When It Happened Tells Us What Happened: the Effects of Temporal Distance and Metacognitive Inference on Word-Of-Mouth

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Inferences from WOM information are influenced by metacognitive assumptions, including the assumption that extreme events are better remembered. Consumers read WOM accounts about a negative restaurant experience that happened one year or one week ago. They inferred that the experience was worse (experiment 1) and reported lower intentions to visit the restaurant (experiment 3), when the recalled event was temporally distant rather than recent, despite understanding that recent events are more predictive of current service quality than distant ones (experiment 2). We conclude that consumers draw on others’ memory performance as a source of information and discuss implications for WOM.

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SESSION OVERVIEW

There is a growing interest among consumer researchers to understand the antecedents and consequences of psychological distance. Psychological distance is a fundamental construct in human cognition and it can manifest itself in the perceived geographical distance (close vs. remote), temporal distance (recent vs. distant), or construal level (concrete vs. abstract; how vs. why mindset). Psychological distance can have a direct effect on consumer behavior by changing the perceived distance to stores and cities (e.g., Raghubir and Krishna 1996) and thus influence preferences, choices, and willingness to pay (WTP). It can also have an indirect effect by changing how consumers construe the available information (e.g., Liberman, Trope, and Wakslak 2007). In this special session, we address an issue that has received limited attention in the extant literature: the role of metacognitive experiences in perceived psychological distance. We bring together four papers that examine the interplay of metacognitive experience and psychological distance in judgments and decisions. The first two papers in the proposed session investigate how metacognitive experience influences perceived distance and its consequences. The third and fourth papers examine how psychological distance moderates the effect of metacognitive experience on judgments. Together, these four papers offer new insights into how metacognitive experience and psychological distance interactively influence judgments and decisions.

Using a series of seven experiments, Alter, Oppenheimer, and Shah manipulate metacognitive experiences arising from different sources of processing fluency—font, conceptual priming, and linguistic structure—to investigate its influence on perceived geographical distance, construal levels, and its consequences. Thomas, Lindsey and Lakshmanam extend this work to show that metacognitive experience induced by familiarity has a similar effect on perceived geographical distance. They test the origins of this effect, ascribing it to misattribution for expectancy disconfirmation.

Tsai and McGill further investigate metacognitive experiences by uncovering conditions in which consumers may reverse the cue relationship between judgments and fluency. Using a series of three experiments, Tsai and McGill demonstrate that choice confidence is systematically influenced by fluency but that these effects are moderated by levels of construal (how vs. why mindset), which evoke different theories to interpret the subjective experiences of ease. At lower construal levels, fluency informs the feasibility of achieving the outcome but at higher construal levels fluency signals low investment in decision and thus lack of confirmation for outcome desirability.

Similarly, Smith and Schwarz show that when consumers make inferences based on the reported experiences of others, such inferences are moderated by temporal distance from the event and the vividness of this report. Specifically, experiences closer in time should be more relevant to predictions of enjoyment than experiences that occurred long time ago, a concept consumers understand in the abstract but which they may reverse when the experience is highly vivid (and so seemingly better remembered) due to the metacognitive belief that more extreme events are better remembered (i.e., more vivid).

These four papers feature on-going work that connects research on psychological distance with issues important to marketers. Session participants should come away with increased understanding of the influence of met cognition on variables directly important to marketers such as shopping distance, confidence in choice, inferences of future quality based on word of mouth reports. These papers also explore seemingly incongruent findings to help map the interactive effect of fluency and psychological distance on judgments and decisions.

EXTENDED ABSTRACT

“Fluency and Psychological Distance: Consequences for Construal and Discounting”

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Psychological distance—the subjective experience of distance from a target stimulus—influences many important judgments and decisions, including how objects in the environment are represented mentally, and which of two future monetary rewards people prefer. Researchers typically show these effects by manipulating how far the target stimuli are from the perceiver. In contrast, we suggest that people make such distance calculations spontaneously, even without explicit instruction. In particular, we argue that a stimulus feels psychologically close to the extent that it is easy to process. In Studies 1 and 2, we began by showing that people use processing fluency—the ease with which they process a stimulus—as a cue to determine the psychological distance of a stimulus (for related research, see: Alter and Oppenheimer, 2006, 2008, 2009; Alter, Oppenheimer, Epley and Erye 2007).

In Study 1, participants believed that cities printed in a disfluent font were farther away than cities printed in a fluent font. Replicating this effect using a different instantiation of fluency, participants in Study 2 estimated the distance of cities whose names they either had or had not read in an earlier, ostensibly unrelated phase of the study. As expected, participants rated the cities as nearer when their names had been primed, and were therefore more fluent.

Having shown that fluency influences distance estimates, we examined the effects of fluency on mental construal, and future reward preferences. According to Construal Theory (Trope and Liberman 2003), the nearer we are to a stimulus, the more likely we are to focus on its concrete, specific details. As we move further away, we focus on its abstract, global properties. Participants in Study 3 were asked to write a one-sentence description of New York city. The request was printed in either an easy to read or a difficult to read font. As expected, participants generated more abstract descriptions of New York when the request was printed in the difficult to read font.

Study 4 replicate this effect using the conceptual fluency priming paradigm described in Study 2. Participants in Study 4 preferred concrete descriptions of Los Angeles when they had earlier been primed with the name of the city, but relatively preferred abstract descriptions when they were not earlier primed.
In Study 5, we showed that this effect also holds in a naturalistic environment, using a third instantiation of fluency: linguistic fluency. We collected archival data from a web-based community of Balderdash contestants. In the game of Balderdash, players attempt to generate plausible definitions for obscure English words. Consistent with Studies 3 and 4, participants generated more abstract definitions for words that were difficult to pronounce.

Psychological distance has similarly profound effects on intertemporal choice. When making intertemporal choices, people often discount the value of delayed rewards. This discounting is best modeled by hyperbolic or hyperbola-like functions (Green and Myerson 2004). These models of choice predict that adding a constant delay in front of two rewards might lead to preference reversals. For example, a person choosing between $10 immediately versus $15 in one week might prefer the immediate reward. However, when choosing between $10 in ten weeks versus $15 in 11 weeks this person might prefer the later reward, even though the absolute time difference between the two rewards is still one week.

Consistent with these findings, in Study 6, we found that participants were more likely to choose a larger, later reward (LL) than a shorter, sooner reward (SS) when the questionnaire was printed in a disfluent font rather than a fluent font. Since disfluency made both rewards seem more psychologically remote, the displeasure of waiting for the larger reward figured less prominently in participants’ choices.

In contrast to this result, for immediate vs. delayed reward choices, we might expect disfluency to lead to diminishing preferences for the LL reward, because it would be perceived as farther away while the perception of the immediate reward would not change.

To test this prediction, participants in Study 7 imagined receiving a $75 Visa gift card that had no expiration date. Half of the participants were told that the gift card could be used immediately, half were told that the card could only be used after waiting for one year. They were then asked to imagine having to wait an additional two months before using the gift card and asked how much more money they would need to be paid in order to wait. Half of the participants received questionnaires printed in a fluent font, whereas the other half received questionnaires printed in a disfluent font. As expected, when considering the immediately available gift card, participants in the disfluent condition asked for more money to wait than did participants in the fluent condition, whereas, when considering the delayed gift card, participants in the disfluent condition asked for less money to wait than did participants in the fluent condition.

This research therefore suggests that processing fluency is one plausible mechanism behind several fundamental processes in human cognition. Since fluency is cheap and easy to manipulate, these studies have useful implications for marketing researchers and practitioners who seek to shape how people construe goods and services.

References


Why Does Familiarity Affect Distance Judgments? The Discrepancy Attribution Hypothesis
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The burgeoning literature on the role of psychological distance in everyday decisions has prompted researchers to examine factors that influence distance judgments. In this research we focus on the role of metacognitive experience in distance judgments. Recent work by Alter and Oppenheimer (2008) has shown that distance judgments are influenced not only by the available cognitive information but also by the metacognitive experience evoked by the information. We extend this research by addressing two important questions about the role of fluency in distance judgments. First, we examine the generalizability of this effect by testing whether the metacognitive experience induced by familiarity has the same effect as that caused by manipulations of font, conceptual priming, or linguistic structure. While the latter manipulations are very useful tools to delineate the role of processing fluency in judgments in laboratory settings, familiarity is a more ubiquitous antecedent of metacognitive experience in everyday judgments. Some cities are more familiar than other ones. So distance judgments will feel easier for the familiar than for the unfamiliar cities. Will the metacognitive experience induced by familiarity with cities affect peoples’ judgments of distance from the city? The first two experiments (Experiments 1A and 1B) reported in this research were designed to address this question. Our hypothesis is that people will judge familiar cities to be more proximal than unfamiliar cities and further, the familiarity effect in distance judgments will affect their economic decisions.

Second, we examine when and why familiarity affects distance judgments. Several researchers have suggested that familiarity is hedonically marked and that it elicits a positive affective response (e.g., Alter and Oppenheimer, 2008; Garcia-Marques and Mackie, 2000; Winkielman and Cacioppo, 2001; Winkielman, Schwarz, and Nowak 2002). For example, Winkielman & Cacioppo (2001) showed that familiarity affects physiological measures of positive affect. They found that familiar stimuli generated an incipient smile that manifested as higher activity over the zygomaticus major region of the face (cheek muscle). It has also been suggested that the relationship between familiarity and positive affect is bidirectional: illusions of familiarity can be produced through unobtrusive inductions of positive affect (Garcia-Marques & Mackie, 2000). However, all researchers do not agree with this perspective. Some have suggested that familiarity is affectively neutral and is subjectively interpreted based on contextual factors...
(Mandler et al., 1987; Whittlesea and Williams 2001a; 2001b). Proponents of such familiarity-attribution models suggest that familiarity influences judgments only when it is perceived as surprising or discrepant. Experiments 2 and 3 were designed to test this discrepancy misattribution hypothesis.

Experiment 1A: Distance Judgments. The purpose of this study was to test the hypothesis that familiarity of a city can bias participants’ distance judgments. In this experiment participants were asked to judge the distance between a famous US city (New York) and a relatively less known city (Ithaca). The same question was asked to residents of Ithaca as well as to residents of New York City. Participants were students recruited from university campuses in Ithaca and New York City and were paid $5 for completing a short questionnaire. As predicted participants in NYC judged the distance between the two cities to be longer (M=5.92) than those in Ithaca did (M=5.18; F(1, 57)=4.07, p=.048). Experiment 1B demonstrates that such familiarity-induced bias could also affect participants’ WTP for products.

Experiment 2 & 3: Hedonic Familiarity or Discrepancy Attribution? These experiments were designed to investigate whether the familiarity effect in distance judgments is better characterized by the hedonic familiarity account or by the discrepancy misattribution account. Participants were asked to judge the relative distance to 24 US cities. We selected 12 pairs of US cities such that each pair was equidistant from the experimental location, but one city was relatively better known than the other (e.g., Los Angeles, CA and Hemet, CA are equidistant from the experimental location but the latter is unfamiliar). Some of these pairs were in the same state as the experimental location, while the other pairs were in far-flung states. If familiarity is hedonically marked, then we would expect the familiarity effect for all pairs irrespective of their actual distance from the experimental location. In contrast, the discrepancy misattribution hypothesis suggests that people expect themselves to be familiar with proximal but not distant cities. Therefore, they will find unfamiliarity to be discrepant only for the proximal cities. Results support the discrepancy misattribution hypothesis. The familiarity effect manifested only for proximal cities. Further, in Experiment 3, we identified the locus of the bias and found that the bias in distant judgments is caused by unfamiliarity and not by familiarity. These results do not support the hedonic familiarity hypothesis.

References

“On the Psychology of Confidence-The Effects of Fluency and Construal Level on Confidence Judgments”
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The present research explores the influence of the meta-cognitive cues on consumers’ confidence judgments and proposes an important moderator for the fluency effect on confidence judgments, specifically, construal level (Trope & Liberman, 2003). We find that when consumers adopt a low construal level, which highlights the feasibility of an outcome, fluency increases confidence. However, when consumers adopt a high construal level, which highlights the desirability of an outcome, fluency decreases confidence. We trace this latter effect, a reversal of prior findings regarding the role of fluency, to lay theories regarding the relationship between outcome desirability and effort.

Recent research has shown that fluency may not always have a positive effect on the underlying judgment, depending on the extent to which meta-cognitive experiences are judged to be diagnostic, the judgmental heuristics or theories used to interpret the subjective experiences of ease, and processing motivation. The present research adds to this emerging literature by positing that people interpret feelings of ease differently depending on construal level.

We hypothesize that when people think about feasibility, that is, at a low construal level, feelings of subjective ease should bolster confidence. Greater ease logically signals greater likelihood of achievement. By contrast, when thinking about desirability, that is, at a high construal level, people will reverse the effect. When people are confident that an outcome is desirable, they are willing to allocate more resources to achieving that outcome (Simmons & Nelson, 2006; Tsai et al., 2008) and would probably put forth greater effort. Hence, they may reverse this association and interpret greater effort to reflect greater confidence in the outcome.

These hypotheses imply an interaction of fluency and construal level on confidence. This prediction distinguishes our work from two alternative explanations, sunk cost fallacy and cognitive dissonance. Both of these accounts predict a main effect, that is, greater effort leads to greater confidence in choice, but not an interaction effect.

We tested our proposition in two ways. In studies 1 and 3, we manipulated retrieval fluency by asking participants to think either of a few (easy) or many (difficult) reasons for their choice. In study 2, we manipulated processing fluency and presented a choice set using either an easy or a difficult to read typeface. Across all studies, we manipulated people’s construal levels by using a priming task that appears to be irrelevant to the choice task.

In studies 1 and 2, we demonstrated the interactive effect of fluency and construal level on confidence judgments. In study 1, participants finished the priming task first and then proceeded to the main choice task where they were presented descriptions of two digital cameras and they generated either two or ten reasons for preferring one camera to the other. They were then asked to choose a product and indicate their confidence in their choice. As predicted,
participants at lower construal levels exhibited the retrieval fluency effect and reported greater confidence when thought listing was easy (two reasons) than when it was difficult (ten reasons). On the contrary, participants at higher construal levels reversed the fluency effect and reported greater confidence when processing was difficult than when processing was hard. Study 2 replicated the results of study 1 with the typeface manipulation.

Study 3 was designed to obtain direct evidence for the role of retrieval fluency and construal level. We used a misattribution paradigm and showed that when participants attributed processing difficulty to the background music rather than the decision, the effects of retrieval fluency on confidence were eliminated. Study 3 not only generalized the findings of study 1 in a different product category (movie) but also showed that the effects of retrieval fluency and construal level on confidence were moderated by the interpretation of that feeling.

These findings provide a clearer picture of how fluency affects confidence judgments and identify construal level as an important moderator. To the extent that choices vary in their mode of presentation and that consumers vary in their internal states, the fluency experienced during choice and levels of construal will also vary. This variation will induce changes in confidence in choice and thus affect actual purchase decisions and the amount that consumers are willing to pay for an item.

References

“When it Happened Tells Us What Happened: The Effects of Temporal Distance and Metacognitive Inference on Word-Of-Mouth”

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A growing body of research shows that consumers draw inferences from their own metacognitive experiences (Lee 2004; Schwarz 2004), such as their subjective ease or difficulty of recall (Schwarz et al. 1991). What consumers conclude from these experiences depends on their naïve theories of mental processes. Most people assume, for example, that recent or important events are easier to remember than distant and unimportant ones. Hence, they conclude from ease of recall that the event was recent or important (Schwarz 2004). We extend this research by showing that consumers also draw inferences from the memory performance of others, an observation that is particularly important for the impact of word-of-mouth (WOM) information. Moreover, we document use of a naïve theory that has not been addressed in earlier research, namely that extreme events are better remembered than less extreme ones. Applying this theory to WOM reports, consumers are likely to infer from otherwise identical WOM information that a described service episode was more extreme, the more distant it is in time.

As a first test of these assumptions, participants in experiment 1 imagined that a friend was telling them about his experience at a restaurant. They then read a vivid, highly detailed paragraph about an enjoyable or unenjoyable restaurant visit that happened one week or one year ago and answered questions about how their friend felt about his restaurant experience. This 2 (valence) x 2 (temporal distance)-factorial experiment revealed an interaction of both factors: when the event was negative, participants inferred that the experience was worse when it occurred one year rather than one week ago; the influence of temporal distance was less pronounced, and not significant, when the event was positive.

Follow-up experiments tested whether these inferences influence consumers’ own behavioral intentions. On the one hand, the inferences observed in experiment 1 suggest that consumers may express less interest in going to the restaurant after receiving negative WOM information about a temporally distant rather than recent service experience. On the other hand, WOM accounts of distant service events are less diagnostic of the likely current service quality than accounts of recent service events—the unfriendly staff from last year may long have left, but the staff from last weekend will probably still be there. Hence, consumers may infer that the distant event was very bad, given that it is still remembered in detail, but may discount it as irrelevant when deciding whether they want to visit the restaurant themselves.

To assess whether consumers realize that distant service events are less predictive of what they might expect if they went to the restaurant now, experiment 2 asked participants to imagine that they are considering a restaurant visit. They then reported whether they would prefer to talk to someone who went to the restaurant a week ago or to someone who went there a year ago. Participants nearly unanimously preferred talking with someone who visited the restaurant a week ago, indicating that they clearly understand that recent service experiences are more diagnostic than distant ones. However, does this insight imply that they discount vivid reports of distant service events once they receive them? Or is the inferred extremity of the event so compelling that WOM information is nevertheless more influential when it pertains to distant rather than recent service events?

Experiment 3 addressed this question. Participants again read about a friend’s positive or negative restaurant experience that happened one week or one year ago, resulting in a 2 (valence) x 2 (temporal distance)-factorial between-participants design. Replicating experiment 1, they inferred that their friend’s negative experience was more extreme when his otherwise identical report pertained to last year rather than last week. However, the influence of temporal distance on inferences from positive events was small and nonsignificant. Paralleling this pattern, participants reported less interest in going to the restaurant if the recounted negative event occurred one year rather than one week ago; their intention to visit the restaurant was unaffected by temporal distance when the described event was positive. Thus, consumers’ own intentions were influenced by their metacognitive inferences from the observation that a friend still remembered a negative service experience one year later, despite their general insight that distant service events are less diagnostic than recent ones.

On the theoretical side, these findings extend the analysis of metacognitive inferences in several ways. First, they provide first evidence that metacognitive inferences are not limited to inferences from one’s own memory performance; instead, people also attend to others’ memory performance as a source of information. However, second, they may only engage in this additional inferential work when the declarative information signals a problem that warrants extensive thought, that is, when the information is negative. This adds to the growing body of research showing a negativity effect in WOM (e.g., Aihlualiwal 2002). Third, our findings also add to the growing list of naïve theories people use in drawing metacognitive inferences (Schwarz 2004): extreme events are
better remembered than less extreme events. Hence, detailed memory of a distant event implies extremity; we term this the Distance-Extremity Bias. Finally, it is worth noting that this bias influenced consumers own intentions (experiment 3) despite the fact that they generally understand that distant events are less predictive of future service experiences than recent ones (experiment 2). On the managerial side, our findings highlight the importance of service recoveries, stressing the counterintuitive notion that service errors that occurred long ago may actually do more damage through WOM than recent service errors.

References