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## **Made By Mistake: When Mistakes Increase Product Preference**

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Past work suggests that mistakes are undesirable and often result in negative inferences. However, we find that consumers actually prefer products made by mistake to otherwise identical products made intentionally. We document this preference in a field study, nine experiments and eBay auction sales.

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Ritchie, Jane, Jane Lewis, Carol M. Nicholls, and Rachel Ormston (2013), *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, London: Sage.

Taylor, Jenny (2009), "What is the Tablighi Jamaat?" The Guardian, <http://www.theguardian.com/commentisfree/belief/2009/sep/08/religion-islam-tablighi-jamaat>

# Made by Mistake: When Mistakes Increase Product Preference

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## EXTENDED ABSTRACT

Imagine a pastry chef is making a new batch of chocolate. Not paying attention, the chef leaves the chocolate in the oven for an extra five minutes by mistake, resulting in the chocolate having a different taste than the chef had intended. Would learning of the chef's mistake increase or decrease consumer preference for the chocolate?

Intuition and past research suggest that the knowledge of a mistake (i.e., careless action) involved in the making of a product would decrease consumer preference. Indeed, prior work reveals that mistakes are perceived as undesirable and often result in negative inferences about the person or company that made the mistake (Chesney and Su 2010; Michael 1976; Palmer, Simmons, and de Kervenoael 2010). Consequently, individuals and companies tend to avoid sharing information about their mistakes with others (Edmondson 1996; Michael 1976; Stefaniak and Robertson 2010; Uribe et al. 2002). Despite this previous literature, we propose that knowledge of a mistake in the creation of a product can ironically enhance consumer preference for that product. We propose that this preference for products "made by mistake" is not limited to mistakes that enhance a product, but also extends to mistakes that detract from a product.

We posit that this preference results from how consumers reason about the relationship between intention and action. Specifically, we draw from a large body of work on the intentionality bias (Begue et al. 2010; Kana et al. 2015; Rosset 2008; Rosset and Rottman 2014; Spunt, Meyer and Lieberman 2015), which has found that people tend to assume that actions by agents (e.g., individuals, companies, etc.) are done intentionally. We propose that a product made by mistake deviates from this assumption, and thus, is perceived as more improbable than when the same product is made with full intent. In turn, this perceived improbability (for both products that are improved or worsened by a mistake) leads consumers to perceive the product as more unique and thus to prefer it. We test these predictions in a dataset of eBay auction sales, nine lab studies, and an additional study conducted in the field. We outline four of these studies below.

## Conceptualization Of Mistake

The current research examines consumer preference for products made by mistake versus otherwise identical products made with full intent. We define a mistake as "an error in action, calculation, opinion, or judgment caused by poor reasoning, carelessness, insufficient knowledge, etc." (Random House Webster's Unabridged Dictionary 2001). Importantly, a mistake is defined by an outcome's cause (e.g., a careless deviation from intent) but not its valence (e.g., whether the outcome is positive or negative). For instance, returning to the example of the chef who mistakenly left the chocolate in the oven for five extra minutes, this mistake could have a positive outcome (the chocolate could be enhanced), negative outcome (the chocolate could be worsened), or neutral outcome (the chocolate could not be affected). Regardless of the outcome's valence, the extra cooking time is a mistake because it is both a deviation from the chef's intent and the result of carelessness. Thus, in our conceptualization of a mistake, consumers have to perceive the product as a result of an action that both deviates from the creator's intent and is careless in nature.

## Empirical Evidence

### Study 1

Study 1 examined the preference for products made by mistake in a consequential choice setting. Participants learned about a new chocolate that either was (or was not) the result of a mistake. They were then given the choice of receiving either the chocolate or extra monetary compensation. A chi-square analysis revealed that the chocolate made by mistake was chosen (88.6%) more often than the chocolate that was made intentionally (70.3%),  $\chi^2(df = 2, N = 144) = 7.31, p = .007$ .

### Study 2

Study 2 examined whether people still prefer a product made by mistake even when the mistake detracts from a product (i.e., a drawing of a face that is tarnished by a pen scribble). To examine this prediction, participants viewed a drawing of a face with a scribble, and either read information about the artist which included the fact that the artist made a mistake while making the drawing (in the mistake condition), read information about the artist which included the fact that the artist did not make a mistake while making the drawing (in the no mistake condition), or did not read anything about the artist (in the control condition). Thus, this design also examined our theorizing that people still prefer products made by mistake even after they experience them. As we predicted, participants were more likely to purchase the drawing in the mistake condition ( $M = 2.61, SD = 1.73$ ) compared to both the intention condition ( $M = 2.05, SD = 1.44$ ; Fisher's LSD:  $p = .014$ ;  $d = 0.35$ ) and the control condition ( $M = 2.13, SD = 1.53$ ; Fisher's LSD:  $p = .031$ ;  $d = 0.29$ ), which did not differ from each other (Fisher's LSD:  $p = .734$ ). Willingness to pay data revealed the same pattern,  $F(2, 98) = 5.25, p = .006$ . Planned contrasts followed the same pattern, wherein participants were willing to pay more for the drawing in the mistake condition ( $M = 3.11, SD = 3.28$ ) compared to both the intention condition ( $M = 1.81, SD = 2.54$ ; Fisher's LSD:  $p = .002$ ;  $d = 0.44$ ), and the control condition ( $M = 2.28, SD = 2.79$ ; Fisher's LSD:  $p = .041$ ;  $d = 0.27$ ), which did not differ from each other (Fisher's LSD:  $p = .257$ ).

### Study 3

Study 3 provided converging evidence for the proposed mechanism via a moderation and mediation approach. Specifically, we predicted that if consumers are made aware that a particular product creator is likely to make a mistake, perceptions of the improbability of that creator making a mistake will decrease and the preference will attenuate. We tested this prediction in a 2 (Expertise: Novice vs. Expert)  $\times$  2 (Creation Process: Mistake vs. Intention) between-subjects design. In the expert conditions, participants read that the creator was a hip-hop producer who works in the recording industry. In the novice conditions, participants read that the creator was a community college administrator taking a music production class, and that the class assignments included doing recording sessions. We adapted this expertise manipulation from Karmarkar and Tormala (2010). Participants then learned that during a recent recording session, the sound of the creator's breath was added to a song. This addition was either intentional (in the intention condition) or made by mistake (in the mistake condition) and it enhanced the overall sound and flow of the song.

As predicted, the interaction between expertise and creation process on choice was significant ( $b = 1.29, p = .029$ ). In the expert conditions, participants preferred the song when it was made by mistake (67.4%) compared to when it was made intentionally (39.5%;  $b = 1.15, p = .012$ ). In the novice conditions, there was no difference in song preference when it was made by mistake (49.1%) versus intentionally (52.4%;  $b = .13, p = .721$ ). Further analysis revealed a significant interaction between expertise and creation process on perceived improbability,  $F(1, 198) = 3.93, p = .049$ . Consistent with participants' song decisions, the song was perceived as more improbable when an expert made it by mistake ( $M = 4.37, SD = 1.77$ ) compared to when the song was made intentionally ( $M = 3.47, SD = 1.41$ ; Fisher's LSD:  $p = .013; d = .56$ ). In contrast, when a novice made the song, there were no differences between the mistake ( $M = 4.26, SD = 1.75$ ) and intention ( $M = 4.29, SD = 1.55$ ) conditions,  $F < 1$ . The analysis also revealed the predicted interaction between expertise and creation process on uniqueness,  $F(1, 198) = 7.67, p = .006$ . The song was perceived as more unique when an expert made it by mistake ( $M = 4.45, SD = 1.03$ ) compared to when the song was made intentionally ( $M = 3.96, SD = 1.16$ ) (Fisher's LSD:  $p = .047; d = .45$ ). In contrast, when a novice made the song, the opposite was the case—when the novice made the song intentionally it was deemed as marginally more unique ( $M = 4.44, SD = 1.22$ ) than when it was made by mistake ( $M = 4.04, SD = 1.08$ ; Fisher's LSD:  $p = .055; d = .35$ ).

To test our proposed process, we ran a serial mediation model at each level of the expertise condition, with improbability and uniqueness as sequential mediators. As predicted, the model revealed that when an expert made a mistake (vs. made the song intentionally), the song was perceived to be more improbable, which increased perceived uniqueness, resulting in greater song choice (95% CI for the indirect effect: [-.7446, -.0465]). Importantly, we tested the reverse model with uniqueness preceding perceptions of improbability, and we found no mediating path from uniqueness and improbability leading to song choice (95% CI for the indirect effect: [-.2560, .0562]). Lastly, as predicted, for novices, there was no significant indirect effect from improbability to uniqueness leading to song choice (95% CI for the indirect effect: [-.1157, .0264]).

#### Study 4

Study 4 examined the preference for products made by mistake in a real market setting. We examined eBay auction sales of original photographs—some of which were made by mistake and some of which were not. The mistakes originated from a variety of causes, including double exposure, blurriness, and the photographer's finger in the exposure (i.e., finger bombing). Critically, all photographs were advertised as original, with no copies and reproductions of any kind available. In other words, all photographs (both those with mistakes and those without) were one-of-a-kind and hence equally rare. The photographs were sold on eBay to the consumer who submitted the highest bid. We ran a regression on the price data with the mistake dummy code as a predictor variable, and the sale date and photograph size as control variables. The regression revealed a significant effect of photograph size on sale price, such that larger photographs sold for more money ( $b = .529, p < .001$ ). There was no effect of sale date on sale price ( $b = -.008, p = .292$ ). Most relevant to our focal theorizing, the regression also revealed that photographs with mistakes (vs. without mistakes) sold for more money ( $b = 6.08, p < .001$ ). In other words, photographs with a mistake sold for a premium controlling for both photograph size and sale date.

Thus, we observe in an actual market context a premium for products with a mistake over products without a mistake. We posit, in line with our experimental evidence, that this preference is driven

by the perception that a photograph with a mistake is a more improbable occurrence than a photograph made with full intent, and thus is conferred with more uniqueness and value. It is interesting to note that photographs containing arguably negative properties (i.e., blurriness) received a premium relative to those containing no such negative property. Thus, along with Study 2, these results may provide converging evidence that the preference for products made by mistake emerges not only in cases in which the mistake enhances the product, but also when it detracts from it.

#### General Discussion

Individuals and companies often avoid advertising their mistakes (Edmondson 1996; Michael 1976; Stefaniak and Robertson 2010; Uribe et al. 2002). However, we find that consumers sometimes prefer products made by mistake to otherwise identical products made intentionally. We identify the conditions under which this preference emerges, and find that this preference is driven by the perception that a product made by mistake is more improbable than a product made without mistake. This perceived improbability increases product uniqueness perceptions and subsequent preference.

In support of this process, we find that the preference for products made by mistake manifests both when the mistake enhances (Study 1 & Study 3) and detracts from (Study 2 & Study 4) the product. Study 3 provided moderation support for this process: When the creator had a high likelihood of making a mistake (a novice), the preference for products made by mistake was attenuated. Study 3 also found full process evidence, wherein perceptions of the improbability of the product's creation enhanced perceptions of product uniqueness and preference. Finally, Study 4 documented the external validity of the current results—consumers pay more for products made by mistake in a real market setting.

#### Theoretical Implications

The current research is the first to reveal that consumers prefer products made by mistake, and that this preference emerges because mistakes are perceived to be improbable and the resulting product more unique. Beyond documenting a new phenomenon, our findings illuminate a novel mechanism through which information about the creation process influences consumer preference. We find that consumers differentially prefer identical products depending on the improbability of their creation. Further, we find that a typically negative occurrence (a mistake) actually increases product preference. This finding contributes to a growing body of work showcasing the positive effects of negative information (Berger, Sorensen, and Rasmussen, 2010; Ein-Gar, Shiv and Tormala, 2012; Reich and Tormala, 2013; Reich and Wheeler, 2016).

Second, our work contributes to the underexplored role of intentions in consumer preference. By focusing on mistakes in particular, we reveal a novel process by which intentionality plays a role in consumer preference. A product made by mistake deviates from the intentionally bias (Begue et al. 2010; Rosset 2008; Rosset and Rottman 2014; Spunt et al. 2015), and consumers thus perceive the process of making a product by mistake as more improbable and hence more unique than the same product made with full intent. Future work could examine other potential consequences of the intentionality bias in the context of how consumers assess the actions of individuals and companies.

Finally, our findings also contribute to work on the role of uniqueness in consumer preference. Prior work has focused on individual differences in consumers' need for uniqueness (Simonson and Nowlis 2000; Tian et al. 2001) or on how uniqueness is distinct from other dimensions of value (Bhattacharjee and Mogilner 2014;

Keinan and Kivetz 2011). The present work illuminates a conceptual antecedent of perceptions of product uniqueness. Specifically, we find that product uniqueness stems from the improbability of the product's creation. Our work suggests that these process features do not necessarily have to be positive, but rather unlikely. We encourage future research to examine other antecedents that might enhance product uniqueness.

## REFERENCES

- Bègue, Laurent, Brad J. Bushman, Peter R. Giancola, Baptiste Subra, and Evelyn Rosset (2010), "There is No Such Thing as an Accident: Especially When People are Drunk." *Personality and Social Psychology Bulletin*, 36(10), 1301-04.
- Berger, Jonah, Alan T. Sorensen, and Scott J. Rasmussen (2010), "Positive Effects of Negative Publicity: When Negative Reviews Increase Sales." *Marketing Science*, 29(5), 815-27.
- Bhattacharjee, Amit, Jonathan Z. Berman, and Americus Reed (2013), "Tip of the Hat, Wag of the Finger: How Moral Decoupling Enables Consumers to Admire and Admonish." *Journal of Consumer Research*, 39(6), 1167-84.
- Bhattacharjee, Amit, and Cassie Mogilner (2014), "Happiness from Ordinary and Extraordinary Experiences." *Journal of Consumer Research*, 41(January), 1-17.
- Chesney, Thomas, and Daniel KS Su (2010), "The Impact of Anonymity on Weblog Credibility." *International Journal of Human-Computer Studies*, 68(October), 710-18.
- Edmondson, Amy C. (1996), "Learning from Mistakes is Easier Said than Done: Group and Organizational Influences on the Detection and Correction of Human Error." *The Journal of Applied Behavioral Science*, 32(January), 5-28.
- Ein-Gar, Danit, Baba Shiv, and Zakary L. Tormala (2012), "When Blemishing Leads to Blossoming: The Positive Effect of Negative Information." *Journal of Consumer Research*, 38(5), 846-59.
- Fuchs, Christoph, Martin Schreier, and Stijn MJ van Osselaer (2015), "The Handmade Effect: What's Love Got to Do with It?" *Journal of Marketing*, 79(March), 98-110.
- Gilbert, Daniel T., and Patrick S. Malone (1995), "The Correspondence Bias." *Psychological Bulletin*, 117(1), 21-38.
- Haberstroh, Kristina, Ulrich R. Orth, Stefan Hoffmann, and Berit Brunk (2015), "Consumer Response to Unethical Corporate Behavior: A Re-Examination and Extension of the Moral Decoupling Model." *Journal of Business Ethics*, 1-13.
- Hassin, Ran R., Henk Aarts, and Melissa J. Ferguson (2005), "Automatic Goal Inferences." *Journal of Experimental Social Psychology*, 41(2), 129-40.
- Heider, Fritz (1958), *The Psychology of Interpersonal Relations*, New York: Wiley.
- Hong, Sung-Tai, and Robert S. Wyer (1989), "Effects of Country-of-Origin and Product-Attribute Information on Product Evaluation: An Information Processing Perspective." *Journal of Consumer Research*, 16(2), 175-87.
- Inesi, M. Ena, Simona Botti, David Dubois, Derek D. Rucker, and Adam D. Galinsky (2011), "Power and Choice: Their Dynamic Interplay in Quenching the Thirst for Personal Control." *Psychological Science*, 22(August), 1042-48.
- Kana, Rajesh K., Carla J. Ammons, Constance F. Doss, Megan E. Waite, Bhumika Kana, Abbey J. Herringshaw, and Lawrence Ver Hoef (2015), "Language and Motor Cortex Response to Comprehending Accidental and Intentional Action Sentences." *Neuropsychologia*, 77(October), 158-64.
- Keinan, Anat, and Ran Kivetz (2011), "Productivity Orientation and the Consumption of Collectable Experiences." *Journal of Consumer Research*, 37(June), 935-50.
- Knobe, Joshua (2003), "Intentional Action and Side Effects in Ordinary Language." *Analysis*, 63(279), 190-4.
- Kruger, Justin, Derrick Wirtz, Leaf Van Boven, and T. William Altermatt (2004), "The Effort Heuristic." *Journal of Experimental Social Psychology*, 40, 91-8.
- Levin, Irwin P., and Gary J. Gaeth (1988), "How Consumers Are Affected by the Framing of Attribute Information Before and After Consuming the Product." *Journal of Consumer Research*, 15(3), 374-78.
- Malle, Bertram F., and Joshua Knobe (1997), "The Folk Concept of Intentionality." *Journal of Experimental Social Psychology*, 33(2), 101-21.
- Michael, Donald N. (1976), *On Learning to Plan and Planning to Learn*, San Francisco: Jossey-Bass.
- Morales, Andrea C. (2005), "Giving Firms an 'E' for Effort: Consumer responses to High-Effort Firms." *Journal of Consumer Research*, 31(March), 806-12.
- Newman, George E., Margarita Gorlin, and Ravi Dhar (2014), "When Going Green Backfires: How Firm Intentions Shape the Evaluation of Socially Beneficial Product Enhancements." *Journal of Consumer Research*, 41(3), 823-39.
- Nisbett, Richard E., and Timothy D. Wilson (1977), "Telling More than We Can Know: Verbal Reports on Mental Processes." *Psychological Review*, 84(3), 231-59.
- Palmer, Mark, Geoff Simmons, and Ronan de Kervenoael (2010), "Brilliant Mistake! Essays on Incidents of Management Mistakes and Mea Culpa." *International Journal of Retail & Distribution Management*, 38(March), 234-57.
- Pizarro, David, Eric Uhlmann, and Peter Salovey (2003), "Asymmetry in Judgments of Moral Blame and Praise the Role of Perceived Metadesires." *Psychological Science*, 14(3), 267-72.
- Random House Webster's Unabridged Dictionary (2001), New York: Random House Reference.
- Reich, Taly, and Zakary L. Tormala (2013), "When Contradictions Foster Persuasion: An Attributional Perspective." *Journal of Experimental Social Psychology*, 49(3), 426-39.
- Reich, Taly, and S. Christian Wheeler (2016), "The Good and Bad of Ambivalence: Desiring Ambivalence When the Outcome is Uncertain." *Journal of Personality and Social Psychology*, 110(4), 493-508.
- Roberts, Royston M. (1989), *Serendipity: Accidental Discoveries in Science*, New York: John Wiley & Sons.
- Roe, Brian, Alan S. Levy, and Brenda M. Derby (1999), "The Impact of Health Claims on Consumer Search and Product Evaluation Outcomes: Results from FDA Experimental Data." *Journal of Public Policy and Marketing*, 18(1), 89-105.
- Rosset, Evelyn (2008), "It's No Accident: Our Bias for Intentional Explanations." *Cognition*, 108(3), 771-80.
- Rosset, Evelyn, and Joshua Rottman (2014), "The Big 'Whoops!' in the Study of Intentional Behavior: An Appeal for a New Framework in Understanding Human Actions." *Journal of Cognition and Culture*, 14(1-2), 27-39.
- Rucker, Derek D., and Adam D. Galinsky (2008), "Desire to Acquire: Powerlessness and Compensatory Consumption." *Journal of Consumer Research*, 35(August), 257-67.

- Ruvio, Ayalla, Aviv Shoham, and Maja Makovec Brencic (2008), "Consumers' Need for Uniqueness: Short-Form Scale Development and Cross-Cultural Validation." *International Marketing Review*, 25(1), 33-53.
- Shiv, Baba, Ziv Carmon, and Dan Ariely (2005), "Placebo Effects of Marketing Actions: Consumers May Get What They Pay For." *Journal of Marketing Research*, 42(4), 383-93.
- Simonson, Itamar, and Stephen M. Nowlis (2000) "The Role of Explanations and need for uniqueness in consumer decision making: Unconventional choices based on reasons." *Journal of Consumer Research*, 27(1 (2000): 49-68.
- Smith, Rosanna K., and George E. Newman (2014), "When multiple creators are worse than one: The bias toward single authors in the evaluation of art." *Psychology of Aesthetics, Creativity, and the Arts*, 8(March), 303-10.
- Smith, Rosanna K., George E. Newman, and Ravi Dhar (2016), "Closer to the Creator: Temporal Contagion Explains the Preference for Earlier Serial Numbers." *Journal of Consumer Research*, 42(5), 653-68.
- Spunt, Robert P., Meghan L. Meyer, and Matthew D. Lieberman (2015), "The Default mode of human brain function primes the intentional stance." *Journal of Cognitive Neuroscience*, 27(6), 1116-24.
- Stefaniak, Chad, and Jesse C. Robertson (2010), "When Auditors Err: How Mistake Significance and Superiors' Historical Reactions Influence Auditors' Likelihood to Admit a Mistake." *International Journal of Auditing*, 14(March), 41-55.
- Tian, Kelly Tepper, William O. Bearden, and Gary L. Hunter (2001), "Consumers' Need for Uniqueness: Scale Development and Validation." *Journal of Consumer Research*, 28(1), 50-66.
- Uribe, Claudia L., Sharon B. Schweikhart, Dev S. Pathak, Gail B. Marsh, and R. Reed Fraley (2002), "Perceived Barriers to Medical-Error Reporting: An Exploratory Investigation." *Journal of Healthcare Management*, 47(April), 263-79.