The Precise-Unique Intuition: Semantic Precision Signals Product Uniqueness

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Cite as:
Kronrod Ann, Xie Guang-Xin, Brege Harald (2022), The Precise-Unique Intuition: Semantic Precision Signals Product Uniqueness. *Proceedings of the European Marketing Academy*, 51st, (106831)

Paper from the 51st Annual EMAC Conference, Budapest, May 24-27, 2022

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Abstract:

Six experiments in the field and online reveal a novel "precise-unique" heuristic, whereby greater semantic precision increases perceived product uniqueness. We discover that the effect takes place when semantic precision characterizes product descriptions, but also when semantic precision is merely found in language surrounding the product and does not relate to the product itself. This precise-unique effect is mediated by the cognitive category resemblance: more precise words are less typical I their categories and therefore more precise language evokes perceptions of rarity and a-typicality.

Keywords: categorization, product uniqueness, semantic precision

Track: Consumer Behavior

1. Introduction

Marketing communications can vary across a wide range of precision levels, from quite imprecise ("customers are satisfied"), to fairly precise ("more than 90% customers are satisfied"), to extremely precise ("91.92% of customers gave a 5-star satisfaction rating"). Previous research demonstrated that the precision of the information consumers acquire about products can vastly influence their perceptions, attitudes, and decisions. To date, most research on the effect of precision in marketing has been focused on *numerical precision* of product-related information. For example, numerical precision can increase perceptions about a product's efficiency (Palmeira et al. 2019), a firm's competence (Xie and Kronrod 2012), or a brand's personality (Yan 2016). However, only a handful of works inquired into the effects of *semantic precision* – the extent to which language describes things exactly as they are – in marketing communication. Additionally, this adjacent literature offers mixed conclusions. For example, on the one hand, using specific adjectives or names to describe jellybean flavors or crayon colors increased product evaluations and purchase intentions (Miller and Kahn 2005). Similarly, more specific job ads attracted more applicants (Feldman, Bearden and Hardesty 2006; Robertson, Collins and Oreg 2005). On the other hand, more concrete language is often tied to negative attitudes and unfavorable decisions (e.g., Schellekens, Verlegh, and Smids 2010). For example, more precise information may increase perceived risk (Dahlstrom, Dudo, and Brossard 2012).

2. Theory

Acknowledging the importance of language in forming perceptions of brands and products (Wu et al. 2019), our goal in the current research is to investigate the effect of the semantic precision perceptions of offerings in the marketplace. We propose that semantic precision can influence product perceptions via a signaling effect whereby more precise language elicits perceptions of product uniqueness. Semantic precision is the extent to which language refers to things exactly as they are. We draw on the psycholinguistic literature suggesting that more precise words (e.g., *scarlet* versus *red*) are less prototypical members of their category (e.g., *colors*; Rosch 1983; Rosch and Mervis 1975). This means that when thinking of a given cognitive category, such as '*furniture*', people are more likely to think of more prototypical category members (represented by less precise words, e.g., *sofa*), compared with less prototypical members of the category (represented by more precise words, e.g., *loveseat*). As more precise words are less likely to come up in people's minds within their context, we suggest that more precise words signal uniqueness.

Further, uniqueness has been conceptualized as distance from other category members (Nedungadi and Hutchinson 1985; Segev et al., 2015). Thus, according to our conceptualization via categorization theory, semantic precision denotes greater distance of meaning, lower typicality, and higher distinction of the object. Relatedly, it was found that consumers are less likely to think of more precise words when they process product information within their semantic category (Hamby and Levine 2015). We suggest that as a result, more precise words evoke perceptions that the product is more unique. In addition, we predict that this effect can take place even when the language does not directly relate to a product's attribute. For example, a product review for a tour abroad that uses the word '*robin*' would elicit higher perceived uniqueness of the tour than a review that uses the word '*bird*.'

To sum, our hypotheses are:

H1: Product descriptions that include more (vs. less) precise words will be perceived as more (vs. less) unique.

H2: The effect of semantic precision on perceived product uniqueness is mediated by category resemblance, such that more precise words are less likely to be evoked when thinking about their categorically.

H3: Products will be perceived as more (vs. less) unique when their textual environment (with no direct reference to product attributes) is more (vs. less) semantically precise.

3. Method

Studies 1 and 2 demonstrate H1 in the lab and in the field, showing that high(low) semantic precision increases(decreases) perceived product uniqueness. Study 3 shows that the positive effect of semantic precision on perceived uniqueness is mediated by categorical resemblance of words or phrases describing consumer products (H2). Study 4 pushes the theoretical prediction to its limit, showing that the observed effect of semantic precision holds when the more or less precise words/phrases are not related to focal product attributes (H3).

3.1 Study 1: Semantic Precision Increases Perceived Uniqueness

The purpose of study 1 is to test H1 predicting a positive effect of semantic precision on consumer perception of product uniqueness. A total of 425 college students from a U.S. university (181 female; M_{age} = 19.62, SD = 1.19) participated in this online experiment in exchange for partial course credit. Participants were randomly assigned to one of three between-subjects conditions, representing three levels of semantic precision. They read an ad for a T-shirt, presented as "imported from Europe (vs. Netherlands vs. Amsterdam)." Having read the ad, participants rated the T-shirt's uniqueness on a 4-item scale

(distinct/original/special/unique: 1 = not at all, 7 = very much; α = .96), and then rated how precise the phrase "imported from Europe (vs. Netherlands vs. Amsterdam)" was on a 4-item scale (definite/exact/precise/specific; 1 = not at all; 7 = very much, α =.92).

Results of a one-way ANOVA suggested that semantic precision was significantly different across the three conditions, F (2, 422) = 32.60, p <.001. Specifically, the T-shirt "imported from Amsterdam" ($M_{\text{Amsterdam}}$ = 4.41, SD = 1.39) was perceived more precise than "imported from Europe (M_{Europe} = 3.16, SD = 1.58), t (283) = 7.08, p <.001. "Imported from Netherlands" ($M_{\text{Netherlands}}$ = 4.37, SD = 1.47) was also perceived more precise than "imported from Europe," t (282) = 6.64, p <.001. Perceived precision of the T-shirt "imported from Amsterdam" and "imported from Netherlands" was not significantly different, t (279) = .28, p = .783.

Product Uniqueness. We found a strikingly similar pattern regarding perceived uniqueness of the T-shirt. One-way ANOVA suggests that perceived uniqueness was significantly different across three conditions, F (2, 422) = 4.96, p =.007. Specifically, the T-shirt "imported from Amsterdam" ($M_{\text{Amsterdam}}$ = 3.16, SD = 1.66) was perceived more unique than "imported from Europe" (M_{Europe} = 2.60, SD = 1.66), t (283) = 2.84, p =.005, η^2_p = .151. "Imported from Netherlands" ($M_{\text{Netherlands}}$ = 3.09, SD = 1.58) was also perceived more unique than "imported from Europe," t (282) = 2.53, p =.006, η^2_p = .135. Perceived uniqueness of the T-shirt "imported from Amsterdam" and "imported from Netherlands" was not significantly different, t (279) = .37, p = .709.

Study 1 provides preliminary evidence supporting the hypothesized "precise-unique intuition" (H1) in an online experiment. The findings suggest that participants were able to differentiate between levels of semantic precision, and that this difference influenced perceptions of product uniqueness, following the same pattern.

3.2 Study 2: The Precise-Unique Intuition in the Field

The purpose of study 2 is to test the "precise-unique intuition" in a real-world setting. Thirty undergraduate students in a U.S. university served as confederates in this study. Each confederate sent one email to up to thirty friends or acquaintances. The email contained either more, or less precise language, and read, "Hi! I'm working on a research assignment for my marketing (low precision: business) class. My professor's daughter (low precision: family member) opened an online gallery for her paintings (low precision: art). Can you give some feedback? The link is: *MeyArt*. Thanks!" Contacts who opened the email and clicked the link were directed to a landing page of an online gallery. On that page, they were asked to rate the

extent to which they had expected the online gallery to be unique (1 = not unique at all; 7 = very unique).

A total of 633 contacts clicked through to the gallery's landing page. In the low-precision condition, 142 out of 320 (44.36%) participants clicked the link. In the high-precision condition, 164 out of 313 (52.40%) participants clicked the link. A between-subjects Z-test suggested a significantly higher click-through rate in the high (vs. low) precision condition, Z = -2.019, p = .043. Further, out of the participants who had clicked the link (n = 306) those who received a more precise email expected the online gallery to be more unique (M = 5.71, SD =1.39) compared with those who received the less precise email (M = 5.08, SD = 1.33, F (1, 297) = 15.80, p < .001, η^2_p = .051). Thus, Study 2 replicated our precise-unique intuition effect, supporting H1, in the field.

3.3 Study 3: Category Resemblance Mediates The Precise-Unique Link

In study 3, we aimed to explore the psycholinguistic mechanism underlying the precise-unique intuition. We hypothesized that the effect of semantic precision on perceived uniqueness is mediated by category resemblance of more/less precise words (H2). We tested whether more precise words are less likely to be thought of when thinking about their category.

A total of 201 participants recruited through the Prolific Academic platform (144 female, M_{age} = 24.99, SD = 7.32) took part in this online experiment in exchange for a small stipend. Participants were randomly assigned to one of two conditions: high vs. low semantic precision. They read an excerpt from a tourist review of a boat tour in Istanbul, Turkey. Semantic precision was manipulated via twelve words in the review, for example: "The dinner (meal) included soup (appetizer), fish (entrée), and pudding (dessert)". Having read the review, participants rated perceived uniqueness of the tour, and then they rated each word on category resemblance: "when you think of the category, how likely are you to think of that particular word?" (1: not likely at all; 7: very likely)." For example, for the word '*oak(tree)*' the word category was '*plant'*. We computed the average of these twelve ratings to formulate a composite measure of "category resemblance" (α = .81). Next, participants rated perceived semantic precision of the twelve words, taken together.

Results suggested that participants rated the 12 high-precision words as being significantly more precise ($M_{high\text{-}precision}$ = 5.39, SD = 1.11) than the low-precision words ($M_{low\text{-}precision}$ = 4.78, SD = 1.25), F (1, 199) = 13.32, p < .001. Further, perceived category resemblance of the words was significantly lower in the high-precision condition (M = 4.93, SD = .98), than in the low-precision condition (M = 5.34, SD = .88), F (1, 199) = 9.46, p

=.002, η^2_p = .045. The difference in perceived uniqueness between the high- (vs. low-precision condition ($M_{\text{high-precision}}$ = 5.12, SD = 1.22; $M_{\text{low-precision}}$ = 4.91, SD = 1.11) was directional but did not reach significance in this study (F (1, 199) = 1.56, p = .21).

Mediation Role of Category Resemblance. Notably, an insignificant main effect does not rule out the opportunity to explore the underlying mechanism (Zhao, Lynch, and Chen 2010). As we did not observe a significant main effect of semantic precision on perceived uniqueness, we followed Zhao Lynch, and Chen (2010) and recent research (Johnen and Schnittka 2019; Parker et al. 2018) involving indirect-only mediation (i.e., mediation in which there is a significant indirect effect, but no direct effect). We conducted a mediation analysis using the PROCESS procedure (Hayes 2018, Model 4) with 5,000 bootstrap samples, testing the path from semantic precision, through category resemblance, to perceived uniqueness. Semantic precision (binary: manipulated) was tested as the predictor, and category resemblance (continuous; measured) was tested as the mediator (see Figure 2). Results show that semantic precision was a significant predictor of category resemblance (β = -.40, p = .002). When semantic precision and category resemblance were tested as predictors of perceived uniqueness, the effect of semantic precision became a marginally significant (β = .32, p = .053), and the effect of category resemblance was significant (β = .28, p = .001). The mediation pathway from semantic precision to perceived uniqueness via category resemblance was significant (b = -.12, SE = .06, 95% CI: [-.24, -.03]).

Study 3 provided support for the mediation hypothesis in H2, suggesting that semantic precision reduces perceived category resemblance, which in turn increases perceived product uniqueness. The insignificant direct effect of semantic precision on perceived uniqueness may be attributed to the high uniqueness inherent to the tour experience. We therefore conducted study 4 employing a different context, a different precision manipulation. Further, we aimed to test H3, suggesting that products will be perceived as more unique even when the more precise text does not refer directly to product attributes.

3.4 Study 4: Extension to Unrelated Language

A total of 442 online participants (57% female, M_{age} = 32.7, SD = 7.32) recruited through the Prolific Academic platform took part in a 2 (semantic precision: high vs. low) x 2 (relevance to product attributes: high vs. low) between-subjects design. Participants read a customer review of a pizzeria and answered questions about it. The review contained six more (vs. less) precise words (e.g. repaint/change, spotless/clean, mint/herb, cider/beverage, knife/utensil, next week/soon). These words addressed a variety of semantic categories (e.g., action, drink, time) and belonged to different lexical categories (e.g., noun, verb, and

adjective). Word relevance to the pizzeria was manipulated by the subject matters that the words referred to (e.g., “the place was spotless/ I put on a spotless new t-shirt”). After reading the review, participants rated the uniqueness of the pizzeria, category resemblance for each of the six words, and semantic precision of the review. Word relevance was measured on the following item: “taken together, to what extent do the following words in the review describe the pizzeria, its operation, or its products?” (1 = definitely not; 7 = definitely yes). Last, participants indicated the extent to which they would like a pizzeria to be unique and different from other pizzerias (1 = definitely not; 7 = definitely yes).

As expected, participants indicated that on average the focal words were significantly more relevant to the pizzeria in the high- (vs. low-) relevance condition ($M_{high\text{-}relevance}$ = 4.99, SD = 1.40; $M_{low\text{-}relevance}$ = 3.73, SD = 1.55), F (1, 440) = 79.87, p < .001. Further, the 2 (word precision) x 2 (word relevance) between-subjects ANOVA did not show an interaction effect (F (1, 438) = .22, p = .64, η^2_p < .001), suggesting that the effect was similarly strong whether the focal words related to the pizzeria, or not. This result supports H3. In addition, we found a significant main effect of word precision on uniqueness: perceived uniqueness of the pizzeria was significantly higher in the high- (vs. low-) precision condition ($M_{\text{high-precision}}$ = 5.44, SD = 1.01; $M_{\text{low-precision}}$ = 5.02, SD = 1.29), F (1, 438) = 14.38, p <.001, η^2_p = .032. The main effect of word relevance was not significant, F (1,438) = 1.01, p = .32, η^2_p = .002. Finally, we found a significant main effect of word precision on category resemblance. Category resemblance was significantly lower in the high- (vs. low-) precision condition ($M_{\text{high-precision}}$ = 4.16, SD = 1.00; $M_{\text{low-precision}}$ = 5.43, SD = .86), F (1, 438) = 206,87, p <.001, η^2_p = .32. The main effect of word relevance was not significant, F (1, 438) = .03, p = .87, η^2_p < .001. The interaction was not significant either, F (1, 438) = .19, p = .66, η^2_p < .001. Finally, a mediation analysis using model 4 of Hayes (2018) PROCESS macro with 5,000 bootstrap iterations revealed a significant model, whereby word precision was a significant predictor of category resemblance (β = -1.13, SE = .088, p <.001), category resemblance was a significant predictor of perceived uniqueness (β = .30, SE = .06, p <.001), and the full mediation path was also significant (indirect effect = -.33, 95% CI: [-.246, -.203]).

4. General Discussion

Consumers often value unique products (Kasey 2019). Our findings demonstrate the potential benefit of precise language in product marketing, showing that precise descriptions increase perceived uniqueness of the products. As people often have an implicit sense of the baseline level of precision for verbal descriptions, higher precision may signal that

"something is different" about the subject matter. Our findings suggest that this sense, mediated by cognitive category resemblance, elicits perceptions of product uniqueness. We also find that this intuition takes place even when the description does not directly relate to product attributes.

Besides semantic precision, other linguistic aspects in product descriptions may elicit perceptions of product uniqueness. For example, meta-cognitive difficulty (the perception that something is complex and hard to process) enhances perceptions of a product being special (Pocheptsova, Labroo, and Dhar 2010). If so, then it is possible that more complex text, such as text that contains more difficult or unfamiliar words, may induce perceptions of product uniqueness. Future research may investigate the relation between semantic precision and other indicators of product uniqueness.

Some product categories inherently evoke expectations for product uniqueness. For example, wines are often described as special. Thus, inherent category uniqueness may be a boundary to our effect, creating a buffer to the cognitive category resemblance mediator as well. In addition, situational differences may also influence the impact of precision on attitudes and decisions. For example, Ülkümen and Cheema (2011) find that, compared to later stages in consumer journey, consumers are susceptible to more general and less precise information at earlier stages, because it fits with their higher construal level processing style at these stages. This research may inform further research on the link between communication precision and how the topic at hand is construed. Relating to another situational effect, Whitley, Trudel, and Kurt (2018) showed that consumers within hedonic purchase contexts perceive their preferences as highly unique and therefore prefer larger consideration sets, hoping that they will be able to find their specific preference within the more extensive set. Therefore, in contrast to previous research (e.g., Wadhwa and Zhang 2015; Wegener, Petty and Smith 1995) suggesting that consumers in hedonic contexts may be more tolerant to - and even prefer – imprecise, and vaguer, communication, it is possible that in fact in hedonic contexts consumers might prefer more precise language, which would suit their perceptions of their preference uniqueness. Future research will be able to shed light on this question.

To sum, the current work finds that more precise language influences perceived uniqueness of products which it surrounds. Importantly, this effect takes place even when the language is not directly describing product attributes. We show that this effect occurs because more precise language induces perceptions of less category resemblance on our internal categorization system, which in turn influences perceptions of the rarity of a product. While other works exist pertaining to information specificity, detail, concreteness, and precision, the current research is the first to propose a theoretical framework that can explain the effect of

semantic precision on product perceptions. We hope this work will open a conversation about semantic precision and its effects on marketing communication.

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