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# Effects of product type and contextual cues on eliciting naive theories of popularity and exclusivity 

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#### Abstract

This research shows in a series of studies that exposing consumers to functional products evokes the naive theory of popularity, whereas exposing them to self-expressive products induces belief in the naive theory of exclusivity. The research further demonstrates that when the naive theory elicited by product type is matched by the appropriate contextual purchasing cues regarding the interest of others, it results in greater purchase intentions than when those cues are mismatched. The research specifies that the matching effect for functional products is mediated by consumers' perceptions of product quality, whereas mediation for self-expressive products occurs through consumers' self-perceptions regarding the extent to which the product conveys uniqueness. Finally, the research illustrates that an explicit signal of product quality (e.g., a favorable rating in Consumer Reports) attenuates the effect associated with the contextual cues regarding the interest of others. © 2014 Society for Consumer Psychology. Published by Elsevier Inc. All rights reserved.


Keywords: Interest of others; Quality; Functional; Self-expressive; Unique; Naive theories of popularity and exclusivity

## Introduction

Consider the following statements: "If you want to be perceived as someone who knows how to dress well, wear what everyone else is wearing; you can't go wrong by following current trends in fashion," and "You'll be seen as a fashion maverick if you wear a unique dress, and be the envy of everyone at the party." These statements represent seemingly contradictory messages about the desirability of a wearing a particular garment. The first statement implies that wearing what others wear leads to a favorable impression among interested others; in the latter

[^0]example, not wearing what others wear leads to a favorable impression among interested others. So whose advice should you take, and under what conditions?

These inferences are based on what the literature has described as naive theories. Consumers frequently use these common-sense explanations, or naive theories, as the bases for evaluating products or services (e.g., Deval, Mantel, Kardes, \& Posavac, 2013; Labroo \& Mukhopadhyay, 2009; Raghunathan, Naylor, \& Hoyer, 2006; Yorkston, Nunes, \& Matta, 2010). As in the examples above, a consumer may hold several naive beliefs that seem to contradict one another. Under certain circumstances, consumers may be driven to purchase what other consumers have purchased; but in other situations, they may be more strongly attracted to unique products offered in limited editions.

The present research focuses on naive theories related to social factors and explores two that are potentially contradictory. The first is the naive theory of popularity: the belief that a
product is desirable when it is popular (Cialdini, 2009; Cialdini \& Goldstein, 2004; Deval et al., 2013). The second is the naive theory of exclusivity: the notion that some products are desirable when they are exclusive (Berger \& Heath, 2007, 2008; Snyder \& Fromkin, 1980; Steinhart, Mazursky, \& Kamins, 2013).

We propose that the type of product under consideration triggers these social naive theories. We predict that when a product is functional and its performance is important in the consumer's evaluation, as opposed to expressing the consumer's identity, the naive theory of popularity is elicited. By contrast, we predict that when a product is categorized as self-expressive, and reflects upon someone's personal taste or preferences, the naive theory of exclusivity is elicited. This occurs when the product is perceived as personalized or unique, or when it enables consumers to diverge from others by explicitly showing they differ from contextual others.

We expect that when the naive theory elicited by product type matches the appropriate contextual purchasing cues (presented by the seller or the selling context), higher purchase intentions will result, compared to a mismatch. We examined the underlying mediating processes of the matching effect, by focusing on product quality perceptions for functional products; and in the case of self-expressive products, on reflective self-perceptions of uniqueness that using the products convey.

Our research framework follows that of Deval et al. (2013), who manipulated pre-exposure to written material in their first experiment designed to prime a specific naive theory. These authors show support for their contention that "marketers need to understand the importance of activating one of the competing naive theories in order to match the appeal to consumers' salient knowledge" (Deval et al., 2013, p. 1187). Although we agree with this contention, our research departs from theirs by showing that the product itself can activate a specific naive theory, in the absence of the need for any other manipulation.

Deval et al. (2013, Experiments 2-8) further reveal that product evaluations are contingent on the naive theory active at the time of judgment, and that product descriptions congruent with this naive theory result in significantly more favorable product evaluations than a mismatch. We address the product description as a contextual purchasing cue that marketers intentionally generate, and we further include the influence of cues that can be triggered by the purchase environment (i.e., interest of other consumers in the product). We follow the idea of a match or mismatch between the activated naive theory and contextual purchasing cues. In our research, however, product type triggers the activation of naive theory. The idea that a specific product type can activate a particular naive theory was also implied in the work of Berger and Heath (2007), who examined participants' preferences among a wide set of products as a function of the percentage of people who historically preferred the product. Consumers were more likely to choose products that fewer people historically preferred, particularly within product categories linked to self-identity. Although the presence or absence of naive theories related to exclusivity or popularity was not tested in Berger and Heath's (2007) research, their finding implies that products high in self-expression seemingly activate consumers' preference for exclusivity, while
functional products are more closely linked to a preference for popularity.

In a set of studies, we attempt to define the class of products that activates each naive theory. We further attempt to examine the contextual purchasing cues relating to the interest of others that are either a match or mismatch with the activated theory, examining the influence of such appeal-related cues on purchase intentions. We emphasize the mediating process of the matching effect for functional products (i.e., product quality perceptions) and for self-expressive products (i.e., uniqueness self-perceptions). Finally, we show that the presence of an explicit quality cue (e.g., a favorable rating in Consumer Reports) attenuates the process. We conducted the research across multiple products using varied approaches to imply popularity or exclusivity and ultimately to produce generalizability in our findings.

## Naive theories in the context of social influence

Naive theories are defined as informal, commonsense explanations that people use in their everyday lives to make sense of their environment. Naive theories often diverge from formal, scientific explanations of what actually happens in life (Deval et al., 2013; Furnham, 1988). Because it takes minimal cognitive effort to apply and activate naive theories, consumers frequently rely on them to make inferences regarding marketing communications, products, and services (Kardes, Posavac, \& Cronley, 2004). Marketers exploit these tendencies when devising communication strategies by emphasizing product characteristics that are likely to trigger naive beliefs associated with desirable consumer responses, such as information search behaviors and product evaluations (Duncan, 1990; Lynn, 1992).

Deval et al. (2013) have illustrated how commonly held naive theories may conflict with each other and how consumers' evaluations of products vary according to the inference rule triggered by prior priming (e.g., popularity versus exclusivity in a social context). Specifically, when following the naive theory of popularity, consumers may interpret the interest of many others in the product as a favorable attribute (Cialdini, 2001, 2009). This phenomenon is similar to the "bandwagon" and the "As Seen on TV" effects (Corneo \& Jeanne, 1997; Hellofs \& Jacobson, 1999; Powell \& Prasad, 2010), which occur when consumers evaluate products favorably simply because of the number of people who have purchased or used them.

Conversely, the naive theory of exclusivity suggests that the interest of many others in a product may signal diminished product uniqueness (Lynn, 1992), leading consumers to think the product is commonplace (Hui \& Bateson, 1991; Machleit, Eroglue, \& Mantel, 2000). This is consistent with what Hellofs and Jacobson (1999) have termed "loss of exclusivity."

Following the reasoning of Deval et al. (2013), activation of one of the competing naive theories guides consumers' purchase decisions by framing the context that determines how consumers value the product and ultimately the price they are willing to pay for it. As Deval et al. (2013) have shown, activation may be achieved through prior manipulation of product popularity or exclusivity cues that convey actual interest others have shown in the product. However, we maintain that exposure to the product
itself, without the need for other cues, is sufficient to activate a specific naive belief. In particular, we examine the interplay between contextual purchasing cues that convey interest in the product and product type, and we examine how this interplay influences consumers' behavior.

## Contextual purchasing cue: Interest of others

Contextual purchasing cues can be generated intentionally by marketers (i.e., embedded within the marketing communication) or by the purchasing conditions. In this research we focused on contextual purchasing cues that indicated interest of others in the products. For example, we relied on marketing communication that described the product as popular or exclusive, and reported the percentage of consumers who had chosen to buy the product after viewing it.

The effect of the interest of others on product perceptions and ultimately purchase intentions has strong foundations in past research, particularly when examining behavior of consumers who lack complete information while making a purchase (Becker, 1991; Cialdini, 2001; Kamins, Noy, Steinhart, \& Mazursky, 2011; Raz \& Ert, 2008; Steenkamp, 1990). As Monroe and Krishnan (1985) have noted, consumers are neither perfect information processers nor do they possess complete information about products; consequently; they use a variety of inferential strategies to compensate and to fill informational gaps when they make judgments and choices (Gunasti \& Ross, 2009; Kardes et al., 2004).

Therefore, consumers may rely on the contextual purchasing cues regarding the interest of others in a product as an implicit signal about product perceptions. Consumers may interpret this signal either positively (Becker, 1991; Cialdini, 2001; Kamins, Folkes, \& Dreze, 2004; Raz \& Ert, 2008) or negatively (Hellofs \& Jacobson, 1999), conditional upon other factors associated with the purchase decision. Prior research has discussed possible factors that may determine whether the contextual purchasing cue has a positive or negative effect on product perceptions. Machleit et al. (2000), for example, demonstrated that the relationship between crowding in retail stores and consumers' satisfaction with the shopping experience varied by store type (discount or upscale). The authors found (p. 41) that in discount stores, "where shoppers may gauge value by the number of patrons in the store, human crowding was not significantly related to shopping satisfaction." However, this was not true for the upscale stores they studied. The current research extends the study of the effect of others by suggesting and testing product type as a potential moderator.

## Product type: Functional or self-expressive

In this research we distinguish between functional and self-expressive products. Although any product could theoretically serve to express the personal tastes of its users, individuals tend to use certain types of products more than others for the purpose of self-expression (Belk, 1981). Indeed, some products more easily communicate information about their users (Escalas \& Bettman, 2005), and research on attitude contrasts symbolic
products (e.g., a school sweatshirt) with those that are more functional and less self-expressive (e.g., a stereo system; Shavitt, 1990; see also Katz, 1960). In one study, when participants were asked to describe the type of person who uses a given product, a self-expressive product elicited more dispositional information than a functional product (Shavitt \& Nelson, 2000). In what follows, we focus on studies that distinguish between these different product types regarding the impact of interested others on purchase intention.

## Functional products and the interest of others

Functional products are defined as essential, utilitarian tools that enable the owner to achieve a goal or complete a practical task (Dhar \& Wertenbroch, 2000).

Consumers' evaluations of functional products are predicted to be enhanced when many others own such products. For example, Hellofs and Jacobson (1999) have shown that popularity leads to perceptions of higher quality, facilitated by the underlying mechanism of signaling, or efficient network externalities. In addition, Berger and Heath $(2007,2008)$ have demonstrated that some product categories, such as scooters, tools, and power mowers, are more attractive when many rather than few others already possess them. People believe that the wisdom of the many cannot be wrong, and a product must be good if many have chosen it. This phenomenon is the basis for the advantage of market leadership as it reflects enhanced product quality (Caminal \& Vives, 1996).

## Self-expressive products and the interest of others

Self-expressive products possess symbolic features, and an individual's consumption depends more on the personal and social meaning of the product for the individual than it depends on its functional utility (Berger \& Heath, 2007, 2008). Park, Jaworski, and Maclnnis (1986) have noted that symbolic needs are related to self-image and social identification. Therefore, persuasive marketing messages associated with self-expressive products usually involve claims concerning what the product symbolizes or conveys to others about the consumer (Shavitt \& Nelson, 2000, p. 41). Self-expressive products tend to include scarce and differentiated products (Lynn \& Harris, 1997; Tian, Bearden, \& Hunter, 2001), such as unique products made by local designers with a relatively low likelihood that others may own similar or identical products, and personalized products, based on consumers' special tastes and preferences.

Consumers' evaluations of self-expressive products are predicted to be enhanced when few rather than many own such products. For example, Berger and Heath $(2007,2008)$ have shown that this is true for products such as music CDs and hairstyles, which facilitate individuals' abilities to diverge from others. According to Johar and Sirgy (1991), when few people possess self-expressive products, it suggests scarcity and provides determinant information about the owner. Additional support for the advantage of few over many others comes from Hellofs and Jacobson (1999), which examined the association between exclusivity and product evaluations across 85 product
categories, including cosmetics, credit cards, greeting cards, and cars. They found that as consumers' concerns for exclusivity (measured as one's "preference that very few other people purchase the same brand as you") increased, increased market share reduced perceived product evaluations. Hence, from a theoretical perspective, the interest of few others elevates product evaluations as consumers rationalize that the product is not accessible to everyone. Support for this premise is also found in Becker's (1991) explanation of how a reputation for scarcity (i.e., such as a reservation at the Jules Verne in Paris or a new work of art by Banksy) can increase an object's social prestige. Consequently, consumers use product scarcity or exclusivity as a positive signal.

Consumer valuations of self-expressive products may also depend on whether they are consumed within or outside the relevant group. When consumers within the relevant group purchase the products, they are evaluated based on their ability to help consumers converge with others (Berger \& Heath, 2007, 2008), such as a Yankee fan wearing a Yankee cap at Yankee Stadium.

Research shows that consumers make similar choices as ingroup members to facilitate the communication of desired social identities (Berger \& Heath, 2007; Chan, Berger, \& Van Boven, 2012; Escalas \& Bettman, 2005). Moreover, Brewer (2003) proposes that people seek similarities with others because of their need for validation. We therefore expect that when people consume self-expressive products within the relevant group and many (rather than few) others possess the same product, the naive theory of popularity will be evoked. By contrast, when people consume a self-expressive product outside the relevant group such as a Yankee fan wearing a Yankee cap when visiting Fenway Park - the product enables the consumer to diverge from others (Berger \& Heath, 2007, 2008; Chan et al., 2012). In this manner, consumers are not only able to express their unique preferences, but they also explicitly show they are different from others (Lynn, 1992), evoking the naive theory of exclusivity.

## The present research

We examined how functional and self-expressive products elicited specific naive theories of popularity and exclusivity. We then examined the impact of potential matches (or mismatches) between activated naive theory and contextual purchasing cues regarding the interest of others on purchase intentions-provided either in the marketing communication (by describing the product as popular or exclusive) or that consumers could infer through marketplace information (by reporting the percentage of consumers who had chosen to buy the product).

## The matching effect related to functional products

We propose that exposure to a functional product elicits the naive theory of popularity. Thus, when a functional product is accompanied by a contextual purchasing cue that emphasizes its popularity, we consider that a match between product type and the contextual purchasing cue. In contrast, when the same product is accompanied by a description emphasizing its uniqueness -a
description that elicits the naive theory of exclusivity - we consider that to be a mismatch between the product type and its associated contextual purchasing cue. In the presence of a match, consumers are likely to interpret the item's popularity as a positive signal regarding its quality, therefore enhancing their purchase intentions, compared to a mismatch.

## The matching effect related to self-expressive products

The perceived benefits of a self-expressive product are associated with the extent to which the product reflects the consumer's personal tastes and/or distinctive qualities. Such products - which include those that are personalized or unique, or that enable consumers to diverge from others by explicitly showing they are different from those around them - elicit the naive theory of exclusivity. Here, we assume that consumers value products that reflect their uniqueness and/or enable them to communicate a differentiated image. We propose that consumers' perceived evaluations of self-expressive products are enhanced further when few rather than many possess them. Thus, a self-expressive product will match contextual purchasing cues when few are interested in it and when the product itself conveys individuality, resulting in enhanced purchase intentions. In contrast, a mismatch occurs when the same product is accompanied by a description that elicits the naive theory of popularity. In the presence of a match, consumers are likely to interpret the item's exclusivity as a positive signal regarding its ability to convey the user's uniqueness, and therefore purchase intentions will be enhanced, compared to a mismatch. We formally hypothesize:
H1. In the presence of a match between product type and contextual cue, individuals will be more likely to purchase the product than in the absence of a match. That is:

- Individuals will be more likely to purchase a functional product when the contextual cue emphasizes popularity rather than exclusivity.
- Individuals will be more likely to purchase a self-expressive product when the contextual cue emphasizes exclusivity rather than popularity.


## Mediation of the "match" vs. "mismatch" effect

We propose that different factors drive the matching effect for each product type.

In case of functional products, the contextual purchasing cue of many (vs. few) others is expected to enhance quality perceptions (Becker, 1991; Cialdini, 2001; Kamins et al., 2004; Raz \& Ert, 2008) and consequently increase consumers' intention to purchase the product.

Quality perceptions are consumers' general evaluative judgments or perceptions about the overall excellence or superiority of products (Steenkamp, 1990; Zeithaml, 1988). When evaluating functional products, consumers seek cues that reflect the products' overall excellence and performance. Contextual purchasing cues related to the interest of many others provide such validation
(Cialdini, 2001; Hellofs \& Jacobson, 1999). We predict that product quality perceptions will mediate the matching effect (i.e., between the activated naive theory of popularity and the contextual cue of many others) for functional products.

In the case of self-expressive products, the contextual cue of few (vs. many) others' interest enhances the consumer's self-perception that the product can convey unique individuality (Berger \& Heath, 2007, 2008; Johar \& Sirgy, 1991; Lynn, 1992) and ultimately enhances the consumer's intention to purchase.

When a product conveys unique individuality it differentiates a consumer's personal image in a distinctive manner (Lynn \& Harris, 1997; Tian et al., 2001). When evaluating self-expressive products, consumers seek ways to convey their self-image and social identity (Shavitt \& Nelson, 2000, p. 41). The contextual purchasing cues related to the interest of few others indicate product scarcity and therefore increase consumers' senses of uniqueness. Accordingly, we predict that consumers' self-perceptions of uniqueness will mediate the matching effect (i.e., between the activated naive theory of exclusivity and the contextual cue of few others) for self-expressive products. We formally hypothesize:

H2a. Perceived quality is likely to mediate the effect of a match between functional products and contextual cues on purchase intentions.
H2b. The consumer's perception that the product can convey self-uniqueness is likely to mediate the effect of a match between self-expressive products and contextual cues on purchase intentions.

## Attenuation of the "match" vs. "mismatch" effect

We propose that the presence of an explicit quality signal, such as a positive recommendation or quality confirmation by a reliable third party, attenuates the inferential process derived from contextual information. In this regard, Cleeremans (1997) has examined the learning process when an implicit cue uniquely presented to subjects was joined by an explicit cue. The explicit cue replaced dependence upon the implicit cue and led participants to abandon the information provided by the latter. In addition, Kanouse (1984, p. 705) has claimed that explicit cues are more salient than implicit clues in product evaluation because people perceive them to be more definitive. Moreover, Evans, Clibbens, Cattani, Harris, and Dennis (2003, p. 617) have found that explicit versus implicitly gained knowledge influences judgment more significantly, even when such knowledge is "not soundly based."

We predict that consumers presented with information from a reliable source regarding the quality of an item (e.g., a Consumer Reports article or feedback from a reputable website) will rely more on the explicit cue than on the contextual interest of others to judge quality and uniqueness. We formally hypothesize the following:

H3. The presence of an explicit signal of product quality will attenuate the effect of a match between product type and contextual purchasing cues on participants' purchase intentions.

## Manipulation check study

As an initial foundational investigation, in this study we tested whether exposure to functional and self-expressive products elicited different beliefs that represent the naive theory of popularity or that of exclusivity, respectively. This manipulation check study, however, was not designed to manipulate contextual purchasing cues and observe their effect on purchase intentions. Based on our previous discussion, we tested two types of products that are likely to elicit the naive theory of popularity: (a) a functional product and (b) a self-expressive product that conveys group membership and is consumed within the context of the group to reflect conformity. In addition, we tested three types of products likely to induce the naive theory of exclusivity: (a) a personalized product reflecting the consumer's own special preferences; (b) a unique product produced by a local designer, reflecting the consumer's special taste; and (c) a product that conveys group membership outside of the context of the group, emphasizing the consumer's differentiation. For the five product types described above, we utilized a between-subject factorial design. We also examined the effect of each product type for two different product categories: hat and keychain.

This study extends Deval et al. 's (2013) first experiment, which showed that priming evoked a specific naive theory that subsequently informed consumers' market beliefs. Although Deval et al. (2013) used web-based and/or newspaper articles to prime participants, we used the product type itself as the stimulus. The product types used in this study were also used as target stimuli in the subsequent studies.

## Method

## Participants

One hundred-eighty seven adult participants ( $M_{\text {age }}=32$, $56 \%$ women) took part in the study in return for compensation of $\$ 1$ USD, and were randomly assigned to one of ten conditions: (product category: hat or keychain) $\times$ (product type: functional product or four self-expressive products). Participants were approached via an online survey database website; those who registered for the study were assigned a personal code enabling the database manager to remit payment for participation without revealing participants' identities. An e-mail notification was sent to registrants, assigning them to one of the experimental conditions. For the group-related products conditions, we pre-selected participants, focusing only on residents of Tel-Aviv, a major cosmopolitan city with more than $3,000,000$ inhabitants within Israel, with a large variety of theaters, shows, restaurants, and shopping locations. These factors make living in this city different from living in other cities in Israel and provided us with a wide range of potential participants. To eliminate geographical variance, all participants were required to be residents of Tel-Aviv.

## Stimulus selection

The study included two categories of products: a keychain and a hat. In each product category, we presented participants with one of five product types, using a photo of the product and
a short text description (see Methodological Details Appendix, section 1.3). The product types were as follows: (a) functional: a keychain including a LED flashlight; or a hat designed for sports activities, with moisture-wicking technology for added breathability; (b) self-expressive, group-related: consumed inside the group: a keychain or hat with the slogan "I Love Tel-Aviv, the Best City in Israel," reflecting civic pride for their city, to be used or worn in their city; (c) self-expressive, personalized: a keychain or a hat that allows the consumer to insert his/her own photo or personalized message; (d) self-expressive, unique: a keychain or hat, made by a local designer; and (e) self-expressive, grouprelated: consumed outside the group: a keychain or hat with the slogan "I Love Tel-Aviv, the Best City in Israel," reflecting civic pride (identical to product type b). For this product type, we told participants that they were to consider using or wearing the product outside their city, in other major cities (such as Jerusalem or Haifa), in order to reveal civic pride for Tel-Aviv.

## Procedure

Following the study by Deval et al. (2013), we told participants they would be participating in two unrelated studies that had been grouped together for the sake of efficiency. The first study was described as a task about product evaluations. Participants viewed a product and were asked to indicate an overall evaluation of the product - either a keychain or hat - representing one of the five product types. We also included a manipulation check item related to the extent to which the product represented the respondent's personal taste. Specifically, participants used a 7-point Likert-type scale from 1 (highly disagree) to 7 (highly agree) to indicate their agreement with the statement: "The product expresses my personal tastes to others."

After evaluating the product, participants moved to the second task, described as an investigation of consumer opinions and beliefs, including the main dependent variables. Participants were asked to rate their agreement with two statements relating to general and marketing-relevant phenomena, including naive theories.

## Dependent measures

Participants were asked to complete a semantic differential scale related to the naive theory of popularity and exclusivity, similar to that used by Deval et al. (2013): "Good products usually are:" and "Desirable products usually are:" with responses ranging from 1 (very popular - everybody loves them) to 7 (very exclusiveonly selected people can buy them).

## Results

## Manipulation check

We initially conducted a $2 \times 5$ between-subject ANOVA analysis, with two product categories (hat or keychain) and five product types (functional, personalized, unique, and group identity with usage in or outside the group). The dependent measure was the extent to which each product reflected the respondent's personal taste. As expected, the main effect of product category was not found to be significant $\left(F_{(1,177)}=.21, p>.1\right)$, indicating that product category had not affected the ratings related to the
extent to which the products reflected participants' personal tastes. The interaction effect between product category and product type was also not significant $\left(F_{(1,177)}=.29, p>.1\right)$, allowing us to combine results across products in subsequent analyses. Product type, however, revealed a significant main effect $\left(F_{(1,177)}=5.48\right.$, $p<.001$; see Table 1, rows 1-2).

The resulting $1 \times 5$ between-subject ANOVA analysis, conducted across product categories (e.g., hat combined with keychain), revealed a significant main effect for product type $\left(F_{(4,182)}=5.34, p<.001\right.$; see Table 1, row 3$)$, in line with our expectations and the theoretical explanation offered above. Based on LSD post-hoc multiple comparison tests comparing the differences between product type ratings, we found empirical support for the fact that a functional product induces lower self-expression ratings $(M=2.16, \mathrm{SD}=1.34)$ than self-expressive products, such as a personalized product ( $M=3.40, \mathrm{SD}=1.85$ ), a unique product made by a local designer $(M=3.75, \mathrm{SD}=2.14)$, and a group-related product used outside the group ( $M=3.24$, $\mathrm{SD}=2.11$ ). In addition, as expected, the self-expressive product that was group-related and consumed within the group got low self-expression ratings ( $M=2.25, \mathrm{SD}=1.72$ ) (to the same extent as a functional product). We assume this is a result of consumers' desire to converge with others.

## Naive theories

We conducted an ANOVA analysis using the average ratings related to the naive theories of popularity and exclusivity $(\alpha=.67)$ as a dependent measure, wherein a high score reflected a stronger belief in exclusivity and a low score indicated a greater belief in popularity. We initially conducted a $2 \times 5$ between-subject ANOVA analysis, with two product categories and five product types. The main effect of product category was not found to be significant $\left(F_{(1,177)}=.001, p>.1\right)$, which indicates that product category had not impacted the naive belief scores. The interaction term was also not significant $\left(F_{(1,177)}=.07, p>.1\right)$. However, product type had a significant main effect on naive belief scores $\left(F_{(1,177)}=4.90, p<.001\right)$ (see Table 1, rows 4-5). We therefore conducted a $1 \times 5$ between-subject ANOVA across product categories, and found that product type revealed a main effect $\left(F_{(4,182)}=5.15, p<.001\right)$ (see Table 1, row 6). In line with our expectations, a functional product was found to be more related to beliefs in popularity $(M=3.11, \mathrm{SD}=1.14)$ than self-expressive products: a personalized product $(M=4.00, \mathrm{SD}=1.22)$, a unique product made by a local designer $(M=4.32$, $\mathrm{SD}=$ 1.29 ), and a group-related product used outside the group ( $M=$ $3.98, \mathrm{SD}=1.32$ ), which were found to be more related to beliefs in exclusivity. In addition, as expected, the self-expressive product that was group-related and consumed within the group was more related to belief in popularity than exclusivity ( $M=$ $3.35, \mathrm{SD}=1.42$ ).

## Discussion

The manipulation check study shows that it is possible to trigger competing, socially related naive theories by exposing

Table 1
Mean of self-expression, beliefs in popularity and exclusivity, as a function of product category and product type (manipulation check study).

| Dependent measures | Product category | Product type |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Functional | Self-expressive, in-group | Unique | Personalized | Self-expressive, out-group |
| Self-expression | Keychain | 2.00 (1.15) | 2.00 (1.54) | 4.00 (1.79) | 3.23 (1.74) | 3.21 (1.96) |
|  | Hat | 2.28 (1.49) | 2.42 (1.84) | 3.56 (2.41) | 3.58 (2.02) | 3.26 (2.25) |
|  | Across product categories | $2.16^{\text {a }}$ (1.34) | $2.25{ }^{\text {a }}$ (1.72) | $3.75{ }^{\text {b }}$ (2.14) | $3.40{ }^{\text {b }}$ (1.85) | $3.24{ }^{\text {b }}$ (2.11) |
| Naive theory | Keychain | 3.19 (0.97) | 3.27 (1.47) | 4.29 (1.54) | 4.04 (1.13) | 4.00 (1.02) |
|  | Hat | 3.05 (1.28) | 3.42 (1.41) | 4.36 (1.11) | 3.96 (1.36) | 3.96 (1.51) |
|  | Across product categories | $3.11^{\text {a }}$ (1.14) | $3.35^{\text {a }}$ (1.42) | $4.32^{\text {b }}$ (1.29) | $4.00^{\text {b }}$ (1.22) | $3.98{ }^{\text {b }}$ (1.32) |

Note: Cells with unlike subscripts differ at $p<.05$.
consumers to functional and self-expressive products. As expected, functional products triggered the naive theory that it is preferable to buy products that many others have. Alternatively, self-expressive products triggered the naive theory that products owned by few others are desirable.

More interestingly, self-expressive products - which highlight group identity and were designated as being consumed within the group - elicited the naive theory of popularity, similarly to functional products; in both cases, consumers seek social validation. However, when participants imagined consuming the same self-expressive products outside the group, they elicited the naive theory of exclusivity, similar to the personalized and unique products. Thus, using self-expressive products outside the group reflects personal preferences and divergence from others.

## Study 1

Here we examined how exposure to a match or mismatch between product type and a contextual (marketer-generated) cue regarding a product's popularity or exclusivity influenced a consumer's likelihood of buying a functional or self-expressive product. We expected consumers' purchase intentions to be higher in the presence versus absence of a match (H1). We also expected product quality perceptions to mediate the matching effect for a functional product and the degree the product conveys the consumer's uniqueness for a self-expressive product (H2).

## Method

## Participants

We recruited 100 participants ( $M_{\text {age }}=29,50 \%$ women) who received compensation of \$3 USD and randomly assigned them to one of four conditions: (product type: functional or self-expressive) $\times$ (contextual purchasing cue: product described as popular or as exclusive). We relied on the same database of participants as in the manipulation check study.

## Procedure

We invited participants to complete an online questionnaire on consumer attitudes and perceptions. We then assigned participants to one of four experimental conditions. Each participant was exposed to a product - a keychain - that was either functional or made by a local designer (as described in the manipulation check study). Each participant was also exposed to
a different contextual cue, wherein the keychain was described as either popular or exclusive, using wording similar to that of Deval et al. (2013). The contextual cue stated either that "the product is very popular among consumers" or that "the product is very unique and rare for consumers."

Dependent measures. The following dependent measures were used: (a) purchase intentions: participants used a 7-point scale from 1 (strongly disagree) to 7 (strongly agree) to rate their agreement with the following statement: "I am interested in buying such a product."; (b) product quality perceptions: participants used a 7-point scale from 1 (very low) to 7 (very high) to rate the product's perceived quality, and (c) uniqueness self-perceptions: participants rated on a 7-point scale from 1 (very low) to 7 (very high) the extent to which they perceived the product reflects its user's uniqueness.

Finally, we included a manipulation check measure for the contextual purchasing cue by asking participants to rate their agreement with the statements "Many others are likely to own this product" and "Few others are likely to own this product" on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree).

## Results

## Manipulation check

As expected, participants in the contextual purchasing cue condition, which described the product as popular, more strongly agreed with the statement that many others were likely to own the product ( $M=4.82, \mathrm{SD}=1.70$ ) than participants in the contextual purchasing cue condition, which described the product as exclusive $\left(M=3.56, \mathrm{SD}=1.54 ; t_{(98)}=3.85, p<.001\right)$. In addition, participants in the contextual purchasing cue condition, which described the product as popular, agreed significantly less with the statement that few others were likely to own the product ( $M=2.98, \mathrm{SD}=1.54$ vs. $M=4.19, \mathrm{SD}=1.68 ; t_{(98)}=3.72$, $p<.001$, respectively).

## Purchase intentions

An ANOVA of participants' reported purchase intentions revealed a significant main effect for product type $\left(F_{(1,96)}=7.19\right.$, $p<.009)$ and a significant two-way interaction ( $F_{(1,96)}=19.88$, $p<.001$ ) (see Fig. 1). Thus, in line with H1, for the functional product, a contextual purchasing cue condition that described the product as popular was associated with stronger purchase


Fig. 1. Mean of purchase intentions, as a function of product type and the contextual purchasing cue (Study 1).
intentions than a contextual purchasing cue condition, which described the product as exclusive $(M=4.36, \mathrm{SD}=1.44 \mathrm{vs}$. $\left.M=2.50, \mathrm{SD}=1.34 ; t_{(45)}=4.57, p<.001\right)$. Conversely, for the self-expressive product, a contextual purchasing cue condition that described the product as popular was associated with significantly weaker purchase intentions than a contextual purchasing cue condition, which described the product as exclusive $(M=3.81, \mathrm{SD}=1.69$ vs. $M=4.69, \mathrm{SD}=1.59$; $\left.t_{(51)}=1.94, p<.001\right)$.

## Moderated mediation analyses

We proposed that the effects of the contextual cue on purchase intentions are driven by product quality perceptions in the case of the functional product but by uniqueness self-perceptions in the case of the self-expressive product (H2). We tested these predictions using bootstrapping techniques (Preacher, Rucker, \& Hayes, 2007) through a contextual purchasing cue, which varied by product description ( $1=$ popular and $2=$ exclusive $)$ as the independent measure, product type $(1=$ functional product and $2=$ self-expressive product) as the moderator, and product quality perceptions and uniqueness self-perceptions as the mediators (for full results of quality perceptions and uniqueness selfperceptions, see Methodological Details Appendix, section 2.4). As predicted, we found the following with 5000 bootstrapping samples: product quality perceptions significantly mediated the effect of the contextual purchasing cue for a functional product ( $b=.42, \mathrm{SE}=.21 ; 95 \% \mathrm{CI}: .11$ to .92 ), so that when the functional product was described as popular, participants' product quality perceptions increased and consequently purchase intentions increased. However, and in support with our predictions, product quality perceptions did not mediate the effect of the contextual purchasing cue for the self-expressive product ( $b=-.02$, $\mathrm{SE}=.12 ; 95 \% \mathrm{CI}:-.27$ to .22 ). Moreover, we found that the ability of the product to convey uniqueness significantly mediated the effect of the contextual purchasing cue for a self-expressive product ( $b=-.28, \mathrm{SE}=.17 ; 95 \% \mathrm{CI}:-.72$ to -.05 ), so that when the self-expressive product was described as popular, uniqueness self-perceptions and purchase intentions decreased. In addition, and in line with our expectations, uniqueness self-perceptions did not mediate the effect of the
contextual purchasing cue on purchase intentions for a functional product ( $b=.17, \mathrm{SE}=.16 ; 95 \% \mathrm{CI}:-.06$ to .61 ).

## Discussion

Results of Study 1 show that consumers report stronger purchase intentions in the presence of a match (versus mismatch) between the product's type and its contextual purchasing cue regarding its popularity or exclusivity. Participants exposed to the functional product reported stronger purchase intentions when they were exposed to the contextual purchasing cue congruent with the naive theory of popularity. Similarly, participants exposed to the self-expressive product expressed a stronger belief in the ability of the product to convey their uniqueness and ultimately elevated purchase intentions when the contextual purchasing cue was congruent with the naive theory of exclusivity.

## Study 2

Study 2 also used a contextual purchasing cue to elicit the naive theories of popularity and exclusivity among participants. Rather than using the contextual purchasing cues used in Study 1, Study 2 aimed to elicit participants' naive theories by manipulating information on the number of others interested in the product from an external source (not controlled by the marketer).

We conveyed the interest of others to participants by reporting the percentage of consumers who had chosen to buy the product after viewing it. We relied on a variation of Berger and Heath's (2007) manipulation procedure in "identity" domains, in which one-half of the participants were told that $65 \%$ of those who previously viewed the product purchased it, whereas the other half were told that $10 \%$ of those who previously viewed it purchased it.

We further included in this study a condition in which product quality information was conveyed to participants in the form of positive ratings in Consumer Reports. We expected exposure to such ratings to attenuate the extent to which participants' purchase intentions were affected by the matching effect between product type and purchase by others (H3).

## Method

## Participants

We recruited 176 participants ( $M_{\text {age }}=34,48 \%$ women) who agreed to participate in return for compensation of $\$ 3$ USD. All participants were randomly assigned to one of eight conditions: (product type: functional or self-expressive) $\times($ contextual purchasing cue: purchased by many or few others) $\times$ (exposure to an explicit quality cue: Consumer Reports-present or absent). We relied on the same database of participants as used in previous studies.

## Stimuli selection

We selected a t-shirt as the product used in this study: functional or personalized (see Methodological Details Appendix, section 3.3). In a pretest among 51 participants ( $M_{\text {age }}=31,50 \%$ women), we found that participants perceived a "functional" t -shirt - suitable for athletic activities such as walking, running, and biking - to be less self-expressive of their personal tastes than a "personalized" t-shirt, designed to be fashionable with a cutting-edge design, and on which users could print their own personal messages $(M=3.84$ vs. $M=5.12$, respectively, $\left.t_{(50)}=4.48, p<.001\right)$.

## Procedure

We invited participants to complete an online questionnaire on consumer attitudes and perceptions. We then assigned participants to one of eight experimental conditions. Each participant was exposed to at-shirt that was either functional or self-expressive. Each product was accompanied by a specific contextual purchase cue of popularity or exclusivity. It was described as having been purchased either by many others ( $65 \%$ of those who had seen it) or by few others ( $10 \%$ of those who had seen it). Finally, each product was either accompanied or not by an explicit quality cue of a five-star recommendation in Consumer Reports.

As expected, a pretest among 102 participants ( $M_{\text {age }}=31$, $61 \%$ women) confirmed that those exposed to the $65 \%$
previous purchase condition agreed more strongly with the statement that "many others own the product" ( $M=4.32$, $\mathrm{SD}=1.31$ ) than those exposed to the $10 \%$ condition ( $M=$ 2.71, $\left.\mathrm{SD}=1.31 ; t_{(100)}=6.05, p<.001\right)$. Participants in the $65 \%$ condition agreed less that "few others own the product," ( $M=3.13, \mathrm{SD}=1.48$ ) compared to participants in the $10 \%$ ownership condition $\left(M=4.20, \mathrm{SD}=1.97 ; t_{(100)}=3.05, p<.003\right)$.

## Dependent measures

We used measures similar to those used in Study 1. We asked participants to rate (a) their intentions to buy the product, (b) their perceptions of the product's quality, and (c) the extent to which the product reflects its user's uniqueness, on a 7-point scale from 1 (very low) to 7 (very high).

## Results

## Purchase intentions

A $2 \times 2 \times 2$ ANOVA of purchase intentions as a function of product type, contextual purchasing cue, and the presence or absence of an explicit quality cue (a Consumer Reports rating) indicated a significant three-way interaction $\left(F_{(1,168)}=8.04\right.$, $p<.005$ ) (see Fig. 2), explained by the two two-way interactions between product type and contextual purchasing cue with the presence or absence of the explicit cue. The product type/ contextual purchasing cue interaction in the no-explicit-cue condition was significant $\left(F_{(1,168)}=14.62, p<.005\right)$. For a functional product, the contextual purchasing cue of purchase by many others was associated with stronger purchase intentions than the contextual purchasing cue of purchase by few others ( $M=4.76, \mathrm{SD}=1.39$ vs. $M=3.18, \mathrm{SD}=1.62 ; t_{(41)}=3.47$, $p<.001$ ). Conversely, for the self-expressive product, the contextual purchasing cue of purchase by many others was associated with weaker purchase intentions than the contextual purchasing cue of purchase by few others $(M=2.91, \mathrm{SD}=1.19$ vs. $\left.M=4.12, \mathrm{SD}=1.49 ; t_{(37)}=2.81, p<.01\right)$. Both results were consistent with the findings in Study 1.


Fig. 2. Mean of purchase intentions as a function of product type, contextual purchasing cue, and presence or absence of an explicit quality cue (Study 2 ).

In contrast, in the explicit-cue condition, the two-way interaction between product type and the contextual purchasing cue was not significant $\left(F_{(1,168)}=.36, p>.1\right)$. Participants reported similar purchase intentions for both product types, regardless of information on the contextual purchasing cue (functional product: $M=4.35$ for purchase by many others, $\mathrm{SD}=1.94$, vs. $M=3.60$ for purchase by few others, $\mathrm{SD}=$ $1.58 ; t_{(46)}=1.44, p>.1$; self-expressive product: $M=4.35$ purchase for many others, $\mathrm{SD}=1.94$, vs. $M=3.57$ for purchase few others, $\left.\mathrm{SD}=1.73 ; t_{(44)}=1.56, p>.1\right)$. These findings support H3.

## Moderated mediation analyses

We conducted similar moderated mediation analyses as in Study 1, but in the absence of an explicit quality cue. Analyses of purchase intentions in the absence of a Consumer Reports rating, in which contextual purchasing cue of purchase by others ( $1=$ few others, and $2=$ many others) represented the independent measure, product type $(1=$ self-expressive, $2=$ functional $)$ represented the moderator, and product quality perceptions and uniqueness self-perceptions represented the mediators (for full results of product quality perceptions and uniqueness selfperceptions, see Methodological Details Appendix, section 2.4). Using 5000 bootstrapping samples (Preacher et al., 2007), product quality perceptions were found to significantly mediate the effect of the contextual purchasing cue for a functional product $(b=.41, \mathrm{SE}=.24 ; 95 \% \mathrm{CI}$ : .06 to .99 ), so that when the contextual purchasing cue stated that many others purchased the functional product, participants' purchase intentions increased. However, and in support of our predictions, product quality perceptions did not mediate the effect of the contextual purchasing cue for the self-expressive product ( $b=-.03$, $\mathrm{SE}=.14 ; 95 \% \mathrm{CI}:-.38$ to .21 ). Moreover, we found that uniqueness self-perceptions significantly mediated the effect of the contextual purchasing cue for a self-expressive product ( $b=-.38, \mathrm{SE}=.17 ; 95 \% \mathrm{CI}:-.98$ to -.06 ), so that when the contextual purchasing cue stated that many others purchased the self-expressive product, uniqueness self-perceptions and purchase intentions decreased. In addition, and in line with our expectations, uniqueness self-perceptions did not mediate the effect of the contextual purchasing cue on purchase intentions for a functional product $(b=.19, \mathrm{SE}=.15 ; 95 \% \mathrm{CI}:-.02$ to 61 ).

## Discussion

The findings of this study replicated and extended the results of Study 1. Like Study 1, Study 2 demonstrated that in the absence of an explicit quality cue, a match between product type and contextual purchasing cue elicits higher purchase intentions, compared with a mismatch. However, consumers relied more strongly on explicit cues, when they were present, than they did on contextual information. In this situation, consumers' purchase intentions did not differ as a function of the contextual purchasing cue related to the number of others who purchased the product. Specifically, this shows the
domination that explicit information, when credible, can have over contextual cues in consumer decision making.

## General discussion

The present research demonstrates a link between product type (functional or self-expressive) and naive theories elicited by exposure to the product. That is, exposing consumers to a functional product triggers the naive theory of popularity, whereas exposing them to a self-expressive product elicits the naive theory of exclusivity (manipulation check study). This supports our premise that a match between the naive theory elicited by product type and provided by contextual purchasing cues (presented by the seller or the selling context) is associated with stronger purchase intentions, compared to a mismatch. Specifically, we demonstrated that when product type and contextual cues are consistent (i.e., functional product/many interested others; self-expressive product/few interested others), consumers' purchasing intentions are enhanced, in contrast to situations when product type and contextual cues are at odds (Studies 1 and 2). In the case of functional products, we attribute this increase in purchase intentions to enhanced product quality perceptions. In the case of self-expressive products, increased purchase intentions are related to the degree to which the product elevates consumers' self-perceptions of uniqueness. Finally, we emphasized the role of contextual information as an implicit cue (Study 2) by demonstrating that when consumers are exposed to an explicit signal of product quality, that signal dominates. Our findings are robust in that we replicated the effects across studies and products (hats, key chains, and t-shirts), supporting their strength and generalizability.

From a theoretical perspective, the current research extends the consideration set of the factors that drive the impact of two of Cialdini's (2009) core persuasive heuristics - social validation and scarcity - on consumers' product purchasing behavior. The current research explores the interplay between product type (functional or self-expressive) and contextual cues indicating product popularity or exclusivity. For functional products, when contextual cues suggest a product is popular, the social validation heuristic positively influences consumers' product evaluations working through product quality. In contrast, for self-expressive products, when contextual cues suggest that the product is exclusive, the scarcity heuristic positively affects consumers' evaluations and purchase intentions, by conveying that the product represents the consumer's uniqueness.

We also show that when consumers use a self-expressive product to reflect group identity, the product either triggers the naive theory of popularity or exclusivity, depending upon whether they anticipate consuming the product within or outside the relevant group. Following this reasoning, the matching effect related to a self-expressive product may also depend upon whether consumers expect to consume it within or outside of the relevant reference group. When a product is consumed outside of the relevant group, the fewer who use it, the better, because it represents uniqueness. However when a
self-expressive product is consumed within the relevant group, the matching effect is reversed: the more people who use it the better. A pilot study among 75 participants $\left(M_{\text {age }}=30,56 \%\right.$ women) provided initial support for these predictions. We found a significant two-way interaction $\left(F_{(1,71)}=12.61, p<.001\right)$ between the expected nature of consumption (within or outside of the relevant group) and the contextual purchasing cue (purchased by many or few others). Participants expressed higher purchase intentions when the contextual cue indicated that many others purchased a self-expressive product they expected to consume within the relevant group $(M=3.32, \mathrm{SD}=1.38 \mathrm{vs}$. $\left.M=1.97, \mathrm{SD}=1.26 ; t_{(32)}=2.95, p<.01\right)$. Conversely, when participants expected to consume the self-expressive product outside the relevant group, the effect on purchase intentions was reversed, and the contextual cue of purchase by many had a less positive impact on purchase intentions $(M=2.25, \mathrm{SD}=1.38 \mathrm{vs}$. $\left.M=3.42, \mathrm{SD}=1.93 ; t_{(39)}=2.25, p<.05\right)$. Future research should further investigate the role of quality perceptions and uniqueness self-perceptions as mediating this effect.

The research further extends the work of Deval et al. (2013) in two important ways. First, it shows that for social influence, the nature of the product itself can elicit belief in a specific naive theory without any other external manipulation. This is important, because this finding reveals that for certain products that do not (do) elicit or reflect consumers' self-expression, the naive theory of popularity (exclusivity) becomes salient and informs marketplace beliefs, as Deval et al. (2013) have demonstrated. We extend their framework by manipulating contextual information that is either congruent or incongruent with consumers' activated naive theories and market beliefs, showing that consistency leads to stronger purchase intentions than inconsistency. Second, we show that providing the consumer with external information (outside the marketplace) mitigates this effect.

This research presents managerial implications, as it concerns a fundamental positioning issue raised by the existence of two opposing marketing trends. The first trend is the social networking revolution (i.e., assimilation processes), which assumes consumers are more likely to buy a product if they see members of their relevant social network using it (Dholakia, Bagozzi, \& Pearo, 2004). Marketing messages based on this assumption include cues that elicit the naive theory of popularity. Pepsi's advertising slogan "The Choice of a New Generation" illustrates this approach. The second trend, a byproduct of growing competition, is personalization (i.e., differentiation processes; Chan et al., 2012), which is driven by the notion that consumers will more strongly engage with products they believe are tailored to their specific needs and preferences. Marketing messages based on this assumption use cues that elicit the naive theory of exclusivity. Tailor Made, a company that uses the slogan "The Tailor Dressed Man Stands Out from the Crowd," exemplifies such campaigns. Therefore, from a practical perspective our results help explain the conditions under which popularity versus exclusivity appeals are likely to be effective, by more clearly defining the type of products that elicit the naive theories consistent with these appeals. Specifically, managers should consider a match between appeal type (popularity or exclusivity)
and a product's positioning as functional or self-expressive. Appeals that emphasize popularity are better suited to products that are positioned as functional. Alternatively, appeals that emphasize exclusivity are more appropriate for self-expressive products conveying uniqueness or personalization.

Future research should consider factors beyond Consumer Reports that may influence the match between product type and contextual cues regarding the interest of others. Such factors might include product price and brand prestige. For example, when only a few consumers possess an expensive product, such as a Mercedes-Benz, it may be because most people cannot afford it. Similarly, when consumers perceive a brand as having high prestige, it may serve as an explicit quality signal and attenuate the interaction effect between product type and contextual cues and its impact on purchasing behavior. Future research might also consider consumers' tendency to prefer functional or self-expressive products. Individual variables, such as the need for uniqueness (Tian \& McKenzie, 2001; Tian et al., 2001), might heighten consumers' desire to possess self-expressive products that signal personal tastes and highlight individuality. Finally, it may be interesting to explore gender identity as a possible moderator for the matching and mismatching effects. Specifically, females have been found to be more focused on social relationships and interpersonal relationships, whereas males have been found to more concerned with self (Kurt, Inman, \& Argo, 2011; Winterich, Mittal, \& Ross, 2009). Gender identity may interact with product type as well as with the naive theories of popularity and exclusivity. Females might be more oriented toward functional products, especially when the contextual purchasing cues emphasize popularity. By contrast, men may be more inclined toward self-expressive products, especially when the contextual purchasing cues signal exclusivity.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.jcps.2014.04.004.

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