The Impact of Counterfactual Mindset on Consumer Information Processing

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Counterfactual thinking is the process of looking back at events and thinking how things could have turned out differently. Whenever individuals consider how the past might have turned out differently, they are engaging in counterfactual thinking. We propose that consumers’ preference for product feasibility and desirability will be moderated by counterfactual thinking (vs. control). Specifically, consumers’ preference for product feasibility will be boosted after going through counterfactual thinking in an unrelated domain. The results from three experiments under different contexts supported our hypotheses.

[to cite]:

[url]:
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We tested the present predictions in two studies. In Study 1, we used a regulatory focus (promotion vs. prevention) x loyalty reward (hedonic vs. utilitarian) two-factor design where the reward was manipulated as a between-subject factor through loyalty program scenarios and the regulatory focus was measured as an individual difference factor (N=236). Wine and a gasoline coupon (equal monetary value) were used as hedonic and utilitarian rewards respectively. The dependent variables were preference toward the loyalty program and the likelihood of joining the program. A MANOVA revealed that promotion-focused consumers are more likely to prefer and join loyalty programs offering utilitarian rewards compared to those offering hedonic rewards. Prevention-consumers were indifferent toward either type of loyalty program. Participants’ chronic reactance was also measured and an ANOVA indicated that promotion-focused consumers were indeed higher in chronic reactance compared to prevention-focused consumers.

Study 2 utilized a regulatory focus (promotion vs. prevention) x loyalty reward (hedonic vs. utilitarian) two-factor design where both the reward and the regulatory focus were manipulated as between-subject factors through loyalty program scenarios (N=143). A restaurant certificate and a grocery coupon (equal monetary value) were used as hedonic and utilitarian rewards respectively. The dependent variables were the same as in Study 1. The MANOVA replicated Study 1 results. When individuals’ promotion goals were made accessible, they showed a tendency to prefer and join loyalty programs offering utilitarian rewards vs. hedonic rewards. When prevention goals were induced, individuals were indifferent toward either type of loyalty program. An ANOVA indicated that promotion-primed consumers exhibited higher reactance compared to prevention-primed consumers.

The present research showed that consumers' preferences toward hedonic and utilitarian rewards in the context of loyalty programs may not necessarily fit their regulatory goals. The differences in the level of reactance experienced seem to influence consumers’ reward preferences. Promotion-focused consumers, for whom reactance becomes a salient factor, tend to prefer utilitarian loyalty rewards to alleviate the resulting unpleasant state. Prevention-focused consumers, who are less concerned with reactance, are indifferent toward either loyalty reward.

References

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Extended Abstract
Counterfactual thinking is the process of looking back at events and thinking how things could have turned out differently. Whenever individuals consider how the past might have turned out differently, they are engaging in counterfactual thinking. For example, in consumption context, imagine that one consumer finds her HDTV needs repair just after the warranty expires. This consumer may think to herself: “If only I had purchased a TV with an extended warranty, I would not have to incur so much cost on this repair.”

A large body of research has documented a wide variety of psychological (e.g., emotional and judgmental) consequences of engaging in counterfactual thinking. Two basic routes through which counterfactual thinking influences individuals have been differentiated in the literature: the content-specific route and the content-neutral route (Epstude and Roese 2008). Through the content-specific route, counterfactual thinking influences the same behavior specified by the counterfactual. In contrast, through the content-neutral route, counterfactual thinking influences individuals’ behavior in domains that are independent of the counterfactual context. That is, independent of the meaning contained in a counterfactual thought, the process of counterfactual thinking can ignite attentional, cognitive, or motivational processes that will linger after counterfactual thinking and alter individuals’ subsequent behavior in another domain. For example, counterfactual thinking in one domain (e.g., missing a flight) can influence behavior in a different domain (e.g., buying a book, ordering meal in the airport).

Recently, an emerging stream of research starts to study the content-neutral route, especially, the influence of counterfactual mindset (or cognition orientations) that results from constructing counterfactual thoughts (Galinsky and Moskowitz 2000). A counterfactual mind-set may involve a range of cognitive operations, including attention shifts to specific classes of information and the use of specific inferential strategies (Galinsky and Kray 2004; Krishnamurthy and Sivaraman 2002). In this research we explored how counterfactual thinking might activate another cognition orientation and influence consumers’ preferences. Specifically, we propose that counterfactual thinking can activate a process/procedure-focused (i.e., “how to”) cognition orientation, which leads consumers to construe activities
more often as “how to,” overweight product feasibility attributes in choice, and be persuaded more by ad messages promoting ease-of-use product features.

Counterfactual thinking often takes the form of a conditional proposition, in which individuals identify alternative routes or processes to mutate factual events. For example, Krishnamurthy and Sivaraman (2002) view counterfactual thinking as a problem-solving process which involves generating alternatives, steps, and solutions to solve problems. That is, counterfactual thinking involves mentally mutating a past event by re-running the sequence of the event and also simulating the necessary alternative steps or procedures needed to alter what has happened. In this way, counterfactual thinking may activate a process-focused information processing mentality and sensitize individuals to procedural information. This is especially true for counterfactual thinking involving a sequence of actions (e.g., one missed an important meeting because of first alarm clock failure, then being caught in traffic jams, and also getting lost the building) instead of single event (e.g., one missed the chance to win a trip to Hawaii because of seat switching) (Roese 1997).

In consumption context, the mindset of focusing on processes or procedural relationships created through counterfactual thinking will increase consumers’ ability to perceive, understand, and value product ease-of-use or product feasibility in judgment and choice. Product feasibility, in addition to desirability, is a prominent consideration of consumer choices. Many times consumer decision making involves a trade-off between these two product attributes (Zhao, Hoeffler, Zauberman 2007). Several moderating conditions for consumers’ preference for product feasibility and desirability have been identified in the literature, e.g., product trial experience, decision time distance, decision stage, etc. (Hamilton and Thompson 2007; Rothman 2000; Trope and Liberman 2000).

We propose that consumers’ preference for product feasibility and desirability will be moderated by counterfactual thinking (vs. control). Specifically, consumers’ preference for product feasibility will be boosted after going through counterfactual thinking in an unrelated domain. We conducted three experiments to test our hypotheses.

In Study 1, we examined how counterfactual thinking (vs. control) impacts the way in which individuals construe activities. 124 participants were randomly assigned to either a control condition or a counterfactual thinking group. Participants in the counterfactual thinking group were instructed to engage in counterfactual thinking with a standard procedure borrowed from the literature. Then, all the participants completed the Behavior Identification Form (BIF). The BIF, a 25-item, dichotomous-response questionnaire, assesses individual differences in level of action identification. For each item, participants read about an action (e.g., “voting”) and circled which of two identifications more appropriately described it. The choices corresponded to “how to” (i.e., procedural) identifications (e.g., “marking a ballot”) and ends identifications (e.g., “influencing the election”). A one-way ANOVA on the total number of “how to” identifications revealed a significant main effect for counterfactual thinking such that individuals gone through counterfactual thinking had a higher total number of “how to” identifications (M=5.75) than the control group (M=4.70, F (1, 122)=6.52, p<0.05).

In Study 2, we employed a 2 (counterfactual thinking vs. control) x 2 (high-desirability and low-feasibility product vs. low-desirability and high-feasibility product) between subject factorial design to study how counterfactual thinking will impact consumer choices of product that are presented either in terms of product feasibility or desirability. A total 171 students participated in the study. The counterfactual scenario was modeled after the literature (Roese 1997). The scenario asked the participants to imagine that they experienced a broken camera on a beach during a vacation and later found out that the camera was broken because the camera was left on the beach too long and the battery was damaged. After reading the scenario, participants were asked to complete a series of “If only ______” counterfactual thinking sentences. The control group read the same scenario without going through counterfactual thinking and only wrote down their thoughts that went through their minds as they read the story. Then, participants read a product review from the CNET about MP3 voice recorder. The high-desirability and low-feasibility product was rated high on desirability attributes (e.g., recording quality, overall rating); whereas the high-feasibility and low-desirability product was rated high on feasibility (e.g., ease of use, quick to set up). Two-way ANOVAs revealed a significant two-way interaction between the two factors (F (1, 167)=5.30, p<0.05). Further analyses showed that individuals gone through counterfactual thinking indicated higher intentions to choose the high-feasibility and low-desirability option (M=4.79) than the high-desirability and low-feasibility option (M=4.09, t=2.43, p<0.05). There was no difference in the control condition. Similar results were found on other dependent measures including likelihood to buy and product attitude.

In Study 3, we seek to replicate the findings in Study 2 in persuasion context to further explore the role of counterfactual thinking on consumer information processing. It was a two-factor between subject factorial: 2 (counterfactual thinking vs. control) x 2 (ad promoting feasibility attributes vs. ad promoting desirability attributes). A total of 136 students participated in the study. A similar procedure was used to manipulated counterfactual thinking, but with a scenario about missing an important interview. Then participants were shown two digital camera ads promoting a pseudo brand. One ad had a headline of “An Easy Way to Capture Important Moments!” and highlighted the feasibility attributes of the camera (e.g., easy to frame and shoot pictures and videos, automatic face detection, etc.); the other ad had a headline of “An Perfect Camera for Important Moments!” and highlighted the desirability attributes of the camera (e.g., large LCD, true HD quality, etc.). Two-way ANOVAs revealed a significant two-way interaction between the two factors on intention to use (F (1, 132)=5.60, p<0.05). Further analyses showed that, for individuals gone through counterfactual thinking, they indicated higher intentions to use the camera after reading the ad promoting feasibility attributes (M=5.02) than the ad promoting desirability attributes (M=3.84, t=2.68, p<0.01). The two ads were equally persuasive in the control condition (t=.67, p=.51). Similar results were found on other dependent measures including likelihood to buy and product attitude.

Taken together, these three experiments support our proposed theorizing that consumers’ preference for product feasibility will be boosted after going through counterfactual thinking in an unrelated domain.

References

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**Counterfactual Priming Effects on Advertising Persuasion**  
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**Extended Abstract**

Counterfactual thinking (CFT) refers to the process of reflecting on past events and simulating alternative possible outcomes. CFT impacts consumers in many ways, including their emotions, judgments, and decision making. Consumers engage in CFT, either upward or downward, after experiencing purchase events. For example, imagine that your new plasma TV needs to be repaired immediately after the warranty expires. As you consider this repair, you might engage in upward counterfactual thinking, generating alternatives that are better than actuality, when you think, if only I had purchased a TV with an extended warranty, I would not have to spend so much money on this repair. Conversely, if you engage in downward counterfactual thinking as you contemplate the repair, you would generate alternatives that are worse than actuality. You might think, at least I did not purchase the model with the longer warranty and smaller screen, because I enjoy my large screen TV. CFT occurs in a variety of consumer contexts, regardless of the valence, positive or negative, of purchase outcomes.

In consumer contexts, it is important to understand how CFT affects consumers’ future decision making. Such understanding will help marketers develop effective marketing strategies. Little consumer research has investigated related issues on this topic. Given that CFT may influence information processing (Krishnamurthy and Sivaraman 2002), it is important to determine how and when such effects occur. This research investigates how cognitive activities (i.e., CFT) initiated by previously encountered events (e.g., a negative purchase experience) impact consumers’ subsequent processing of ad messages. Such motivational priming processes are only beginning to be understood in social psychology (Roese, Hur, and Pennington 1999, Galinsky and Moskowitz 2000), and have not received much attention in the consumer behavior literature.

After experiencing a purchase event, particularly following a negative outcome, consumers engage in either upward or downward CFT (Walchli and Landman 2003). Recent research has indicated that upward CFT impacts consumers’ processing of subsequently encountered ad messages (Krishnamurthy and Sivaraman 2002). Consumers who engage in upward CFT scrutinize ad claims, and thus they are more persuaded by strong arguments than by weak arguments. Roese (1994) indicates that upward counterfactuals serve a preparative function and help to improve performance in the future. Following this logic, after a negative purchase outcome, consumers who engage in upward CFT should seek improvements over their previous experience. Thus, these consumers should process subsequent information via a central route, while those do not engage in upward CFT via peripheral route, according to the elaboration-likelihood model, ELM ( Petty, Cacioppo, and Schumann 1983). We argue that this mentality primed should affect consumers’ preference for comparative appeals vs. noncomparative appeals.

Specifically, we conducted two experiments demonstrating the impact of CFT in response to previous consumption experience on the effectiveness of comparative advertising appeals that consumers subsequently get exposed to. In experiment 1, we show the effect of CFT on consumers’ processing of subsequently encountered ad messages (comparative vs. noncomparative) that is relevant to prior consumption experience. In experiment 2, the effects observed in experiment 1 are replicated when subsequently encountered ad information is unrelated to the previous consumption experience, providing an extension of experiment 1 and establishing the robustness of the documented findings.