

Cute Design and Green Consumption Behaviour: Exploring the Mediating Role and Mechanisms of Emotional Responses

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Abstract: With the increasing trend in environmental protection awareness, consumers are likely to shift their purchasing towards green products. The traditional green marketing has focused on functionality and environmental benefits, with little emphasis on emotionally motivated design impact in consumer decision-making. Based on the Emotional Response Theory and the Affective Design Theory, through reviewing the literature and theoretically discussing how cute design can stimulate the emotional response of consumers and improve the market appeal of green products, this paper analyzes the following. The results indicated that cute design can stimulate positive emotions such as pleasure and caring more effectively, which in turn can promote consumers' environmental purchase intention. This result provides new perspectives on green marketing and emotional design strategies.

Keywords: Green Consumption, Cute Design, Emotional Response, Consumer Behaviour.

1. Introduction

Ecological problems are highlighted throughout the world, and a lot of consumers are gradually readjusting their purchasing habits to be more ecologically sensitive and sustainable. However, traditional green marketing methods focus on functional benefits and the environmental qualities of the products but tend to neglect emotional factors of consumers. This sort of traditional technique mostly lacks the power of emotional appeal that is imperative in engraving brand loyalty in people's minds for a long period of time. Thus, appealing to people to purchase environmentally friendly products has become a major challenge through effective design and emotional connect in green marketing.

In recent years, Kawaii design, an emotion-driven design approach, has grown in popularity and has been applied to a wide range of items. Whimsical kawaii design, in particular, piques consumers' interest and curiosity with amusing, exaggerated, and imaginative design aspects. This style of design not only improves the visual appeal of a product, but it also encourages purchasing behavior by eliciting an emotional response from consumers (Nenkov & Scott, 2014). As a result, this article will investigate how adorable design influences consumers' green consumption behaviors through emotional responses, as well as provide tactics for emotional green marketing based on a literature study and theoretical analysis.

2. Literature Review

(1) The emotion-inducing effect of cute design

Cuteness is a broad concept, and features including size, shape, design or marketing positioning can market cuteness (Cheng (Norman 2004).

1) Infant Cuteness

Cuteness exemplified by infants triggers 'nurturing emotions', characterized by care and protective instincts. This form of cuteness often leverages the baby schema effect (Lorenz, 1943), wherein features such as large eyes, round faces, and disproportionate body proportions elicit feelings of

affinity and the desire to protect. For example, brands incorporating infant imagery in advertisements can quickly evoke emotional resonance among consumers, thereby enhancing brand loyalty and stimulating purchase behaviors.

Researchers also note that rounded shapes enhance the perception of cuteness by invoking associations with the softness and elasticity of infants and femininity (Marcus, 2002). Consumers are drawn to big eyes, plump cheeks, and 'baby-faced' traits, linking them to warmth and harmlessness, which increases product approachability (Gorn et al., 2008). For instance, cars with rounded headlights or cartoonish packaging designs are more likely to be embraced, as they convey signals of safety and user-friendliness. Similarly, charitable and pet product advertisements often rely on such visual traits to create emotional bonds between consumers and brands.

2) Animal-Based Cuteness

Animal-shaped designs often elicit a strong perception of cuteness, significantly enhancing product appeal. Compared to large, less approachable animals (like elephants or snakes), smaller mammals with baby-like traits—such as kittens, puppies, or chicks—are more likely to evoke consumer perceptions of cuteness (Gerbasi et al., 2008).

An example of successful utilization is the Sanrio brand, which incorporates cartoon-like animal characters such as Hello Kitty to foster emotional marketing, attracting consumers across different age groups and embedding emotional value in its products. Additionally, cartoonish animal figures often incorporate cultural symbols (e.g., fortune cats or pandas) to strengthen consumer-brand identification, especially in the fast-moving consumer goods (FMCG) and gift markets, where such designs can significantly boost competitiveness.

3) Miniaturized Object Cuteness

Miniaturized objects, such as miniature furniture or tiny food replicas, generate surprise and delight through their unique small size and intricate design. This type of cuteness taps into humans' fascination with unusual proportions, sparking a strong desire to collect (collectability).

Studies suggest that small objects often remind consumers of youthful traits, such as fragility and vulnerability (McVeigh, 2000; Marcus, 2002). This association not only triggers psychological responses similar to those when viewing an infant, but it may also lead to positive physiological reactions in the brain, activating caregiving motivations (Glocker et al., 2009). Miniature designs also gain popularity for their practicality (e.g., space-saving) and aesthetic appeal, making them particularly sought after in luxury gift markets where they effectively enhance brand premiums.

4) Whimsical Cuteness

Whimsical designs challenge traditional norms to captivate consumer attention, often through mechanisms unrelated to nurturing emotions. Nenkov and Scott (2014) pointed out that this type of cuteness is more closely related to fun and enjoyment. For example, products with whimsical designs, such as a potato doll wearing sunglasses, stimulate consumers' sense of exploration and curiosity, thereby increasing their interest in the product. This form of cuteness resonates particularly well with younger audiences, as it embodies novelty and creativity while fostering social sharing potential. For instance, consumers are more likely to post and share such unique products on social media, amplifying the brand's reach and influence.

So we can conclude that cuteness is also a multidimensional construct with two basic dimensions - kindchenschem mode and whimsical cuteness (Carver 1989; Nenkov, Inman and Hulland 2008). These two dimensions are subsets of the latent variables of general cuteness and represent different aspects of the construct: while the kindchenschema dimension is associated with aspects of the cute infant or child and his or her fragile nature, the whimsical cuteness dimension is associated with the fun and mischief of the infant or child.

Research indicates that exposure to well-designed, cute products can evoke psychological representations of vulnerability and caregiving, with studies by Berry and McArthur (1985) showing that such products trigger protective instincts. Nenkov and Scott (2014) further support this, demonstrating that whimsical, cute designs elicit positive affective responses, such as fun and pleasure, which increase consumers' likelihood of choosing products with these elements. According to Lorenz's (1943) Kindchenschema theory, cues like baby faces and small animals are inherently linked to positive emotions, particularly feelings of protectiveness. However, whimsical cute designs differentiate themselves by incorporating humor and exaggeration, which encourage 'indulgent' consumer behavior. This approach tends to relax consumers' rational judgments, making them more susceptible to hedonistic purchasing decisions (Nenkov & Scott, 2014; Lorenz, 1943).

The visual elements of cute design—such as cartoon characters, soft colors, and rounded lines—can significantly evoke emotional resonance in consumers, fostering stronger brand preferences. Norman (2004) emphasizes that emotional design works by subconsciously triggering positive emotional responses through the visual and emotional aspects of a product. This, in turn, can motivate sustainable consumption behaviors. Furthermore, research suggests that incorporating whimsical and cute designs into green products can align these products with consumers' emotional needs, enhancing brand appeal. By tapping into emotional responses, cute design helps bridge the gap between functional benefits and emotional engagement, making green products more

attractive to consumers (Norman, 2004; Schmitt, 2003).

(2) The Role of Emotional Responses in Green Consumption

Emotional responses significantly influence consumer purchase decisions. Pham's (2007) emotional response theory asserts that consumers' emotional reactions to products play a pivotal role in shaping their purchase intentions. Specifically, positive emotions, such as pleasure, can increase the likelihood of product selection. In the context of green consumption, Wang et al. (2010) found that emotional responses are crucial in driving the purchase intention of environmentally friendly products. This highlights the potential of leveraging emotional appeal to enhance consumers' intention to buy green products. Furthermore, studies have shown that various emotional triggers, including pleasure and curiosity, can have substantial effects on consumer behavior, especially in relation to cute design elements. Building on these findings, this paper argues that cute design can evoke positive emotional responses that stimulate consumers' interest in eco-friendly products, making them more likely to choose environmentally conscious options.

(3) Interaction between cute design and green consumer behaviour

It is worth noting that the consumption behaviour of green products is different from general consumption behaviour and has certain moral and pro-social attributes (Griskevicius et al., 2010; White and Simpson, 2013). Cute designs can generate positive emotions in consumers, including potentially evoking perceptions of warmth (Sprenelmeyer et al., 2009). Among these, Kindchenschema has long been recognised as a releaser of caring instincts. It triggers a variety of emotions, including empathic caring and kama muta, a positive emotion resulting from the sudden strengthening of shared community relationships (Kringelbach et al., 2016, Steinnes et al., 2019), and whimsical cuteness (whimsical cuteness) can play an important fun and pleasure inducing role in green consumption contexts (Nenkov and Scott, 2014). Lei et al. (2024) noted that in environmental protection and sustainable consumption contexts, cuteness design, through the combination of gain/loss information frames can further enhance consumers' environmental purchase intentions. This emotion-driven mechanism provides an effective strategy for the promotion of green products, making emotional design more competitive in green consumption.

3. Theoretical Analysis and Mechanism Exploration

Drawing on emotional response theory, emotional design theory and green consumer behaviour theory, this paper examines the potential mechanisms by which cute design influences green consumption. The following is a detailed exploration of these mechanisms:

(1) The Mediating Role of Emotional Response

According to affective response theory, consumers' emotional state will directly affect their purchase decisions. Cute designs, especially whimsical designs, trigger positive emotional responses, such as pleasure and curiosity, which increase consumers' interest in green products. For example, exaggerated or humorous elements in cute designs generate positive emotional responses, leading to a higher likelihood of purchase when consumers encounter such products; Kindchenschema designs trigger emotions of care, concern

and thus an increased awareness of the protection of environmental organisms. This mediating role of emotional mediation is particularly important in green consumption, where consumers can overcome potential hesitations due to perceived product functionality or value by engaging emotionally to increase sustainable purchase desires.

(2) Consumers' Emotional Response Mechanisms to Cute Designs

Emotional design theory suggests that product design should not only consider functionality, but also stimulate emotional resonance. According to Norman (Norman, 2004), emotional design can significantly enhance consumers' goodwill and purchase motivation by integrating visual and emotional elements. In the context of green consumption, whimsical and cute eco-friendly designs use emotional resonance to encourage consumers to choose eco-friendly products. Unlike functional design, cute elements such as humour and creativity can stimulate consumers' pleasure and increase their interest in eco-friendly products. In addition, Kindchenschema design evokes empathy and nurtures emotions, prompting consumers to purchase products that are in line with environmental and animal protection values.

(3) Cute design in the context of green consumption

In the green market, cute design is particularly effective for products targeting young consumers, who tend to value the visual appeal and emotional experience of a product. Whimsical and creative design elements can effectively attract the attention of this group. In addition, cute designs are particularly suitable for green products that evoke a strong emotional response, such as eco-friendly bags that protect the environment for animals or stationery made from recycled materials. These products, although powerful, can also be made more emotionally appealing (curiosity or caring) through cute design, which can inspire consumers to be caring and environmentally conscious.

4. Research Conclusion

This study confirms the positive impact of cute design on green consumer behaviour through a comprehensive literature review and theoretical analysis. Emotional responses play a mediating role in this process, as cute design triggers feelings of pleasure and curiosity or triggers emotions of empathy and caring, which in turn enhances consumers' willingness to purchase eco-friendly products. Future research directions may involve the cultural relevance of cute designs in different markets and their relative impact on different demographic groups. It is also worth examining how different age groups such as 'adult women' see cute products targeted at female consumers (Argo, Dahl and Morales 2012), which may further amplify the impact of cute products on consumers' indulgent behaviours in green consumption. It is also recommended that firms incorporate cute designs when promoting green products to achieve better market outcomes.

5. Discussion

This research process illustrates that cute design is a key variable for emotional engagement in the context of green consumption. By incorporating emotionally orientated design principles into green products, firms can significantly improve their market competitiveness. Whimsical and cute design elements are particularly effective in evoking consumer pleasure and curiosity, while Kindchenschema design increases consumers' caring care emotions and thus

their willingness to make environmentally friendly purchases. This design approach is not only applicable to green products targeting young consumers, but also to other eco-friendly products or products that emphasise emotional experiences. These findings also provide some valuable theoretical underpinnings for future green product design, emphasising the power of emotionally driven design in stimulating sustainable consumer behaviour.

6. Future Work

Existing literature predominantly focuses on the visual aspects of cuteness, such as color, appearance, and size (Cheok, 2010; Nenkov & Scott, 2014). However, the role of emotions in mediating the relationship between perceived cuteness and consumer decision-making remains underexplored. Emotions are not only crucial intermediaries in the consumer response to cute elements but also key drivers of behavioral choices. The following research directions can be explored further:

(1) Multisensory Interaction, Emotional Arousal, and Cuteness Perception

Cuteness perception is not limited to visual elements; instead, it is shaped by multisensory interactions that trigger complex emotional responses. For instance, soothing background music (Guido et al., 2016) and pleasant scents (Madzharov et al., 2015) may synergize with visual cues to elicit positive emotions. Tactile perceptions, such as soft or fluffy textures (Sprenghelmeyer et al., 2009), can also directly evoke feelings of comfort, satisfaction, or relaxation.

Future research could investigate how dynamic changes in emotions across different sensory stimuli influence the overall perception of cuteness and whether these emotional responses exhibit cultural differences. For example, do warm tactile sensations and relaxing auditory cues generate distinct emotional reactions among Eastern and Western consumers? Experimental designs could also assess whether the intensity of emotional arousal amplifies the marketing effects of cuteness, ultimately enhancing sustainable brand loyalty or purchase intentions.

(2) Immediate Emotional Effects of Dynamic Cuteness Designs

Dynamic expressions of cuteness, such as animated cartoon characters or interactive toys, may provoke more immediate and intense emotional reactions than static designs. These emotional responses are not limited to 'joy' or 'happiness' but can also include feelings of 'surprise' 'sympathy' or even 'emotion.' For instance, does a sad-faced cute character evoke stronger protective instincts and purchase impulses compared to a smiling counterpart? Future studies could incorporate advanced emotion-tracking methodologies, such as facial expression analysis or heart rate monitoring, to directly measure consumer emotional changes triggered by dynamic designs. Additionally, researchers might explore whether frequent high-intensity interactions result in emotional fatigue, diminishing the perception of cuteness over time.

(3) Cultural Differences, Emotional Expression, and Cuteness Perception

Cultural contexts not only shape the cognitive interpretation of cuteness but also influence the ways emotions are expressed and experienced (Hofstede, 1991). For instance, Asian consumers tend to favor the gentle and reserved traits associated with 'kawaii' culture, while Western consumers may prefer the independence and entertainment value of cute elements (Yano, 2004).

Future research could examine whether consumers from different cultural backgrounds respond emotionally to identical cute and 'green' elements in divergent ways. For example, would a sad-faced character design evoke stronger protective instincts in Eastern cultures while fostering philosophical or entertainment associations in Western contexts? Additionally, research could analyze whether cultural variations in emotional expression influence consumers' long-term preferences for green products and their loyalty to associated brands.

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