Made by Mistake? The Co-creation Paradox: An Abstract

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ABSTRACT

Extant research suggests that co-creation is an important strategy used by companies to improve consumer buying intention. This research extends prior research by revealing a dual effect of co-creation (co-creation paradox): although co-creation increases the buying intentions, it reduces consumers’ visual attention - a factor that might explain recurrent mistakes in the co-creation process. In this way, we examined the role of construal level and deindividuation as moderators of co-creation effects on visual attention and buying intentions. Managers may be able to overcome the co-creation paradox by activating consumers’ concrete (vs. abstract) mindset, and by reducing deindividuation to sustain the positive effects on buying intentions. This research contributes to the literature revealing the not yet explored negative effects of co-creation on visual attention and suggesting ways to avoid this effect.

Keywords: visual attention, eye-tracking, co-creation, deindividuation, buying intentions.
INTRODUCTION

Co-creation is an increasing phenomenon in business research and practice, in which companies invest to increase consumers’ engagement and attention (Alves et al., 2016). Major companies like Lego, Nike, and Harley-Davidson, have made continuous efforts to strengthen ties with their consumers through co-creation actions that include the active participation of these individuals in the development of new products and services. Campaigns such as Dove’s “Speak Beautiful” or Whirlpool’s “Everyday Care Project” uses co-creation to specific actions to the launch of new products and services. DHL’s “Smart Glasses” was created through more than 6,000 co-creation actions, improving the inventory and warehouse efficiency by 25% (Crandell, 2016).

Despite the acknowledged positive outcomes of co-creation in the literature (e.g., product sales, buying intentions), research shows mixed findings on the effects of co-creation. For instance, while previous research suggests that co-creation practices can lead to higher buying intentions it can also have negative effects such as reduced brand evaluations and dissatisfaction with the co-creation outcomes (Chang & Taylor, 2016). A question that arises, thus, is “Why some co-creation actions work and others fail?” One of the factors recognized in the literature is mistakes, derived from incorrect assumptions in the interaction (Rasoulian et al., 2017). In this sense, when being involved in a co-creation process, the customer cannot allocate sufficient level of attention to the process because of their expectation that the company's liability will fail. In this context, visual attention during co-creation tasks may reveal such a phenomenon.

Visual attention is a key variable when consumers choose a product (in the store or online) and might be able to demonstrate consumers’ engagement in the buying process using eye-tracking. It is possible that the negative effects of co-creation may derive from a common factor: consumers – after exposed to co-creation activities – may reduce their engagement to the outcomes of the process (i.e., new co-created product) that can be measured by the visual attention. In four experimental studies using eye-tracking and online panels, we investigate the effects of co-creation on visual attention and buying intentions. This research builds on four streams of literature – namely, co-creation (Vargo & Lusch, 2004), visual attention (Pieters & Wedel, 2004), construal level theory (Liberman & Trope, 1998) and deindividuation (Postmes & Spears, 1998) – to shed light on conditions under which is possible to mitigate the negative impact of co-creation on consumers’ visual attention and maintain the positive effects on consumers’ buying intentions.

By doing so, this research makes important contributions to the literature on co-creation. First, we establish a theoretical link between co-creation and visual attention by demonstrating that while consumers have higher buying intentions towards co-created products, it leads to reduced visual attention (Study 1). We call this effect the co-creation paradox. Second, we explore the moderating role of construal level on the relationship between co-creation and visual attention (Study 2). Construal level theory proposes that people engage in actions according to different levels of construal: abstract versus concrete (Liberman & Trope, 1998). We contend that consumers in abstract construal may decrease their visual attention towards co-created (control) products. That is because people in abstract (vs. concrete) construal form representations of an object that retain only central aspects, omitting specific and detailed information (Liberman & Trope, 1998), reducing consumers’ visual attention. Third, we show the moderating role of deindividuation on the cocreation-visual attention relationship (Study 3). Deindividuation theory proposes that people act as if they immersed in the group, reducing self-perception and adhering to the community (Postmes & Spears, 1998). In this sense, we postulate that low
deindividuation states increase the personal responsibility of co-creators and mitigate the negative on visual attention. Finally, with an online panel (Study 4) we evaluate the interaction effects of deindividuation and construal level on the cocreation-buying intentions relationship.

THEORETICAL BACKGROUND

2.1 The Co-creation Paradox

Consumer co-creation is a collaborative new product development activity in which consumers actively contribute and/or select the content of a new product offering. Co-creation can help companies to identify consumers’ needs (Vargo & Lusch, 2004) and lead to sustainable competitive advantage. Co-creation implies that consumers are active resources integrated into the creation of value, instead of mere recipients of the products and services offered by organizations (Vargo & Lusch, 2016).

However, while the positive effects of co-creation literature are abundant, little research analyzed the possible negative effects of co-creation. For example, co-creation can reduce the control of managers and increase complexity for stakeholder management (Knudsen & Mortensen, 2011). Co-creation can cause a negative effect on profitability and market growth. Furthermore, previous research suggests that co-creation practices can lead to lower new product performance (Chang & Taylor, 2016). Plé and Cáceres (2009) purpose a formal definition of the concept “co-destruction” to express the risks involved in the interactions between companies and customers. The negative effect of co-creation can be explained by the reduction of attention for details of such products once consumers engaged in co-creation activities already has an idea of the expected outcomes of the process. Thus, visual attention can be examined to understand this effect.

2.2 Co-creation and Visual Attention

Visual attention is a physiological response – measured through the ocular behavior of saccades and fixations – that can be used to evaluate brain operations in information processing (Pieters & Wedel, 2004). Marketing studies, for example, use eye-tracking to evaluate how customers process visual stimuli how package features affect visual attention (how customer’s visual attention is influenced by shopping goals, and how price influences visual attention (Chandon et al., 2009; Wastlund et al., 2015).

When companies engage the consumer in the process of co-creation, they expect that it should increase their commitment to the company, increasing buying intentions. The company’s expectation is that consumers participating in co-creation activities can transfer valuable information to build products more suitable to the recipients, increasing consumers’ buying intentions. However, we propose that by co-creating a product, consumers may automate their perceptions and be less attentive to details of those products, once they consider that their preferences were recognized by the company since they are receiving the most favorable product. This factor, capable of being expressed by decreasing the time of total visual fixations may reduce consumers’ visual attention to product details by limiting their contribution to the development of new products and explaining different preliminary results. More formally, we propose that:

\[ H_{1a}: \text{Co-creation will have a negative impact on visual attention.} \]
**H1b:** Co-creation will have a positive impact on buying intentions.

2.3 The Moderating Role of Construal level

Construal Level Theory (CLT) has the central premise that any action can be viewed at different levels of abstraction (Trope & Liberman, 2010). Abstract construal (or high-level construal) involves a loss of specific features of an object and suggests “why” any action is performed. In contrast, concrete construal (or low-level construal) involves specific details, suggesting “how” action is performed (Henderson, 2013). Previous research shows that construal level moderates different facets of consumer behavior, such as behavioral choices, behavioral persistence, and consumer attitudes.

We propose that construal level moderates the effects of co-creation on visual attention and buying intentions. We argue that the effects of co-creation on visual attention can be explained by consumer’s construal level, that is, by the level of construal that consumer was involved in the co-creation process. Consumers in abstract construal (or primed with “why” mindsets) will tend to analyze more general and broad features of the co-created products, thus having less visual attention to the co-creation outcomes. In contrast, consumers in concrete construal (or primed with “how” mindsets) will tend to analyze specific and detailed information about the co-created products, thus having more visual attention to the co-creation outcomes. In addition, in the abstract construal, they focus on the desirability of the activity, whereas in the concrete construal, consumers focus on the feasibility of an activity. Therefore, we suggest that consumers may increase their buying intentions when they focus on the desirability of the co-creation outcomes but decrease their buying intentions when focusing on the feasibility of the co-creation outcomes. More formally, we propose that:

**H2:** Construal level will moderate the relationship between co-creation and consumer outcomes

- **H2A:** Concrete (abstract) mindset will reduce (increase) the negative effect of co-creation on consumers buying intentions.
- **H2B:** Concrete (abstract) mindset will reduce (increase) the positive effect of co-creation on consumers buying intentions.

2.4 The Moderation Role of Deindividuation

Deindividuation is a psychological condition that conduces people to act differently depending on they operate in an individual way or a social one (Postmes & Spears, 1998). In this sense, the crowd constitutes a single collective being guided by a mental unity that makes us feel, think and act differently than what each of us would do alone. This distinction is relevant since the “fell part of the group” can change the main effect of co-creation practices on buying intentions.

Although marketing research shows the effects of groups on consumption standards and the literature has demonstrated the deindividuation effect on conformism to group (Postmes et al, 2002), on antinormative behaviors and on prosocial behavior the effect of deindividuation on consumer behavior received less attention. Especially where companies search to integrate customers around in a community – through practices such as co-creation – is possible that the perception of “be part” of the group (reducing the individual sense) reinforce the positive effects on buying intentions. At the same time, it is expected that immersion in a group and consequent loss of individuality of the consumer (individuation) will be a decisive condition.
for the reduction of their observation capacity, thus reducing the visual attention to the practice. Stated formally,

\( H_3: \) Deindividuation moderates the effect of co-creation on consumer outcomes.
\( H_{3a}: \) High (low) levels of deindividuation will mitigate the negative effect of co-creation on consumers’ visual attention
\( H_{3b}: \) High (low) levels of deindividuation will increase (decrease) the positive effect of co-creation on buying intention

Figure 1 presents the conceptual framework of co-creation effects on visual attention and buying intentions

![Figure 1. Co-creation Effects on Visual Attention](image)

**OVERVIEW OF STUDIES**

The current research consists of four experimental studies using eye-tracking and online panel to test the proposed model. Study 1 explores the effects of co-creation (vs. control) on consumers’ visual attention and on buying intentions, providing preliminary evidence for \( H_{1A} \) and \( H_{1B} \) respectively. Study 1 used a food packaging as context to analyze the influence co-creation (i.e., packaging created by the participant), compared to the control condition, in reducing visual attention and increasing buying intentions. Study 2 provides additional empirical evidence for \( H_{1A} \) and \( H_{1B} \) and further refines our theory by demonstrating the moderating role of construal level on the co-creation effects. In particular, it establishes that visual attention depends not only on co-creation but also on consumers’ salient construal level revealing that concrete (vs. abstract) construal can mitigate the negative effects on visual attention (\( H_{2a} \)). Study 3 advances the analysis by testing the role of participants deindividuation during the execution of tasks. In this sense, we identify that low levels of deindividuation can mitigate the negative effects generated by co-creation in visual attention (\( H_{3a} \)). Finally, study 4 uses an online panel to evaluate the moderating effects of construal level (\( H_{2b} \)) and deindividuation (\( H_{3b} \)) on the relationship between co-creation and buying intentions. Study 4 shed light on the negative aspect of concrete (vs. abstract) construal, revealing the “neutralization” of co-creation positive effects on buying intentions. At the same time, study 4 reinforces the positive effects of deindividuation in this context. Taken together, the set of findings support the co-creation effects on visual attention and on buying intentions that are consistent with our theoretical account and the important moderating role played by construal level in co-creation initiatives.

**RESULTS AND DISCUSSION**
3.1 Study 1: The Effect of Co-creation on Visual Attention and Buying intentions

The objective of Study 1 is to test our co-creation paradox prediction: co-creation (vs. control) reduces visual attention (H1A) and increases buying intentions (H1B). We test our prediction by analyzing the influence of a milk powder packaging created by the participant (co-creation condition) on visual attention and buying intentions in comparison to a control condition. Eighty-two undergraduate students (53.7% male; M age 27.5, SD = 7.49) from a major university volunteered to take part in the study and were not paid. Study 1 uses a one-factor between-subjects design with two levels of co-creation (co-creation vs. control). We used a screen-based Tobii eye tracker (Tobii Pro X3-120) with a high frequency (120 Hz) to collect the data. Each participant was asked to sit in front of the monitor with the eye tracker technology. Participants (randomly assigned across experimental conditions) were informed that they were to provide their preferences regarding milk powder packaging. Both groups of participants, either in the co-creation or the control condition, were exposed to the same milk powder packaging image. For both conditions, all instructions and stimuli were presented on the 17-inch TFT monitor in full-color bitmaps with a 1280x1024 pixel resolution.

We measured participants’ visual attention by the total fixation duration within the area of interest (packaging image) – the overall amount of time spent fixating in milliseconds (results reported in seconds) – as in previous research (e.g. Ares et al., 2014; Behe et al., 2015; Holmqvist et al., 2011; Van der Laan et al., 2015). Buying intentions were measured with a three-items (α = .876; Dodds et al.,1991) seven-point Likert-scale (1-strongly disagree to 7-strongly agree). The items evaluated were: “I would like to buy this powder milk”, “I intend to buy this powder milk”, “I believe that people should buy this powder milk”. To control for other factors that could explain visual attention and buying intentions, we measured appearance importance (single item, Röhr et al., 2005) and subjective knowledge (3 items, α = .917; Flynn & Goldsmith, 1999) across a seven-point Likert-scale (1-strongly disagree to 7-strongly agree). Participants evaluated “The product appearance is important to me for food purchase” for appearance importance, and “I know a lot about food”, “In my circle of friends, I am a food expert”, and “Compared to most other people, I know a lot about food” for subjective knowledge. The final part of the questionnaire gathered demographic information.

Results from one-way ANOVAs show that co-creation had a main effect on visual attention ($F_{(1,80)} = 6.32; p < .05$) and on buying intentions ($F_{(1,80)} = 32.17; p < .001$). Specifically, participants in the co-creation condition had less visual attention within the area of interest than those in the control condition ($M_{co-creation} = 10.59$ and $M_{control} = 12.76$), providing support for H1A. Moreover, participants in the co-creation condition declared higher buying intentions in comparison to those in the control condition ($M_{co-creation} = 4.32$ and $M_{control} = 2.72$), supporting H1B. Figure 2 shows the results in study 1.
One-hundred sixty-seven undergraduate students (53.9% male; \( M_{\text{age}} = 25.9, SD = 7.19 \)) take part in the study as volunteers and were not paid. Study 2 followed a 2 (construal level: abstract vs concrete) x 2 (co-creation: co-creation vs. control) between-subjects experimental design. Study 2 used the same Tobii eye tracker as in study 1 to collect the data. Participants were first randomly assigned to one of the two construal level conditions (abstract vs. concrete). Construal level was made salient by using the “why” and “how” mindset task (Laran, 2009). Participants were asked to fill an open-box by answering “why” (abstract condition) or “how” (concrete condition) people pursue academic success. This context was chosen because it is familiar to our sample and is not related to the co-creation task (food product category). After completing the construal level manipulation, participants were assigned to the co-creation conditions (co-creation vs. control). We used the same co-creation task as in study 1.

Participants’ visual attention, appearance importance, and subjective knowledge (3 items, \( \alpha = .908 \)) were measured as in study 1. The manipulation check for construal level consisted of a one-item nine-point semantic differential scale (Laran, 2009). Specifically, participants evaluated whether academic success was construed as concrete (“getting my books, studying hard, and going to classes”) or abstract (“focusing on whom I want to be in my personal and professional life”). Lower scores relate to concrete construal, whereas higher scores to abstract construal. Results from one-way ANOVA revealed a main effect of construal level priming on participants’ levels of construal \( (F(1, 167) = 4.80; p < .05) \). Specifically, participants in the abstract condition perceived academic achievement more abstractly than those in the concrete condition \( (M_{\text{abstract}} = 6.78; M_{\text{concrete}} = 6.08) \).

Results from 2x2 ANOVA revealed the proposed interaction effect between construal level and co-creation on visual attention \( (F(1, 161) = 4.46; p < .05) \). Contrasts results showed that participants with salient abstract mindset have lower visual attention to the packaging \( (F(1, 161) = 11.14; p < .001) \) when they co-created the packaging in comparison to those in the control condition \( (M_{\text{co-creation}} = 9.22; M_{\text{control}} = 12.55) \). More interestingly, contrasts results showed that participants with salient concrete construal pay similar visual attention \( (F(1, 161) = 0.13; ns) \) to the packaging they just co-created as those in control condition \( (M_{\text{co-creation}} = 11.60; M_{\text{control}} = 11.96) \). Taken together, the results provide support for H2A. Figure 3 shows the results for visual attention in study 2.

![Figure 3](image_url)
3.4 Study 3 – The moderation role of deindividuation on the co-creation/visual attention relationship

Seventy-two undergraduate students (49.2% male; M\text{age}=27.2, SD = 8.83) take part in the study as volunteers and were not paid. Study 3 followed a 2 (deindividuation: high vs low) x 2 (co-creation: co-creation vs. control) between-subjects experimental design. Study 3 used the same Tobii eye tracker as in studies 1 and 2 to collect the data. Similarly to Study 1, participants enter individually into a lab room every 12 minutes. Participants seated in front of the monitor with the eye tracker technology and, before starting the study, a calibration procedure was performed. After successful calibration procedure (correct eye recognition), participants were informed that they would observe 20 displays with different products (cake mix, washing powder, coffee, yogurt, soda) and should choose one of the brands. The tenth display presented the experimental stimulus (snacks).

Participants' visual attention was measured as in study 1 and 2. The deindividuation was measured by adapting the perceived deindividuation scale (Mikal et al, 2016). As control was measured public and private self-consciousness and socio-demographic characteristics (age, gender, income) of the participants.

Results from 2x2 ANOVA revealed the proposed interaction effect between deindividuation and co-creation on visual attention (F (1,58) = 4.29; p <.01). Stratified comparisons of the model (Hayes, 2013, model, 1, bootstrap 5000) suggested that the negative effects of co-creation for visual attention are mitigated when participants had a high level of deindividuation. In contrast, low deindividuation levels increase the negative effect of co-creation on visual attention. That is: confirming the expectation (H4a) when personalized participants began to maintain their visual attention to the products offered (R² = .0512, p <.05). Figure 4 shows the results.

![Figure 4. The moderation role of deindividuation](image)

3.4 Study 4 – The moderation role of deindividuation and construal level on the co-creation/buying intentions relationship

Two hundred consumers (M\text{age}=37.80; 49.4% female) were recruited through an online panel (Qualtrics) and paid $0.35 for participating in a memory study. Participants were randomly assigned to one of eight conditions in a 2 (cocreation: presence vs absence) x 2 (mindset: concrete vs abstract) x 2 (deindividuation: presence vs absence) between-subjects factorial
Participants start the online experiment under the explicit guise that we were interested in testing the memory and attention. To that end, on cocreate condition participants are invited to test a new system developed for personalized pasta dish. In this sense, participants answer eight questions such as “Would you like to add pepper in your pasta dish?” and “Would you like to add garlic to your pasta dish?” In another way, in control condition participants answer questions about food (pasta) preferences, without the induction that is cocreating the dish. Furthermore, the manipulation of the construal level uses the same procedure as Study 2. For deindividuation induce, participants in the experimental (control) condition were anonymous (identify) and suggested that answers will be analyzed for group (individual) way.

After the manipulations, participants answer questions related to buying intention, collected on a three attitudinal items (“Buy this pasta dish is good”, “I would like to buy this pasta dish in the future” and “I plan to buy this pasta dish in the future”). The same pasta dish picture as show for all participants (appendix D). We evaluate the level of participants' deindividuation with the perceived deindividuation scale (Kim and Park, 2011). Finally, we control the sample for psychological traits (Rammstedt and John, 2007) and sociodemographic conditions.

An analysis of variance on buying intent reinforce the previous findings and show a main effect of co-creation on buying intentions such that buying intent was higher for the co-create pasta (M=6.32) compared with the non-co-created pasta (M = 5.93; F(1,253) = 9.915, p<.05). In support of H2b, pairwise comparisons revealed the interaction between co-creation with participant mindset. While in abstract the co-creation increase the buying intention (Mcontrol = 5.62; Mco-creation=6.42, p<.01) the effect is non-significant when participants is in concrete mindset (Mcontrol = 6.24; Mco-creation=6.24, p=ns). That is: the positive effect of co-creation on buying intention was null when participants are in concrete mindset. Figure 5 shows the results for interaction.

![Figure 5. The moderation effect of construal level](image)

In another way, We predicted that the interaction between co-creation and buying intentions would be moderated by the participant deindividuation (H3b). A analysis of variance show that the increase of deindividuation sustain the effects of co-creation on buying intentions positive (Mcontrol = 5.01; Mco-creation = 5.92, p <.001) although the effect won't occur on the control condition (Mcontrol = 6.45; Mco-creation = 6.56, p <.ns). This finding supports the notion that the community sense of consumers is an important factor to be reinforced by companies when adopting co-creation practices, although, closer examination of results revealed distinct results. In control condition, the significant effect reinforces the support for the H1. In the same way, results offer support for the positive effect of co-creation on buying intention in the
deindividuation condition (M_{co-creation}=6.56; M_{control}=5.92, t=2.002, p>.05). In other words: the presence of deindividuation interaction maintained the positive effects of co-creation on buying intention, in the opposite direction to that identified in the moderation tested for construal level. Figure 6 shows the results for interactions.

**Figure 6.** The moderation effect of deindividuation

**CONCLUSIONS AND IMPLICATIONS**

Across our studies, we demonstrate the dual effect of co-creation (co-creation paradox) by a negative impact on consumers’ visual attention and by a positive effect on buying intentions. By doing so, we show the conditions under which companies using co-creation strategies can increase consumers’ buying intentions without incurring adverse outcome as reduce visual attention, through construal level and deindividuation. Specifically, we show that high levels of deindividuation may reduce co-creation paradox. Our findings generate several theoretical and managerial implications, as well as directions for future research.

This research contributes to the literature in two important ways. First, we extend previous research focusing on the negative effects of co-creation (e.g., Fuchs et al., 2013; Gebauer et al., 2012) by revealing a not yet explored negative effect of co-creation on visual attention. Additionally, we contribute the literature focusing on the positive outcomes from co-creation (e.g., Hoyer et al., 2010; Markovic & Bagherzadeh, 2018; McColl-Kennedy et al., 2017; Verleye, 2015) by demonstrating the increase on consumers’ buying intentions for products they co-created. By doing so, we contribute to the co-creation literature revealing the co-creation paradox effect.

Second, we deepen the understanding of the co-creation paradox by identifying important moderators of this effect. First, the construal level (Trope & Liberman, 2010). We find that abstract construal reinforces the co-creation paradox: the negative influence on visual attention and the positive effect on buying intentions. Conversely, we show that concrete construal appears to attenuate the co-creation paradox, increasing consumers’ visual attention but mitigating the positive buying intentions for the co-created product. Second, deindividuation (Postmes & Spears, 1998). We find that personal deindividuation in the relationship can mitigate the negative effect of co-creation on visual attention without loses for buying intentions. By doing so, we contribute to recent research on co-creation that provided mixed findings regarding co-creation outcomes (e.g., Chang & Taylor, 2016; Gebauer et al., 2013; Heidenreich et al., 2015), but did not provide conditions under which the co-creation paradox could be mitigated.
The managerial implications of our findings are critical for companies investing in co-creation practices. Companies expect positive outcomes from co-creation practices, but that may not be aware of the negative effects regarding visual attention. According to McKinsey (2009), consumers are highly influenced by the visual dimension: up to 40 percent of them change their minds because of something they see in-store (e.g., packaging). In addition, recent market research conducted by Ipsos and Google (2017) indicates that visual attention is a critical consideration for advertisers when deciding where to place their investment in marketing; paid YouTube mobile advertising is 84% more likely to receive visual attention than TV advertising. Our findings provide support for the co-creation paradox effects and also suggest ways for managers to avoid adverse outcomes by (i) activating consumers concrete construal and (ii) increase the deindividuation of participants. Accordingly, we recommend managers investing in co-creation practices to first activate consumers’ sense of community to mitigate the negative effects of co-creation on visual attention. This is particularly relevant for situations where consumers’ visual attention is crucial as advertising, the introduction of a new brand or new products, for example. Companies could, for example, ask consumers to focus on collective anonymous tasks instead of personal idea proposition.

This research has some limitations that may stimulate future research. First, this research primed construal level by “why” (for abstract construal) and “how” mindsets (for concrete construal) (Laran, 2009). Future research may investigate how consumers’ chronic CLT orientation (BIF; Vallacher & Wegner, 1987) or other CLT psychological distances dimensions (e.g., temporal distance) interact with co-creation to affect visual attention and buying intentions. In the same way, deindividuation was measured on a scale. Future research can explore the role of different stimuli to do this such as computer-mediated communication. Second, our studies manipulated co-creation by (i) asking the participant to create a food packaging and (ii) choice a pasta dish. Research on co-creation has analyzed this practice outcomes by considering a co-created product from any consumer, not necessarily those who actually participated in the co-creation activity (e.g., Fuchs et al., 2013). Thus, further research may analyze the impact of different co-creation approaches, such as the self-co-creation (consumers who co-created) in comparison to others-co-creation (general consumers who co-created) on company’s outcomes. Finally, our studies considered as co-creation context a milk powder packaging and a pasta dish, products with a utilitarian nature. Future research may extend our findings by evaluating the effects of co-creation on visual attention and buying intentions for other contexts, such as hedonic products.

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