly related to self-control, and by empirically testing the effect of whimsical cuteness on product adoption. As a result, we found that the opposite effect occurs in product adoption, showing that higher whimsical cuteness leads to less adoption of a non-indulgent product. Our findings indicate that whimsical cuteness can be detrimental when the fun

and playful mental representations conflict with a non-indulgent product nature. The findings are in line with Shin & Mattila's (2021) cuteness research which showed that the conflicting mental representations between whimsical cuteness and self-sacrificing nature of prosocial products impeded consumers' product choice.

Next, our research suggests product newness as a new variable that moderates the negative effect of whimsical cuteness on new product adoption. We found that low product newness significantly increases the negative impact of whimsical cuteness by making consumers more focused on the product's feasibility. On the contrary, high product newness does not have a significant influence on whimsical cuteness effect. As high feasibility of low product newness leads consumers to consider product adoption at a low level (Alexander, Lynch & Wang 2008), we propose that low product newness may highlight the mismatch and inconsistency between product design and product nature.

Lastly, our study contributes to the literature on self-control, especially self-control failure and improvement studies (e.g., Fishbach & Labroo 2007; Hofmann, Friese & Strack 2009; Inzlicht, Legault & Teper 2014), by proposing whimsical cuteness as a novel variable that could hinder the adoption of self-control products. As self-control can be framed as a struggle between indulgence and a restraining force (Hofmann, Friese & Strack 2009), whimsical cuteness that increases indulgence would impair self-control. Thus, consumers might be less likely to adopt self-control products with a high level of whimsical cuteness.

4.2 Practical Implications

The key practical significance is that a product design which makes products seem whimsically cute has potentially detrimental effects on consumers' product adoption, especially when the products are non-indulgent. Although nudge is an interesting lens for designers (Chen, Kim & Joo 2019), our finding suggests that whimsical cuteness can have counter-nudging effects (Saghai 2013; Sunstein 2017) that make consumers not to adopt self-control products, contrary to the expectation of designers and marketers. For instance, cute characters with high whimsical cuteness might in fact hinder consumers' adoption of products for self-control such as diet foods and time and study management products. Thus, practitioners should beware of using whimsically cute characters on products related to self-control.

In addition to the product nature, practitioners should carefully consider the level of product newness when applying whimsical cuteness to product design. In particular, the high feasibility of a less new product can impede the adoption of a product designed with whimsically cute features when there are conflicts between whimsical cuteness and product nature. On the contrary, high product newness might not influence the effect of whimsical cuteness on product adoption. Therefore, we recommend not to apply whimsically cute characters to a product with low newness when product nature conflicts with indulgence. Our field experiments' insights can be directly applied to practices related to character products.

4.3 Limitations and Avenues for Future Research

Although our study is the first attempt to demonstrate the impact of whimsical cuteness on the adoption of non-indulgent products, this study has limitations with respect to the type and framing of the products used in our experiment. Regarding the product type, stimuli in our study are limited to one type of product (i.e., alarm clock) which is frequently used and low-involvement goods. Further investigations and experiments on various product categories would expand findings of this

research. For instance, it is unclear whether the uncovered negative effect of whimsical cuteness will replicate in higher stake new products, such as LG Styler, a steam closet system (Nguyen & Joo 2019). Future research could investigate how whimsical cuteness influences adoption behaviour when the product is highly priced and has more complex features. Moreover, products in our study were presented as tools for self-control that restrains self-indulgence. The effect of whimsical cuteness might differ when a product for self-control is framed as fun and playful since whimsical cuteness elicits enjoyable mental representations (Nenkov & Scott 2014). Future self-control researchers could extend our findings by examining how whimsical cuteness facilitates or hampers individuals' self-control in different settings.

In addition, the moderating effect of product newness could be further examined in an indulgent context. Our findings show that low product newness exacerbates whimsical cuteness's negative effect on adopting non-indulgent products. An important question is whether the effect of product newness would be opposite to our findings if the product is indulgent. That is, future research needs to verify whether low product newness highlights the match between the whimsical cute nature and indulgent product nature, and consequently, consumers are more likely to adopt an indulgent product compared to the adoption of a product with high product newness.

Lastly, study respondents are limited to Chinese students. On one hand, the level of customer familiarity may influence the new product evaluation (Calantone, Chan & Cui 2006), consequently consumers with low familiarity to characters need to be investigated in future studies. On the other hand, cultural differences might highly affect the perception of whimsical cuteness during product adoption. A myriad of cultural studies has demonstrated that cultural differences may create different visual perception and attention (e.g., Kitamura, Duffy, Kawamura & Larsen 2003; Nisbett, Peng, Choi & Norenzayan 2001). Agreeing to earlier findings by Sloman (1966) and recent research by Masuda & Nisbett (2011) and Kitayama et al. (2003), Westerners tend to pay more attention to focal objects and less attention to their surroundings, which is suitable to analytical reasoning, whereas Asians are more capable of holistic attention and tend to perceive the whole scene. Thus, it is plausible that western consumers may focus on certain visual cues of characters rather than perceive the characters as a whole, resulting in different perception of whimsical cuteness, compared to Chinese consumers. For instance, westerners might be more attentive to facial expression of the characters so that waggish face alone may lead higher whimsical cuteness. Hence, the culturally different perception of whimsical cuteness could be more deeply examined in the future. Since LINE FRIENDS characters have a strong brand presence worldwide, researchers could employ the characters used in our study to investigate consumers' different perceptions of whimsical cuteness and consequent product adoption.

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