Bilateral Affective Priming and Consumer Judgment

Jiewen Hong, Northwestern University
Angela Y. Lee, Northwestern University
Wen Li, Northwestern University

The valence hypothesis of emotional processing (Silberman and Weingartner, 1986) postulates that the left hemisphere is specialized for processing positive emotional stimuli and the right hemisphere is specialized for processing negative emotional stimuli. This paper extends this research by examining how emotional lateralization processing may impact judgment. Affective stimuli with positive or negative valence are presented subliminally in participants' right or left visual field while participants are asked to judge a target appearing in the center. Results from three studies show that participants' judgment of the target is more favorable when the affective prime is processed by the specialized hemisphere (i.e., negative primes in the left visual field or positive primes in the right visual field), regardless of the valence of the prime. These results differ from the classic affective priming effects whereby participants' judgment of the target assimilates toward the valence of the prime (i.e., a positive prime leads to more positive judgment, whereas a negative prime leads to more negative judgment).

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/13199/volumes/v35/NA-35

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SESSION OVERVIEW

Research on emotion has suggested that the influence of affect on behavior can occur through multiple routes, ranging from the rather quick and automatic “low road” that bypasses any cognitive processes, to the more fine-tuned “high road” that allows for systematic cognitive processes (LeDoux 1996). Indeed, empirical research has shown that affective reactions can occur automatically and rapidly, and exert a direct influence on judgment (e.g., Murphy and Zajonc 1993) and consumption behavior (Winkielman and Berlidge 2004), which is independent of cognition. Affect can also indirectly influence consumer behavior by changing people’s cognitive processes. That is, people’s affective states can alter their perceptions or beliefs about the target (Pham 2004) or activate affect-consistent information in memory, which in turn impacts people’s behavior (Isen, Shaller, Clark, and Karp 1978). More recently, it has also been suggested that the affect of consumer behavior can also take a high road by going through a metacognitive process before exerting its influence. In this case, the reliance on affect in judgments and decisions is subject to the scrutiny of cognitive processes in which people assess whether or how they should use their feelings in a given judgment or decision (Avnet and Pham 2004; Pham 2004). This session takes a closer look at the multiple routes of affective influences on consumer behavior by bringing together research that examines the role of affect in consumers’ judgment of novel objects, their ability to detect changes, and their financial decision making.

The first paper by Hong, Lee, and Li examines the low road of affective influences through which precognitive affective processes directly impact consumer judgment. Building on the valence bias hypothesis of emotional processing (Silberman and Weingartner, 1986), which postulates that the left hemisphere is specialized for processing positive emotional stimuli and the right hemisphere is specialized for processing negative emotional stimuli, this research examines how emotional lateralization processing impacts judgments. Using a paradigm where affective primes are presented slantly in participants’ right or left visual field, the author showed in three experiments that participants’ judgment of a target is more favorable when the valence of the prime is positioned to match the efficient processing of the hemisphere (i.e., negative primes in the left visual field and positive primes in the right visual field); that is, the matching effect is observed even when the prime is negatively valenced. These results differ from the classic affective priming effects (Murphy and Zajonc 1993) whereby participants’ judgment of the target assimilates toward the valence of the prime (i.e., positive prime leads to more positive judgment, whereas negative prime leads to more negative judgment).

The second paper by Rucker and Labroo explores the indirect influences of affect on consumers’ ability to detect perceptual changes by way of changing people’s cognitive processes. Specifically, they show that mood-congruent cognitions may interfere with the accurate storage and retrieval of a stimulus representation from memory. Consequently, people are more accurate in detecting change in emotion-incongruent (vs. emotion-congruent) objects. That is, happy respondents are less accurate in detecting change in a positive (vs. negative) object, and unhappy respondents are less accurate in detecting change in a negative (vs. positive) object. Interestingly, the effect is not hardwired: simply imagining a neutral product (e.g., beer) with positive or negative associations leads to similar effects.

Finally, the third paper by Stephen and Pham investigates a case where affect influences consumer behavior through a high road. Specifically, using an ease-of-retrieval paradigm, they manipulated whether people would trust their feelings in a classic behavioral economics game called the ultimatum game. Results from five experiments show that, compared to lower trust in one’s feelings, higher trust in one’s feelings results in less generous offers in ultimatum games, especially in the dictator version of the game. Higher trust in one’s feelings also results in greater rejection of unfair offers, with little effect on the acceptance rates of fair offers. These findings are not driven by differences in perceptions of what players see as “fair” divisions under high versus low trust of feelings. Rather, players with high trust in their feelings appear to be playing the game as if they represented it in a more literal fashion.

The session highlights a topic that has generated considerable interest in consumer research over the last two decades. We expect this session to be well attended by members of ACR who are interested in the areas of affect and emotion, as well as in consumer decision making and information processing. The session will end with a discussion led by one of the experts in the area, Mary Frances Luce, on how affect can impact consumer behavior, judgment and decision making. We hope the session will provoke discussion on how to systematically integrate the findings relating to these three types of emotion-judgment into a unified framework.

EXTENDED ABSTRACTS

“Bilateral Affective Priming and Consumer Judgment”
Jiewen Hong, Northwestern University
Angela Y. Lee, Northwestern University
Wen Li, Northwestern University

The affective primacy hypothesis (Zajonc 1980) posits that affective reactions can be elicited with minimal stimulus input and cognitive elaboration. Research in affective priming has provided strong support for this hypothesis by demonstrating that the processing of affective stimuli outside conscious awareness can also influence judgment (e.g., Murphy and Zajonc 1993). These studies show that a subliminal affective prime (e.g., a smiling or a frowning face) presented in the center of the screen can influence the affective judgment of a target (e.g., a Chinese ideograph). More specifically, targets are judged more favorably following a positive prime (e.g., a smiling face) and less favorably following a negative prime (e.g., a frowning face).

In this research, we contribute to the affective priming literature by examining how hemispheric differences in emotional processing may influence judgment. The valence hypothesis of emotional lateralization processing (Silberman and Weingartner, 1986) postulates that the left hemisphere is specialized in processing positive emotional stimuli and the right hemisphere is specialized in processing negative emotional stimuli. We hypothesize that when an affective prime is located in the visual field that allows
more efficient processing of the prime by the specialized hemisphere, people would develop more favorable attitudes toward the target. This hypothesis was tested in three studies.

In Experiment 1, affective stimuli with positive or negative valence were presented subliminally in participants’ right or left visual field and participants were asked to evaluate a logo appearing in the center of the screen. The affective primes were normed pictures selected from the International Affective Picture System (Lang, Bradley, and Cuthbert 2005) and were matched on their arousal level. We found that participants’ liking of the logo was enhanced when the valence of the prime matches the hemisphere specialized in processing the valence (i.e., when negative primes were presented in the left visual field, and when positive primes were presented in the right visual field).

Affective priming studies have consistently shown an assimilation effect toward the affective primes on target liking; that is, targets following a positive (negative) prime are judged more favorably (negatively). To ensure that the effects obtained in Experiment 1 were not an artifact specific to the priming stimuli, we conducted Experiment 2 to replicate the classical affective priming effect and also to test the robustness of our bilateral priming effects. Thus, we included conditions in Experiment 2 where the primes would appear in the left versus right visual field as well as in the center of the screen, as in a typical affective priming study. We also included a control condition to examine whether the effects were due to more favorable attitudes when the valence of the prime matches the visual field for more efficient processing or to less favorable attitudes when the valence of the prime mismatches the visual field for less efficient processing, or both. To these aims, a 3 × 3 matrix was used.

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In Experiment 3, affective stimuli with positive or negative valence were presented subliminally in participants’ right or left visual field and participants were asked to evaluate a logo appearing in the center of the screen. The affective primes were normed pictures selected from the International Affective Picture System (Lang, Bradley, and Cuthbert 2005) and were matched on their arousal level. We found that participants’ liking of the logo was enhanced when the valence of the prime matches the hemisphere specialized in processing the valence (i.e., when negative primes were presented in the left visual field, and when positive primes were presented in the right visual field).

In Experiment 4, affective stimuli with positive or negative valence were presented subliminally in participants’ right or left visual field and participants were asked to evaluate a logo appearing in the center of the screen. The affective primes were normed pictures selected from the International Affective Picture System (Lang, Bradley, and Cuthbert 2005) and were matched on their arousal level. We found that participants’ liking of the logo was enhanced when the valence of the prime matches the hemisphere specialized in processing the valence (i.e., when negative primes were presented in the left visual field, and when positive primes were presented in the right visual field).

In Experiment 5, affective stimuli with positive or negative valence were presented subliminally in participants’ right or left visual field and participants were asked to evaluate a logo appearing in the center of the screen. The affective primes were normed pictures selected from the International Affective Picture System (Lang, Bradley, and Cuthbert 2005) and were matched on their arousal level. We found that participants’ liking of the logo was enhanced when the valence of the prime matches the hemisphere specialized in processing the valence (i.e., when negative primes were presented in the left visual field, and when positive primes were presented in the right visual field).

In Experiment 6, affective stimuli with positive or negative valence were presented subliminally in participants’ right or left visual field and participants were asked to evaluate a logo appearing in the center of the screen. The affective primes were normed pictures selected from the International Affective Picture System (Lang, Bradley, and Cuthbert 2005) and were matched on their arousal level. We found that participants’ liking of the logo was enhanced when the valence of the prime matches the hemisphere specialized in processing the valence (i.e., when negative primes were presented in the left visual field, and when positive primes were presented in the right visual field).
participants in a positive (negative) mood may more errors attempting to detect change in a positive (negative) object compared to a negative (positive) object.

Whereas Experiment 1 used target stimuli that were either positive (kitten) or negative (roach), Experiment 2 used a neutral stimulus (beer) but manipulated whether participants’ associations to that stimulus were positive or negative. This manipulation allowed us to test the idea that consumers’ current emotions interfere with participants’ own representation of a stimulus, rather than other properties of the stimulus itself. Specifically, prior to the change detection task participants were asked to imagine a glass of beer as a beer they liked or hated. After that, participants wrote about a happy or an unhappy life event. Thus, mood was manipulated after the initial stimulus had been encoded, and different attention to the stimulus based on a preexisting mood state was not possible. After the mood manipulation, participants then were asked to attempt to detect any change in the beer from one slide to the next. As in experiment 1, we systematically varied the brightness of the object. A significant interaction emerged replicating the results of experiment 1 ($p<.01$). Participants in a positive (negative) mood may more errors attempting to detect change when they had imagined the beer to be positive (negative) compared to negative (positive).

The present research suggests that mood interferes with the accurate storage of a mood congruent representation in memory and consequently the accurate detection of change. This is particularly interesting because the detection of change was thought of as a purely perceptual task; yet we found a conceptually-based interference effect of mood. That is, the data suggested cross modal interference: the conceptual system interfered with holding of an accurate perception. The present research calls for more research to examine how the perceptual and conceptual systems may interactively influence success in accurately assessing change in objects.

“To Trust or Not Trust One’s Feelings in Ultimatum Bargaining”
Andrew T. Stephen, Columbia University
Michel Tuan Pham, Columbia University

The effects of emotion on human decision making may not be as detrimental as generally believed. In particular, feelings and emotions appear to sustain an ecological form of rationality in that they often enhance people’s ability to relate to their social, cultural and natural environment (Pham, 2007). As part of a broader investigation of the role of emotions in economic interactions, this research examines across five experiments how differences in how much people trust and rely on their feelings influence their behavior in a classic economic game called the ultimatum game, which provides a powerful means of studying bargaining and negotiation behavior.

In this game, one player, the proposer, has to propose a division of a sum of money between him- or herself and another player called the responder. If the responder accepts the offer, the two players are paid accordingly. If the responder rejects the offer, the two players each receive no payoff. According to standard economic theory, the optimal solution in this game is for the proposer to offer the smallest positive residual possible, which the responder should rationally accept. Empirical economics studies show, however, that this supposedly “rational” equilibrium is rarely met. Instead, proposers typically offer a substantial fraction of the money, which responders generally accept. It has been suggested that this regular empirical deviation from the supposedly rational economic equilibrium may be driven by the emotions that the players feel. However, empirical investigations of the role of emotions in this game have been inconclusive because of the inherent difficulty in isolating the effects of emotions precisely.

To obtain more insight into the role played by emotions in this game, in our experiments we subtly manipulate the players’ reliance on their feelings by varying their momentary trust in their feelings. To manipulate players’ trust in their feelings, we used a manipulation developed by Avnet and Pham (2007) based on an earlier ease-of-retrieval manipulation by Schwarz et al. (1991). Specifically, participants were asked to recall two or ten instances in the past in which they had trusted their feelings in making a decision and it turned out to be the “right” decision. Previous findings by Avnet and Pham (2007) indicate that those players who recalled just two examples of themselves correctly trusting their feelings would have a higher level of momentary trust in their feelings than those players who recalled ten examples—an assumption that was verified in another pretest.

Experiment 1 examined proposers’ behavior in the ultimatum game, and found that proposers who trust their feelings more make less generous offers than proposers who trust their feelings less. Interestingly, while the offers made by proposers with higher trust in their feelings were less generous, most of these offers were still in a range that made them likely to be accepted. On the other hand, proposers with lower trust in their feelings tended to make offers that were slightly too generous. Also, proposers with higher trust in their feelings who made less generous and objectively riskier offers did not rate the subjective probability of their offers being accepted any lower than proposers with lower trust in their feelings who made objectively more conservative (less riskier) offers.

Experiment 2 examined proposers’ behavior in the dictator version of the game where responders have no choice and are forced to accept the offers made to them. In this version of the game, proposers face no risk of rejection. This experiment yielded the same pattern of results as in Experiment 1: proposers with higher trust in their feelings made lower, less generous offers than responders who trusted their feelings less. Compared to Experiment 1, proposers with higher trust in their feelings lowered their offers more than did proposers with lower trust in their feelings. Thus, players with higher trust in their feelings strategically adjusted to the risk-free nature of the dictator game more strongly than players with lower trust in their feelings.

A possible explanation for the patterns of results in the first two experiments is that players with higher versus lower trust in their feelings might have substantively different perceptions of what constitutes a “fair” division. Experiment 3 tested this hypothesis and found that perceptions of the fairness of various divisions of the money pie did not differ across conditions. Players with high and low trust in their feelings exhibited similar perceptions of “fairness.” Hence, differences in behaviors found in the first two experiments cannot be attributed to substantively different notions of “fairness.” Instead, they are likely due to differences in how high-trust-in-feelings versus low-trust-in-feelings players think about and play the game.

The first three experiments focused on proposer behavior. Respondent behavior was examined in Experiment 4. Responders played the game twice, against different proposers, and were presented with a high offer and a low offer in successive rounds whose order was randomized. The results showed that responders with higher trust in their feelings were more likely to reject lower, “unfair” offers than responders with lower trust in their feelings, but equally likely to accept “fairer” offers. Players with higher trust in their feelings were more sensitive to lower offers than players with lower trust in their feelings, and would reject these lower offers even though rejection would “rationally” disadvantage them.
One explanation for the first four experiments’ findings is that high trust in their feelings leads players to represent the game in a more literal fashion. This seems to manifest as a greater sensitivity to relative payoffs, with a distinct preference for outcomes that provide a relatively higher payoff to themselves at the expense of their opponent. Conversely, players who trust their feelings less and presumably rely more on logical, rational thought processes in playing the game tend to be less concerned with relative payoffs and more focused simply on receiving a nonzero payoff for themselves.

To test this explanation, we conducted a fifth experiment in which responders were allowed to make a counteroffer. Adding this extra stage in the game resulted in a dramatic change in the proposers’ behavior. Unlike in previous studies, proposers with higher trust in their feelings now made more generous offers than proposers with lower trust in their feelings, suggesting that trusting one’s feeling alters how players mentally represent the game.

Finally, in terms of payoffs received, it was found that players with higher trust in their feelings did not do any worse—and in some studies in fact did better—than players with lower trust in their feelings. Trusting one’s feelings and therefore incorporating affect-based information into these kinds of strategic decisions may thus be ecologically rational in that this strategy may result in higher long-term welfare for both parties.

REFERENCES