



# The influence of creative packaging design on customer motivation to process and purchase decisions

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## ARTICLE INFO

### Keywords:

Creativity  
Packaging  
Divergence  
Relevance  
Curiosity  
Decision making

## ABSTRACT

Creativity is a growing area of retailing research. Drawing upon the optimal-arousal theory, this research examines how the dimensions of packaging design creativity, such as divergence and relevance, have varying levels of influence on customer process, persuasion, and response measures. The findings show that packaging design can evoke customer curiosity in certain conditions. Further, the results suggest that the effect of packaging design creativity differs significantly in the retail context, in contrast to earlier studies that have mostly focused on the context of advertising. The findings provide new insights and implications for retailers, brand managers, and packaging designers to understand how creativity impacts customer decision making.

## 1. Introduction

A typical supermarket carries more than 30,000 product lines (FMI 2019), and UK households on average purchase more than 4000 items of packaged goods, including grocery and non-grocery products, per year (Rundh, 2016). Industry analysts suggest that visual appeal of packaging design is vital in influencing customer decision-making at retail level (Deloitte, 2015). Brands have on an average seven seconds to make a favorable impression before the customer moves on to the next option (Reyhle, 2020). Recent conceptual studies in the domain argue that product packaging design provides visual cues that in turn play an important role in influencing customer purchase behavior (e.g., Azzi, Battini, Persona, & Sgarbossa, 2012; Rundh, 2016). Retailers are investing heavily in packaging design with the growing realization that it influences buying at the point of purchase (Arnold & Reynolds, 2012; Orth & Malkewitz, 2012; Söderlund et al., 2017). Brand managers and retailers worldwide use innovative packaging as an important marketing tool (Togawa, Park, Ishii, & Deng, 2019) to signal brand meaning and quality (Karjalainen & Snelders, 2010; Mzoughi, Bree, & Em, 2017; Orquin, Bagger, Lahm, Grunert, & Scholderer, 2020).

Researchers and practitioners concur that creative packaging is an essential element for attracting customer attention and resultant success in a cluttered marketplace (e.g., Smith, MacKenzie, Yang, Buchholz, & Darley, 2007; Yang & Smith, 2009; Cascini et al., 2020). Creative packaging can influence behavioral outcomes such as customer

attention, better recognition, purchase likelihood, brand choice, and financial performance (Orth & Malkewitz, 2012; Hubert, Hubert, Florack, Linzmajer, & Kenning, 2013; Enax et al., 2015; Spence, Velasco, & Petit, 2019). Brand managers and retailers worldwide utilize creative packaging (Togawa et al., 2019) to signal brand meaning and quality (Karjalainen & Snelders, 2010; Mzoughi et al., 2017; Orquin et al., 2020). For instance, when Hasseröder, one of the largest selling beer brands in Germany, changed its beer bottle packaging, it saw a substantial increase in sales (Amster Brand, 2019). Similarly, Hasbro, one of the world's largest toymakers, substantially reduced its packaging footprint through creative design and production processes that led to reduced waste, decreased cost, and most importantly enhanced customer experience (Mohan, 2018). Orth and Malkewitz (2012) suggest that when companies offer unappealing packaging design, shoppers will not be inclined to engage with the product or the brand in today's competitive marketplace. This can have negative consequences for the brand's sales and growth.

While acknowledging the benefits of creative packaging on sales (Teas & Agarwal, 2000; Wells, Farley, & Armstrong, 2007; Enax et al., 2015) and customer motivation to process the brand message (Miyazaki, Grewal, & Goodstein, 2005; Chandon, Hutchinson, Bradlow, & Young, 2009; Chen, 2021), researchers have consistently called for further research on the influence of creative packaging design on customer behavior (Azzi et al., 2012; Rundh, 2016). In particular, evidence on the effect of creative versus less-creative packaging on customer

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<https://doi.org/10.1016/j.jbusres.2022.04.026>

Received 24 March 2021; Received in revised form 9 April 2022; Accepted 12 April 2022

Available online 20 April 2022

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psychological motivation to process the cues, and consequent behavioral responses is sparse (Hubert et al., 2013; Krishna, Cian, & Aydınoglu, 2017). Creative packaging evokes customer attention and could persuade and facilitate buying behavior. In this regard, Smith et al. (2007) suggest that retail researchers should look beyond the attention effect of creativity by investigating its role in the customer persuasion process. For example, creative packaging may encourage curiosity and foster motivation to process the stimuli among the shoppers. Grounded in the optimal arousal theory (Berlyne, 1960), we argue that highly creative packaging increases arousal among customers. Such increased arousal persuades customers to become curious about the creative cue, and they, in turn, are motivated to process the information. Further, the optimal-arousal theory also states that increased arousal leads to exploratory behaviors (Spielberger & Starr, 2012). In contrast, if the packaging is less creative, arousal will be reduced and motivation to process will decrease. Thus, compared to less creative packaging, highly creative packaging may lead to increased curiosity, motivation to process, and behavioral intentions. While it is recognized that the persuasion (i.e., curiosity), process (i.e., motivation to process), and response measures (i.e., behavioral intentions) can act in conjunction to provide reliable metrics of marketing effectiveness (MacInnis & Jaworski, 1989), yet their combined effect with regards to an extrinsic cue such as creative packaging designs has so far not been investigated.

Further, prior studies on the influence of creative packaging on behavioral outcomes have focused selectively on highly creative cues (e.g., El-Murad & West, 2004; Sundar & Noseworthy, 2014; Togawa et al., 2019). Scholars have raised concerns that ‘creativity is treated as exceptional rather than typical’ (Baack, Rick, & Till, 2008, p. 85). In a real-life retail environment, however, the levels of creativity employed in packaging design vary (Orquin et al., 2020). While the received wisdom suggests that increased creativity may lead to greater engagement (Smith et al., 2007), the effect might be opposite if customers have to employ significant affective and cognitive resources (Zimmerman & Shimoga, 2014) to process such creative cues. For instance, when Dove launched highly creative limited-edition bottles representing various body types, instead of engaging the customers it was perceived as insulting by many who felt offended by the packaging design (Luttner, 2017). Such examples from the packaged retail sector suggest that the varying levels of creativity in packaging design might motivate customers to differentially process and become curious toward the cues. In this regard, the comparative impact of low versus high creative cues on customer persuasion, process, and response measures are so far largely unknown and represent a gap in the knowledge. The above issue is critical from practitioners’ perspective, given that brand managers and retailers stand to benefit from understanding what motivates customers to process creative cues, how they become curious about packaging signals, and the consequent influence on their purchase decisions.

Aiming to address the above gap, our research examines the effect of different types and levels of creative packaging cues on customer persuasion (i.e., curiosity), process (i.e., motivation to process), and response measures (i.e., behavioral intentions). Specifically, the study empirically investigates how low versus high of packaging creativity impacts customer curiosity and customer motivation to process the information. Further, we examine the impact of customer curiosity on motivation to process information, and how such motivation, in turn, influences customer attitudinal and behavioral responses. Incorporating the above issues, our research advances knowledge in the domain by developing and testing a novel conceptual model that explores the influence of creativity on the process, response, and persuasion measures.

Our study provides several theoretical and practical implications for the retail sector. Notably, we demonstrate the underlying psychological mechanisms for information processing, by examining the differential effects of high versus low creative packaging in retail brands. Grounded in the optimal arousal theory, we extend earlier research by affirming the beneficial effects of creative packaging and demonstrate how it influences customer decision-making through the process, response, and

persuasion measures. Further, we identify serial mediating effects of curiosity and motivation to process, through which the levels of creative packaging cues influence customers’ responses. Extending the research stream on packaging, such as Sundar and Noseworthy (2014) and Togawa et al. (2019), our findings establish that different levels of creativity should be considered while designing creative packaging. Our study further contributes to the domain of creativity by providing a nuanced approach to understanding the differential impact of the dimensions of creativity on customer response in retail settings. We discuss how our insights can inform retailers and brand managers on effective packaging design.

## 2. Theoretical background and hypotheses development

### 2.1. Research on creativity

Apart from a few studies in the social psychology and design domains, creativity has attracted surprisingly little scholarly attention in the retailing context (e.g., Merlo, Bell, Mengüç, & Whitwell, 2006; Lange, Rosengren, & Blom, 2016). Scholars suggest that creativity is one of the most complex aspects of human behavior, which may explain the lack of consensus about its measurement and definition (El-Murad & West, 2004; West, Koslow, & Kilgour, 2019). A product-based definition of creativity by Amabile (1983) states that “A product or response is creative to the extent that appropriate observers independently agree it is creative...creativity can be regarded as the quality of products or responses judged to be creative by appropriate observers, and it can also be regarded as the process by which something so judged is produced” (p. 1001).

In advertising, creativity is a well-established research stream. For instance, creativity is shown to generate customer attention through enhanced processing of the information (MacInnis & Jaworski, 1989; Smith & Yang, 2004; Stathopoulou, Borel, Christodoulides, & West, 2017) and that creative advertisement influences customers’ affective and cognitive responses (Yang & Smith, 2009). In retailing and retail advertising, packaging is an important aspect of creativity. Stimuli created by the design and information on packaging when processed by the customers are thought to evoke similar effects (e.g., Khan, Lee, & Lockshin, 2017; Krishna et al., 2017; Celhay, Cheng, Masson, & Li, 2020). For instance, using fMRI to compare neural correlates of attractive, neutral, and unattractive packaging stimuli, Hubert et al. (2013), show that attractive packaging led to increased arousal and neural activity changes in brain regions associated with impulsivity and reward, whereas unattractive packaging activated regions corresponding to negative emotions. Research has also shown that altering the packaging shape can change the perception of the material inside (e.g., Becker, Van Rompay, Schifferstein, & Galetzka, 2011; Spence, 2012). Similarly, Sundar and Noseworthy (2014), show that creative logo placement on packaging can affiliate itself with the notion of brand power. However, research on the effects of different levels of creativity is sparse in the retail context, and researchers have called for further studies on this unique construct of packaging (Azzi et al., 2012; Krishna et al., 2017).

### 2.2. Dimensions of creativity

Creativity in advertising is defined as “the art of establishing new and meaningful relationships between previously unrelated things in a manner that is relevant, believable, and in good taste which somehow presents the product in a fresh light” (El-Murad & West, 2004, p. 190). Prior studies identify several aspects associated with creativity including novelty, originality, flexibility, meaningfulness, emotional content, artistic value among others (Ang & Low, 2000; Smith et al., 2007). Further to that, within the creativity domain, scholars argue for two distinct determinant dimensions of creativity namely, divergence and relevance (Smith & Yang, 2004; Chen, Yang, & Smith, 2016). Divergence refers to the originality, novelty, aesthetic representation of the

advertisement, and relevance refers to the extent to which the elements of an advert or a brand are appropriate, meaningful, useful, and valuable to the customer (Smith et al., 2007). While Smith et al. (2007) suggest divergence and relevance as second-order constructs (Smith et al., 2007), in later studies they use these two dimensions as first-order global constructs (Chen et al., 2016). Similarly, several recent studies have employed them as first-order global constructs (Lehnert, Till, & Ospina, 2014; Baccarella, Maier & Voigt, 2021). In light of the above research insights, we operationalize divergence and relevance as first-order creativity dimensions.

Advertising researchers suggest that the principal characteristic of creativity is the dimension of divergence, as it contains the properties of being novel, different, and unusual (e.g., Lehnert et al., 2014; West et al., 2019). Till and Baack (2005) note that some researchers even equate divergence with creativity. On the other hand, Ray and Myers (1986) argue that divergence on its own is insufficient in defining creativity. Holtzman (1984) states that creativity is “divergent thinking that yields some kind of highly valued product or idea” (p.188), suggesting that creativity needs to provide added value. Unless the creative element of the advert conveys some meaning about the advertised brand or product, divergence does not necessarily equate to creativity (Ang & Low, 2000). Goldsmith and Matherly (1987) suggest that creativity needs to go further than the traditional definition of uniqueness and should result in an improvement in organizational efficiency or effectiveness when looking from a strategic planning perspective. This view suggests that creative ideas need to be relevant to the receiver.

Customers may not necessarily react to creative cues in the same way. Several studies show that marketing stimuli are interpreted differently and can be ‘personally relevant’ to customers, which in turn can influence advert processing and response (e.g., Ang & Low, 2000; Smith et al., 2007; Yang & Smith, 2009). In addition, personal relevance is an important aspect of involvement (Zaichkowsky, 1985). Thus, understanding factors that determine the degree of responsiveness at different levels of creativity can be critical in devising appropriately creative cues to different audiences (Hubert et al., 2013). Baccarella et al. (2021) show that consumption-supportive and functionality-oriented packaging that is meaningful for customers, tend to influence their purchase intentions. Research insights into the above can potentially create novel ways of segmenting customers for the purpose of promotion and communication. Understanding how customers react to various levels of creative packaging design is the starting point in this endeavor. While earlier studies have discussed the impact of divergence and relevance on creativity (See West et al., 2019 for a review), this research extends the debate by looking at how both divergence and relevance dimensions of creativity influence persuasion, process, and response measures for low versus high creativity cues.

### 2.3. Optimal arousal theory

The optimal-arousal theory (Berlyne, 1960) explains the relationship between environmental stimuli and individual emotional change. Berlyne (1960) identified two arousal states, namely gradualness and hyperactivity arousal. In gradualness arousal, the intensity of the stimuli increases, gradually reaching a critical point to produce a pleasurable experience. On the other hand, hyperactivity arousal involves a rapid rise of arousal-inducing stimuli (Wang, Xie, Huang, & Morrison, 2020). Extensively used in environmental psychology, the theory holds that specific environmental stimuli can persuade an individual to process the stimuli related information and in turn, lead to exploratory behaviors (Picard, Fedor, & Ayzenberg, 2016).

The optimal arousal theory offers predictions relating to the stimuli intensity. For instance, it suggests that when a stimulus encountered is complex and novel, it increases arousal, and in turn, exploratory behavior is employed to comprehend that stimulus. Conversely, if the stimulus is identified as boring and lacks excitement, then arousal reduces (Berlyne, 1960; Eisend, 2007). Based on the optimal arousal

theory, we posit that highly creative cues will result in increased arousal, leading to greater influence on persuasion (i.e., curiosity), process (i.e., motivation to process), and response measures (i.e., behavioral intentions). We provide support for our assertion in the next section.

### 2.4. Impact of creativity on the persuasion measure – curiosity

Marketing researchers have called for moving beyond the attention-related effects of creativity and investigating its role in the persuasion process (e.g., Smith et al., 2007; Lehnert et al., 2014). Curiosity has been consistently recognized as a critical motive that influences human behavior in both positive and negative ways at all stages of the life cycle (Van Dijk & Zeelenberg, 2006). Using the information-gap perspective, Loewenstein (1994) argues that curiosity has a peculiar combination of superficiality and intensity which can act as a powerful motivational force to process stimuli. For example, at the supermarket, the strong desire to learn the latest news about a celebrity’s most recent affairs typically vanishes immediately after the customer moves away from the tabloids section.

A creative stimulus may, therefore, help fuel the arousal in the customer to learn, resulting from the curiosity generated (Kardes, Cronley, Kellaris, & Posavac, 2004). In the past, scholars such as Hebb (1955), noted that curiosity arises from a natural human tendency to make sense of the world. Consistent with optimal-arousal theory, we posit this need is evoked and strengthened when individuals encounter a violation of expectations which are generated by incongruity. In as much as divergence can promote incongruity, it may also lead to higher levels of persuasion measures (Yang & Smith, 2009), such as curiosity. The above reasoning is supported by Loewenstein (1994) who notes that curiosity has an element of superficiality associated with it, which can be aroused with minimal effort; hence, the sudden appearance of the strong desire. For instance, when a customer comes across a creative packaging that is novel, different, and unique, such a stimulus may increase their arousal state by making them curious about the stimulus. Accordingly, we put forth that divergence will lead to curiosity among both highly creative and less creative stimuli. Moreover, highly creative packaging by nature will lead to hyperactivity arousal (Wang et al., 2020). Thus, we further posit that the effect of divergent stimuli will be stronger in a more creative condition than in a less creative condition, given that highly creative stimuli are more likely to arouse curiosity. Similarly, a creative packaging that is meaningful, valuable, and relevant to the customer, may also increase arousal and in turn lead to higher levels of curiosity for both highly creative and less creative stimuli. Further to that, as argued earlier, high level of creativity will increase the overall levels of curiosity compared to low levels of creativity, and thus the effect will be stronger among more creative stimuli. Hence, we posit:

*H1a: A higher level of divergence will lead customers to become more curious about packaging, particularly when the packaging is high (vs low) in creativity.*

*H1b: A higher level of relevance will lead customers to become more curious about packaging, particularly when the packaging is high (vs low) in creativity.*

### 2.5. Impact of creativity on the process measure – motivation to process

Previous research has considered the impact of creativity on processing, however, mostly within the domain of advertising. Smith and Yang (2004) show that after a mix of divergence and relevance is used to draw customers’ attention, holding the attention becomes the next important goal. MacInnis and Jaworski (1989) demonstrate that the customer’s motivation to process the creative cue determines the amount of attention given to it. Motivation is defined as the need or desire to process the information relating to the creative extrinsic cue

(MacInnis & Jaworski, 1989). Several researchers suggest that motivation mediates the relationship between exposure, processing, and the attitude formation process (Muehling, Stoltman, & Grossbart, 1990). Furthermore, Ang and Low (2000) propose that creative cues are expected to draw more attention than non-creative cues. In addition, the optimal-arousal theory offers a similar reflection for stimuli strength, suggesting that the intensity of stimuli highly correlates with the level of arousal which results in increased motivation for an individual to process the stimuli (Picard et al., 2016). Greater levels of attention lead customers to focus on the central, as against peripheral, elements of the creative cues, enhancing motivation to process (Petty & Cacioppo, 1986; Bazi, Filieri, & Gorton, 2020).

Smith and Yang (2004) note that divergence creates a contrast effect, which in turn attracts attention. In addition, divergence focusing on brand/message elements will enhance motivation to process the message. Divergence creates ambiguity, and as per optimal-arousal theory, ambiguous stimuli incite a need for closure (Peracchio & Meyers-Levy, 1994) that in turn enhances motivation to process the cue. Divergence is the primary and key element of creativity (Lehnert et al., 2014; West et al., 2019). As discussed above, it is logical to assume that divergence perceived by customers leads to increased arousal which piques an individual's curiosity and thereby motivation to process, in both high and low creative packaging. However, since highly creative packaging are likely to cause hyperactivity arousal (Wang et al., 2020) in a retail setting, it may result in increased motivation to process compared to less creative packaging. In our study, we aim to compare high versus low levels of divergence, relevance, and creativity presented in a stimulus. We expect a greater effect of divergence on motivation to process among high level of creativity in packaging, as compared to low creative packaging. As mentioned earlier, we expect this effect due to the ambiguity presented by highly divergent stimuli and its interaction with the high creativity (Smith & Yang, 2004; Wang et al., 2020). Moreover, since relevance is the secondary element of creativity, even some highly creative packaging can be perceived as having low relevance. An increase in perceptions of relevance with higher levels of creativity will increase arousal, promote situational involvement (Picard et al., 2016), and enhance motivation to process. Therefore, we expect relevance to have a greater effect among highly creative, as against less creative, packaging.

*H2a: For higher level of divergence, the effect on motivation to process the packaging, is stronger when the packaging is high (vs low) in creativity.*

*H2b: For higher level of relevance, the effect on motivation to process the packaging is stronger when the packaging is high (vs low) in creativity.*

## 2.6. Curiosity as means of motivation to process

Despite its transience, curiosity can exert a powerful motivational force (Loewenstein, 1994; Hill, Fombelle, & Sirianni, 2016). For example, a customer may be more inclined to process the available information if he or she is made curious about the stimuli. This is particularly the case in the context of creative cues, where divergence creates incongruity which necessitates resolution (Peracchio & Meyers-Levy, 1994). Similarly, relevance can increase the meaningfulness of a creative cue (West et al., 2019) and the aroused curiosity may drive the need to process the stimuli. Therefore, we posit that curiosity will affect motivation to process. We further argue that for highly creative cues, the effect of curiosity on motivation to process will be stronger, given that there is substantially greater incongruity and resultant hyperactivity arousal (Wang et al., 2020), than in the case of less creative cues. Therefore:

*H3: Higher curiosity will lead to stronger (weaker) motivation to process packaging that is high (vs low) in creativity.*

## 2.7. Influence of creative packaging and process measures on response measures

Prior research shows that both divergence and relevance substantially influence customer attitude and purchase intentions toward the brand (Chen et al., 2016; Billore, Jayasimha, Sath, & Nambudiri, 2020). Further, research in packaging demonstrates that increased packaging creativity can lead to stronger brand attitudes and buying intentions (Sundar & Noseworthy, 2014). Moreover, researchers also show that compared to unattractive packaging, attractive packaging has a significantly greater influence on consumption decisions (Togawa et al., 2019) and impulsive motives (Hubert et al., 2013). Thus, in line with extant studies, we expect the effects of divergence and relevance to be influential on brand attitude and purchase intentions. Moreover, we posit that these effects will be more pronounced for highly creative packaging than less creative packaging.

*H4: Divergence will have a significant influence on (a) brand attitude and (b) purchase intentions; this effect will be stronger for packaging that is high (vs low) than low in creativity.*

*H5: Relevance will have a significant influence on (a) brand attitude and (b) purchase intentions; this effect will be stronger for packaging that is high in creativity than low in creativity.*

Smith et al. (2007) suggest that the motivation to process effects are linked directly to customer responses. Further, Zaichkowsky (1985) suggests that the relevance of information is the mechanism that stimulates processing, which in turn can trigger a specific response. These can be cognitive responses (e.g., thoughts about the brand, ad, or the context), or affective responses (e.g., attitude toward the brand, and ad attitudes) (Huang & Hutchinson, 2008). The combined effects of the cognitive and affective responses determine purchase intentions (Smith & Yang, 2004). Prior research notes that cognitive elaboration leads to the strengthening of attitudes (Tesser, 1978); this will also result in a positive effect on brand attitude and purchase intention. The optimal-arousal theory offers further guidance in this regard. For instance, the theory suggests that environmental stimuli driven arousal resulting in information processing can lead to exploratory behaviors (Picard et al., 2016). In store environment situations, a creative packaging that arouses curiosity and motivation to process is likely to lead to exploratory behavior. Since the packaging is designed to be persuasive, we posit that such processing will likely have a positive influence on response measures, such as brand attitude and purchase intention. The positive effects will be stronger among highly creative cues as compared to cues low in creativity, due to the greater processing needed for the former. Hence, it is posited that:

*H6a: Higher motivation to process will lead to a positive brand attitude; this effect will be stronger for packaging that is high (vs low) in creativity.*

*H6b: Higher motivation to process will lead to higher purchase intentions; this effect will be stronger for packaging that is high (vs low) in creativity.*

Fig. 1 below presents the hypothesized relationships.

## 3. Methodology

### 3.1. Pre-study 1 – selection of creative packaging design

In order to create variation in the creativity associated with highly creative and less-creative packaging, we conducted two pre-studies. The first pre-study involved 6 people from creative industries including 2 advertising agencies executives, 2 music industry executives, and 2 academic experts in advertising and marketing. The team was asked to suggest industry choices as well as select 10 creative and 10 less-creative packages. After careful deliberations, the team agreed on music album covers.

Music album covers offer a viable product packaging choice for the

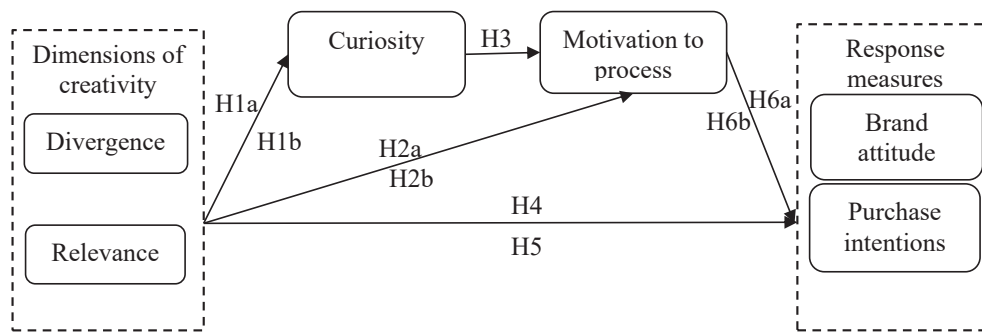


Fig. 1. Conceptual Model.

study setting, given that the covers are the first and foremost product packaging cue that customers come across at the time of browsing and purchase. Music albums are bought almost in equal proportions, physically in-store as well as downloaded digitally, for instance, the recent US sales figures of US\$ 376 million in-store as compared to digital downloads of US\$ 351 million (Friedlander, 2020). Album covers are omnipresent, providing different levels and types of cues about the product inside. Moreover, the talents of illustrators and photographers from both within and outside of the music industry are used to endorse a considerable array of memorable LP/CD covers. A number of world-renowned graphic artists and illustrators such as Andy Warhol (The Velvet Underground & The Rolling Stones), Jamie Reid (The Sex Pistols), H.R. Giger (ELP & Debbie Harry), and Shepard Fairey (Johnny Cash) have applied their creative talent to design notable music packages. Numerous record covers have used images licensed from artists of the bygone eras. A well-known example is the cover of Derek and the Dominoes Layla (from the painting “La Fille au Bouquet” by French painter and sculptor Emile Theodore Frandsen de Schomburg), the cover of their debut album Kansas, adapted from a mural by painter John Stuart Curry. Coldplay’s Viva La Vida, which features a Delacroix painting Liberty Leading the People (in The Louvre) with the words VIVA LA VIDA, is another example. Thus, given the considerable variety of creativity on hand, music album covers were deemed as appropriate product packaging choice for the study.

### 3.2. Pre-study 2 – selection of final packaging designs

For the second pre-study, the team selected 10 creative and 10 less-creative packages. This pre-study involved 30 randomly selected customers who were exposed to the 20 selected music album covers. Following the qualitative, quantitative-based steps were taken to decide on the final choice of creative and less-creative album covers. For the quantitative measure, a three-item scale by Smith et al. (2007), relating to the global measures of overall creativity, was used. The items included, “in general, the cover is very creative”, “the cover should win an award for creativity”, “the cover is not very inventive and displays little creativity (R)”. The creative album covers scored significantly high (Mean = 5.93, SD = 0.56) than less-creative album covers (Mean = 3.10, SD = 1.04).

We removed band name and any text-based information on album covers to avoid the confounding effects of other stimuli on customers’ thinking process. The respondents were specifically asked if they remembered the album cover, and if so, associate a band or music company promoting the same. Such album covers were removed from the process to reduce the bias. In total, 3 respondents were able to identify 2 album covers. These responses were removed from the final analysis. The respondents were asked to rate each of the album covers for their overall creativity. The rating scale items were adopted from Smith et al. (2007).

On the basis of the pretest, the two most creative and two least creative album covers were chosen for the final study by averaging the

constructs and using the mean score. The two most creative album covers had a score of Mean = 6.37 and 6.24, SD = 1.64 and 1.19 and the two least creative album covers had a score of Mean = 2.01 and 2.20, SD = 1.24 and 1.15. The customers’ choice of creative and less-creative album covers overall resembled that of the experts, as the correlation between the customer and expert ratings for creative album covers was 0.55 ( $p < 0.01$ ) and the less-creative album covers was 0.57 ( $p < 0.01$ ).

### 3.3. Final study

We pre-tested the final questionnaire ( $n = 14$ ) and refined it based on respondent feedback about the item clarity and representativeness. A self-administered structured questionnaire was used to measure and validate the hypothesized relationships. We collected the data in two cities in Southeast England through mall intercept over five weeks. To make the final sample representative and reflecting the population, the survey team’s location, day, and time were rotated during the period of data collection. More than 950 customers were contacted at shopping locations on high streets. Once a customer agreed to participate, they were first shown either the creative or less-creative album covers, as selected above. The customers were then asked to complete the self-administered structured questionnaire. The questionnaire was divided into two parts. The first part comprised of the scale items (see Table 1) relating to each of the constructs and the second part related to the customer’s socio-demographic information. In total, 457 customers agreed to participate in the study. After cleaning the data, the final usable sample for high creative cues was 201, and for less-creative cues 196, representing a cumulative response rate of 41.68%.

### 3.4. Measures

The scale items used to measure the latent constructs are presented in Table 1. We adopted the measures for divergence, relevance, and overall creativity from Smith et al. (2007). The items for the curiosity scale were adopted from Kashdan, Rose, and Fincham (2004). The scale items for the process and response measures were adopted from Smith et al. (2007).

The items used to measure the latent constructs with their representative factor loadings, construct composite reliability (CR), and average variance extracted (AVE) are shown in Table 1. The factor loadings, CR, and AVE values for all constructs and items were above recommended levels suggested by Bagozzi and Yi (1988). The squares of factor loadings for all items were above 0.5, satisfying the criteria for convergent validity. Test for discriminant validity was assessed following Fornell and Larcker (1981); this criterion was met by all variables in the study (Table 2). Furthermore, the CR values above 0.7 or very close for all constructs also provided strong evidence of reliability.

### 3.5. Analysis and results

We tested our hypothesized relationships using a maximum

**Table 1**  
Measurement scale items.

Scale items	Less-creative			High-creative		
	Factor loading	CR	AVE	Factor loading	CR	AVE
<i>Divergence</i>		0.68	0.48		0.72	0.55
The album cover is “out of the ordinary”.	0.71			0.62		
The album cover is different.	0.64			0.79		
The album cover is uncommon.	0.58			0.62		
<i>Relevance</i>		0.76	0.60		0.86	0.79
The album cover is very meaningful.	0.88			0.88		
The experience provided by the album cover is relevant to me.	0.57			0.79		
The album cover is valuable.	0.61			0.84		
The album cover is appropriate.	0.67			0.56		
<i>Motivation to process</i>		0.74	0.56		0.72	0.50
The album cover created a strong desire in me to examine it.	0.69			0.59		
I was highly motivated to see this album cover.	0.61			0.67		
The album cover forced me to understand the design further.	0.75			0.59		
The album cover made me very interested.	0.54			0.64		
<i>Curiosity</i>		0.68	0.54		0.69	0.56
The album cover made me curious.	0.88			0.88		
The album cover interrupted my regular thought process.	0.53			0.55		
<i>Brand attitude</i>		0.90	0.87		0.95	0.94
The album cover will affect your attitude towards the band.	0.95			0.96		
What is your overall evaluation of the album cover?						
... Good/Bad	0.88			0.92		
... Unfavorable/ favorable (R)	0.76			0.90		
<i>Purchase intentions</i>		0.73	0.58		0.73	0.57
What is the probability that you will purchase the album after recognizing this album cover?						
... Unlikely/likely (R)	0.79			0.79		
... Improbable/ probable (R)	0.75			0.73		
... Possible/ impossible	0.52			0.53		
<i>Fit statistics</i>						
$\chi^2$ (df)	130.54	(124)		148.31	(124)	
GFI	0.94			0.93		

**Table 1 (continued)**

Scale items	Less-creative			High-creative		
	Factor loading	CR	AVE	Factor loading	CR	AVE
RMSEA	0.016			0.033		
NNFI	0.99			0.99		
CFI	0.99			0.99		

(R) = Reverse coded item.

likelihood simultaneous estimation procedure using LISREL 8.8. To measure the effects of highly creative vs. less-creative extrinsic cues, we specified two nested models. Firstly, a restricted model was run with the  $\gamma$  parameters fixed at zero. Second, an unrestricted model was run in which the  $\gamma$  parameters originally fixed at zero were freed. As shown in Table 3, moving from a restricted to an unrestricted model resulted in a decrease in chi-square of 24.53, with an associated 7 degrees of freedom. The improvement in fit is significant at  $p < 0.001$ . Moreover, the other fit measures including root mean square error of approximation (RMSEA) also improved, suggesting that the unrestricted model is superior to the restricted model.

As Table 3 demonstrates, the overall fit of the unrestricted structural model was good. The GFI was greater than the recommended level of 0.90. The GFI and RMSEA values were within the recommended limits, representing a high fit of the model. Furthermore, the CFI value was satisfactory ( $>0.9$ ), representing an incremental fit of the model. The chi-square statistic was significant at  $p < 0.01$  level. Thus, for the fit of all measures, the unrestricted model satisfactorily meets the criteria to determine the goodness of fit for the model. Table 4 reports standardized parameter estimates and their t-values for the structural model.

Table 4 shows that the relationship between divergence and curiosity is stronger for highly creative packaging ( $\beta = 0.35, p < 0.001$ ) than less-creative packaging ( $\beta = 0.15, p < 0.05$ ). We carried out a Chow test to determine whether the influence of divergence on curiosity was significantly different between these packaging. There was a significant difference between the groups ( $F(2, 395) = 37.63, p < 0.001$ ), thus, H1a was supported. H1b was also supported as the positive relationship between relevance and curiosity was found to be stronger in the case of highly creative packaging ( $\beta = 0.31, p < 0.001$ ) than in less-creative packaging ( $\beta = 0.19, p < 0.001$ ). This was also confirmed by conducting the Chow test ( $F(2, 395) = 68.52, p < 0.001$ ).

The relationship between divergence and motivation to process was found to be stronger for less-creative packaging ( $\beta = 0.26, p < 0.001$ ) than highly creative packaging ( $\beta = 0.17, p < 0.01$ ). Further, the Chow test showed the difference to be significant ( $F(2, 395) = 4.41, p < 0.05$ ), thus, suggesting a reversal in the relationship. H2b was supported ( $F(2, 395) = 17.42, p < 0.001$ ) as relevance had a significantly greater influence on motivation to process for highly creative packaging ( $\beta = 0.21, p < 0.001$ ) than less-creative packaging ( $\beta = 0.10, p > 0.05$ ). Moreover, as hypothesized in H3, curiosity had a stronger influence on motivation to process in the presence of highly creative packaging ( $\beta = 0.27, p < 0.001$ ), than less-creative packaging ( $\beta = 0.20, p < 0.001$ ) and the difference was significant as per the Chow test ( $F(2, 395) = 3.63, p < 0.05$ ). Hypothesis 4a was not supported as divergence did not have a direct influence on brand attitude in high creative or less creative conditions. While H4b was partially supported as divergence had a significant influence on purchase intentions in high creative ( $\beta = 0.14, p < 0.05$ ) and less-creative ( $\beta = 0.31, p < 0.01$ ) packaging conditions. However, similar to H2a, a reversed relationship was observed based on Chow test results ( $F(2, 395) = 26.58, p < 0.001$ ). Regarding H5a, support was observed as brand attitude was significantly influenced by relevance in the highly creative packaging condition ( $\beta = 0.20, p < 0.01$ ) than in the less-creative packaging condition ( $\beta = 0.09, p > 0.05$ ). The Chow test results confirmed the significant difference ( $F(2, 395) = 53.17, p < 0.001$ ). Similarly, for H5b, it was observed that highly creative relevant packaging led to a higher purchase intention ( $\beta = 0.88, p$

**Table 2**  
Correlation matrix and scale properties.

Correlation matrix	Divergence	Relevance	Motivation to process	Curiosity	Brand attitude	Purchase intentions
Divergence		0.32	0.47	0.45	0.31	0.15
Relevance	0.46		0.48	0.38	0.31	0.15
Curiosity	0.60	0.27		0.64	0.65	0.32
Motivation to process	0.39	0.26	0.43		0.41	0.20
Brand attitude	0.45	0.26	0.44	0.40		0.25
Purchase intentions	0.17	0.07	0.10	0.13	0.07	
Highly creative sq. rt. AVE	<i>0.74</i>	<i>0.89</i>	<i>0.71</i>	<i>0.75</i>	<i>0.97</i>	<i>0.75</i>
Less-creative sq. rt. AVE	<i>0.69</i>	<i>0.78</i>	<i>0.75</i>	<i>0.74</i>	<i>0.93</i>	<i>0.76</i>

Note: Highly creative correlation matrix provided in the lower left half of the matrix; less-creative correlation matrix provided in the upper right half of the matrix. The last two rows in italics provide the square root of average variance extracted (AVE) for high-creative and less-creative constructs respectively.

**Table 3**  
Comparison of restricted and unrestricted structural models.

	Chi-sq	df	RMSEA	NNFI	GFI	Chi-sq/df
Restricted model	384.75	290	0.040	0.98	0.98	1.32
Unrestricted model	360.22	283	0.037	0.98	0.98	1.27

**Table 4**  
Path coefficients.

	Hypothesis	Less-creative Std. Est.	High-creative Std. Est.
Divergence → curiosity	H1a	0.15*	0.35***
Relevance → curiosity	H1b	0.19***	0.31***
Divergence → motivation to process	H2a	0.26***	0.17**
Relevance → motivation to process	H2b	0.10	0.21***
Curiosity → motivation to process	H3	0.20***	0.27***
Divergence → brand attitude	H4a	0.17	0.12
Divergence → purchase intentions	H4b	0.31**	0.14
Relevance → brand attitude	H5a	0.09	0.20**
Relevance → purchase intentions	H5b	0.06	0.88***
Motivation to process → brand attitude	H6a	0.22***	0.35***
Motivation to process → purchase intentions	H6b	0.26*	0.44**

Relationship is significant: \*\*\* at  $p < 0.001$ ; \*\* at  $p < 0.01$ ; \* at  $p < 0.05$ .

< 0.001) than less-creative packaging ( $\beta = 0.06$ ,  $p > 0.05$ ). Further, the difference was significant based on Chow test ( $F(2, 395) = 3.78$ ,  $p < 0.05$ ).

The effect of motivation to process on brand attitude was significant in the highly creative packaging ( $\beta = 0.35$ ,  $p < 0.001$ ) as well as less-creative packaging ( $\beta = 0.22$ ,  $p < 0.001$ ). The Chow test results confirmed that the effect was stronger in highly creative packaging condition ( $F(2, 395) = 38.80$ ,  $p < 0.001$ ), thus, supporting H6a. Similarly, H6b was also supported as the effect of motivation to process on purchase intentions was stronger ( $F(2, 395) = 3.58$ ,  $p < 0.05$ ) for highly creative packaging ( $\beta = 0.88$ ,  $p < 0.001$ ) than in less-creative packaging ( $\beta = 0.88$ ,  $p < 0.001$ ).

To further examine the serial mediation of curiosity and motivation to process on the relationship between dimensions of creativity and response measures, we examine the indirect effects through PROCESS Model 6 (Hayes, 2013). All indirect effects were significant supporting the robustness of the serial mediation. The effect of divergence on purchase intentions was serially mediated by curiosity and motivation to process ( $\beta = 0.07$ , BoostSE = 0.03; CI 95% [0.02, 0.13]). Similar results were observed for relevance dimension as well ( $\beta = 0.08$ , BoostSE = 0.03; CI 95% [0.03, 0.13]). Additionally, serial mediation was observed for brand attitude with regards to both divergence ( $\beta = 0.05$ , BoostSE = 0.01; CI 95% [0.03, 0.07]) and relevance dimensions ( $\beta = 0.06$ , BoostSE = 0.01; CI 95% [0.04, 0.08]).

#### 4. Discussion and implications

Brands often use creative packaging as an important marketing tool to influence customer choices (Deloitte 2015; Togawa et al., 2019). However, research comparing high versus less creative packaging and its impact on customer persuasion (i.e., curiosity), process (i.e., motivation to process), and response measures (i.e., behavioral intentions) is sparse (e.g., Hubert et al., 2013). Our study highlights the effects of different levels of creativity in packaging used by retail brands. Grounded in the optimal arousal theory, we extend prior research by confirming how creative packaging can be employed toward beneficial outcomes, through illustrating its effects on customer decision making focusing on process, response, and persuasion measures. Furthermore, we identify a sequential mediating effect of curiosity and motivation to process in order to explain customer responses to brand attitudes and purchase intention. Our findings make novel contributions to knowledge and provide actionable guidelines for the effective use of retail packaging, as discussed below.

##### 4.1. Theoretical contributions

Our research makes several important theoretical contributions. First, we address concerns by scholars that creativity is not only about being perceived as extraordinary (Baack et al., 2008; Rundh, 2016). By examining creativity beyond the notion of extraordinary and exploring the differential effects of the levels of creative packaging on persuasion, process, and response measures, our research provides novel perspectives on the use of creativity in packaging, highlighting creativity as a continuum rather than an exception.

Second, our research focuses on two important dimensions of creativity, namely divergence and relevance. Our findings offer new insights on the influence of divergence and relevance on persuasion measure of curiosity, and responds to calls from scholars for linking creativity and persuasion measures (e.g., Smith et al., 2007). The findings demonstrate that highly creative (divergent) cues make customers curious. However, if the cue is less creative, divergence does not kindle the same level of curiosity. This result shows that customers process divergence-driven creative packaging differently, depending upon the level of creativity. Packaging high on creativity leads to higher levels of stimuli that stand out in terms of originality and imaginativeness, whereas those low on creativity do not generate the same amount of curiosity. The concept of relevance relates to customer involvement and the interpretation of meaningfulness of cues (Hubert et al., 2013). The elements containing stimulus characteristics create meaningful links that are interpreted by customers in their buying contexts. Our results show that relevance significantly influences curiosity in both high and low creativity contexts. Therefore, when the packaging cues are perceived as meaningful, they can generate curiosity in both high and less creative contexts. However, the more meaningful and highly creative packaging leads to greater curiosity. This differential impact of relevance is particularly important in the retail context where customer involvement is often relatively low.

Similarly, the influence of creativity dimensions on process measures is also noteworthy. While highly creative packaging can generate curiosity, highly divergent packaging seems to deter customers from processing the packaging cues. Our findings reveal that when the divergence element of creativity is high, packaging lower in creativity leads to greater motivation to process. This unique outcome is explained through the interactive effects of cognitive effort, arousal and performance. In psychology research, the cue-utilization theory suggests that at higher levels of emotional arousal, the performance or motivation to attend and process the stimuli decreases (Easterbrook, 1959). The above inverted U-shaped relationship between arousal and performance follows the Yerkes-Dodson law on mental arousal and indicates that a lower level of emotional arousal may lead to a favorable outcome in the form of greater motivation to process the presented information (e.g., see Yerkes & Dodson, 1908; Hanoch & Vitouch, 2004). This is particularly relevant in retail settings wherein customers have little time (Reyhle, 2020) to process the creative packaging. Thus, when a customer is exposed to a highly divergent packaging that is original and requires substantial cognitive effort for processing, the customer may experience a high level of arousal. However, as suggested by the Yerkes-Dodson law, they may not process the packaging information, due to the cognitive effort required in the constrained and competitive retail environments. Earlier studies on advertising creativity (Smith & Yang, 2004; Smith et al., 2007) have suggested the significant impact of divergence on motivation to process. When the setting changes from viewing an advertisement to retail shopping, however, the impact of creativity changes. In the retail context, customers have less time to process the cues due to various social and environmental pressures. Furthermore, there are several competing alternatives available on the shelf in most product categories. A highly divergent cue requires extra attention and time to process the information due to its originality and innovativeness when customers are hard pressed for time in a retail setting. This may lead customers to avoid processing highly divergent creative cues in order to simplify their overall buying process, relying upon existing heuristics.

On the other hand, the relevance dimension of creativity shows a differential impact. If the highly creative packaging is meaningful and relevant, the increased arousal seems to work in favor of the packaging (Baccarella et al., 2021). We believe that the increased arousal caused by highly creative packaging coupled with easier interpretation, leads customers to process the information. In contrast to Lehnert et al. (2014), this study provides evidence to support both divergence and relevance as two distinctive dimensions of creativity. When the highly creative packaging cue is appropriate, meaningful and valuable to the context, it increases the overall motivation to process.

Third, our results are in contrast to Chen et al. (2016) and Billore et al. (2020), where highly divergent and relevant advertisements lead to a greater interest, attitude, and purchase intentions. In the retail setting, our results show varying effects. For instance, our findings highlight that divergence does not influence brand attitude, however, relevance does. Moreover, when the divergence cue is employed for less creative packaging, it has a significant influence on purchase intentions. In contrast, relevance influences purchase intentions significantly in highly creative packaging contexts. The differential impact of creativity dimensions on response measures, in comparison to the advertising domain, is another contribution to the field, by establishing the functioning of creativity effects in retail settings.

Fourth, our research corroborates earlier research that process measures have a strong correlation with response measures (Sundar & Noseworthy, 2014; Togawa et al., 2019). Our findings add to knowledge by showing that in the presence of creative packaging, process measures have a significant relationship with response measures. The findings further highlight that in a cluttered retail marketplace if a customer is motivated to process a creative cue like packaging, there is a greater chance that it will lead to a favorable brand attitude and boost overall purchase intentions.

#### 4.2. Managerial implications

Creative packaging has become a crucial element in consumer decision-making; the visual appeal of packaging design motivates consumers to process marketing messages (Chen, 2021). The importance of creative packaging is widely acknowledged by retailers and managers across industries. Managers need to understand which type of creative packaging will be appreciated the most and could lead to a stronger brand attitude and purchase intention. This is particularly important for industries such as FMCG wherein consumers form their attitudes and make purchase decisions on the spur of a moment. Our research offers practical implications to retailers, brand managers, and packaging designers addressing these challenges.

The findings demonstrate the importance of the relevance dimension when developing a communication strategy. Thus, managers and retailers who aim to motivate their customers to process their packaging are advised to use originality and novelty elements of creativity in moderation. Extremely original and novel packaging may not lead customers to process the packaging cues, and thus the significant investment and effort made by the firm may not pay off. On the other hand, we advise retail managers and packaging designers to increase their attention on making their packaging as meaningful and personally relevant to their customers to increase motivation to process. This is crucial for products such as packaged food, grocery, and non-grocery products, that vie for customers' attention at shelf level in the highly competitive supermarket space.

Furthermore, our finding relating to the impact of persuasion measure on customer responses is crucial when we consider the overall impact of creativity. In the presence of a creative extrinsic cue such as packaging, customers become more curious and in turn, are more inclined to process the stimuli. Therefore, managers should apply an optimal level of creative cue for not only its originality and relevance but also its ability to generate curiosity in the recipients. We suggest managers attempt developing highly creative packaging to not lose sight of the meaningfulness and personal relevance that packaging brings to the customers.

#### 4.3. Limitations and future research directions

The limitations of our study also provide directions for further research. While the customers may be exposed to multiple genres of music in a music store, most stores carry a limited breadth of product ranges. Therefore, further studies could be conducted in multiple product retail environments such as superstores. Our study investigated the global measures of divergence and relevance; the extended sub-constructs of divergence and relevance could be explored as suggested by Smith et al. (2007) in future studies. Similarly, other response, process, and persuasion measures could be taken into consideration.

Given the increasing trend of online shopping, future studies can further expand this field by examining the impact of varying creative cues on online shopping behavior. In addition, the social media-driven consumption debate also offers a vibrant platform for future studies in examining the impact of creativity on sharing behavior. Future studies may also examine the interaction effects between the various constructs and the moderating role of socio-demographics. It would be interesting to examine the effect of creativity and related measures on customers at different cognitive learning and response stages. Similarly, a study validating the above constructs in a cross-national environment is recommended.

#### CRediT authorship contribution statement

**Paurav Shukla:** Conceptualization, Data curation, Writing – original draft, Writing – review & editing, Methodology, Validation, Formal analysis. **Jaywant Singh:** Conceptualization, Data curation, Writing – original draft, Writing – review & editing, Methodology, Validation,



Formal analysis, Supervision. **Weisha Wang:** Writing – review & editing, Methodology, Validation.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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