Effects of Specific, Nonconscious Emotion Primes on Behavior

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Current nonconscious emotion priming research considers positively versus negatively valenced affect. We demonstrate that specific, equally valenced subliminal emotion primes can remain unavailable to conscious awareness and affect behavior. In experiments 1 & 2 participants subliminally primed with a guilty emotion show lower indulgence and more helping than participants subliminally primed with a sad emotion. Participants in different emotion prime conditions show no differences in subjective emotion ratings and are unaware of the primes. Experiments 3 and 4 added a time delay manipulation and replicated these findings, suggesting that the nonconscious emotion prime effects found in this research are goal-driven.

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SESSION OVERVIEW

The importance of nonconscious processes in determining consumer behavior is gaining increased attention among consumer behavior researchers, but the range of effects of subtle influences on cognition and behavior has yet to be determined. Moreover, less is known about how and when these processes can influence and interact with the emotional and cognitive components that serve as inputs to consumer behavior. The present session seeks to provide an integrative look at nonconscious affective and cognitive components on choice decisions by examining the main and interactive effects of emotional and cognitive components on automatic behavior.

The first paper, by Zemack-Rugar and Bettman, provides evidence that specific emotion constructs can be activated through subliminal priming procedures. The authors show that specific, equally valenced emotions (guilt and sadness) can be subliminally primed, remain inaccessible to conscious awareness, but yet affect indulgence and helping behavior. Moreover, in their third and fourth studies they use a delay paradigm to find that it is the motivational component, and not the semantic emotion-related component, that drives behavior. Hence, this paper shows that specific emotions can be nonconsciously activated by subliminal priming and affect important consumer behaviors.

The second paper, by Maimaran and Wheeler, examines activation of cognitive constructs by priming stimuli and shows that active automatic construction processes can lead even novel and impoverished priming stimuli to exert significant effects on construct accessibility and choice. Specifically, they show that participants spontaneously extract higher order cognitive constructs (e.g., uniqueness) upon incidental exposure to novel arrays of shapes (e.g., one square among five circles). More important, they show that such stimuli can also significantly affect fundamental choice propensities such as seeking uniqueness and variety. Hence, this paper shows that higher order cognitive constructs can be activated by very primitive visual stimuli and exert congruent effects on choice.

The third and fourth papers examine how emotional and cognitive processes can moderate nonconsciously instigated processes. The third paper, by Fishbach and Labroo, shows that mood can significantly affect nonconscious goal pursuit. Because positive mood signals to approach accessible goals, individuals in positive moods should be more likely to adhere to subtly primed goals, regardless of their content. Because negative mood signals to avoid accessible goals, individuals in negative moods should be less likely to adhere to subtly primed goals. Using a variety of dependent variables, the authors show that positive-mood individuals are more likely to pursue both subtly activated self-improvement and mood-management goals than negative-mood individuals.

In the fourth paper, Wood, Poynor, and Chartrand present a new individual difference scale of priming susceptibility. Using a range of individual difference variables, they show that individuals with dispositional propensities to attend to the environment and engage in associative processing exhibit larger effects of primes on their behavior. These various individual difference variables are distilled into a single Susceptibility to Priming scale that has great potential utility for both consumer behavior researchers as well as advertising practitioners. Additionally, the isolation of these two factors lends additional insight into the critical processes responsible for prime-to-behavior effects.

EXTENDED ABSTRACTS

“Effects of Specific, Nonconscious Emotion Primes on Behavior”
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Research in nonconscious emotion priming has been limited to showing effects of positively versus negatively valenced affect. Such research has utilized two methods, subliminally priming participants with positively or negatively valenced words (Chartrand et al., 2006) and subliminally priming participants with pictures of people with positive versus negative facial expressions (Winkielman et al., 2005).

We introduce a new paradigm of nonconscious emotion priming that goes beyond valence and demonstrates novel effects. Although specific, equally valenced, conscious emotions lead to different behaviors (Lerner & Keltner, 2000), it has not been shown that these effects extend to nonconsciously primed emotions. We show that specific, equally valenced emotions (guilt and sadness) can be subliminally primed, remain inaccessible to conscious awareness, and still differentially affect behavior. We prime emotions by subliminally flashing emotion adjectives. Individuals report no differences in their consciously experienced emotion across the prime conditions, yet behave consistently with the specific emotion primed. We argue that two interrelated processes underlie these effects: nonconscious activation of emotion-constructs and nonconscious activation of emotion-regulation goals (Chartrand & Bargh, 2002).

First, subliminal emotion priming nonconsciously activates emotion-constructs associated with each emotion type (Lazarus, 1991; Lerner & Keltner, 2000). Subsequently, activation of these negative emotion constructs leads to automatic and nonconscious activation of emotion-regulation goals (Bargh & Chartrand, 1999; Erber, 1996; Larsen, 2000).

Such emotion-regulation goals are pursued differently by sad versus guilty individuals. Individuals feeling sad find an unpleasant helping task unappealing for emotion-regulation (Isen & Simmonds, 1978), whereas individuals feeling guilty may find such a task appealing and useful (Bybee, 1998; Tangney & Dearing, 2002). Similarly, individuals feeling guilty find indulging unappealing for emotion regulation (Tangney & Dearing, 2002; Bybee, 1998) whereas individuals feeling sad find indulgence helpful (Rehm & Plakosh, 1975). Hence, guilt-primed individuals are expected to show reduced indulgence and increased helping compared to sadness-primed individuals.

However, emotion-regulation goals are also pursued differently based on individual coping characteristics, such as guilt-proneness (Morris & Reilly, 1987; Tangney et al., 1992). Specifically, individuals feeling guilty and high in guilt-proneness typi-
cally respond to guilt with reduced indulgence or increased helping. Thus, an automatic emotion–behavior link is formed between guilt and these behaviors for high guilt-prone people (Bargh & Chartrand, 1999). However, individuals feeling guilty and low in guilt-proneness do not tend to cope via reduced indulgence and enhanced helping, and therefore will not have such an automatic emotion–behavior link. Thus, we predict that individuals primed with guilt and high in guilt proneness will show less indulgence and more helping than guilt-primed, low guilt-proneness or sadness-primed participants, despite a lack of differences in conscious, reported emotion.

In study 1 participants are subliminally primed with either four sad words or four guilty words using Chartrand and Bargh’s priming paradigm (1996). Then, an enhanced PANAS scale including the word primes and additional guilt adjectives (previously shown to differentiate conscious guilt and sadness; Zemack-Rugar, 2006) is administered. Next, participants complete a “consumer survey” and indicate how much of a $50 coupon (which they may win) they would like to allocate to either school supplies or a CD/DVD (pretests show CD/DVDs are considered an indulgence); dollars allotted to the CD/DVD is the main dependent variable. Finally, participants complete the TOSCA measure of guilt-proneness (Tangney et al., 1992).

As expected, participants primed with guilty words and high in guilt-proneness show lower levels of indulgence than all other participants. Additionally, a hanging neutral control condition indicates that the reduction in indulgence is absolute. Importantly, participants in the sad, guilty, and neutral conditions report equal conscious levels of positive, negative, and guilt-specific emotions. Despite lack of conscious awareness of the prime or the activation of the emotion construct, participants behave in accordance with the prime they received and their individual coping characteristics.

In study 2 participants complete the same subliminal priming procedure, followed by an option to participate in an unpleasant helping task for charity. The amount of time allotted (0–20 minutes) is the main dependent variable. As predicted, participants primed with guilty words and high in guilt-proneness allot more time to the helping task than all other participants. A hanging control condition reveals that this increase in helping is absolute. As in study 1, participants in all conditions report equal positive, negative, and guilt-specific emotions.

The findings of studies 1 and 2 may have been generated by two possible mechanisms. One mechanism is semantic or ideomotoric (Prinz, 1990); certain emotions are semantically linked to certain behaviors, so that verbal activation of those emotions can lead to enactment of linked behaviors. Alternatively, the emotion–behavior link may be motivational, with activation of a negative emotion-construct leading to activation of an emotion-regulation goal (Morris & Reilly, 1987; Bargh & Chartrand, 1999). To examine whether the effects are goal-driven, an established dissociation paradigm is utilized (Bargh et al., 2001; Dunn & Kirsner, 1988) by adding a 5-minute time delay between the emotion prime and the behavior of interest. If behavior is semantically driven, effects should fade with delay (Anderson, 1983); however, if behavior is goal-driven, performance should not fade over time (Atkinson & Birch, 1970).

In a pretest we demonstrate that performance on a semantic task (word-search with prime-related words) diminishes over time, whereas performance on a goal-driven behavior (indulgence) does not. In studies 3 and 4 we add a 5-minute time delay and replicate our prior findings. This persistence of the behavioral effects after a 5-minute time delay suggests that the effects are driven by an emotion-regulation goal.

[1] Throughout this abstract, ‘O’ represents a circle, ‘X’ a square and ‘V’ a triangle.
esized, those shown uniqueness arrays were significantly more likely to choose the unique chocolate (a milk Hershey’s kiss wrapped in a different color) than those shown homogeneity arrays.

In the third study, we extended our examination to variety seeking. We presented participants with either “variety” arrays (e.g., OVOXOXVOXO) or “homogeneity” arrays (see above). As compensation, participants were offered a choice of three chocolates. As hypothesized, those shown variety arrays were significantly more likely to exhibit variety seeking in their choices (i.e., choose three different types of chocolates) than those shown homogeneity arrays.

Taken together, these studies show that individuals spontaneously extract meaning from ambiguous stimuli and their behavior unintentionally follows in kind. These studies reflect two key themes in the study of human perception and behavior: that individuals extract concepts beyond those inherent in the stimuli they encounter and that individuals’ behavior is driven by factors of which they are unaware. That these studies used impoverished stimuli for which individuals had no prior associations illustrates the pervasiveness of these tendencies and suggests that the applicability of these broad principles to consumer behavior processes may be greater than suggested by prior research and theorizing.

“Be Better or Be Merry: How Mood Affects Self-Control”
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Are happy (vs. unhappy) consumers more or less likely to read an emotionally disturbing charity appeal and donate money toward the advocated cause? Are happy (vs. unhappy) consumers more or less likely to attend to an ad appeal that warns them about the adverse effects of caffeine consumption and advises them to change their wayward ways? Such issues that involve motivating consumers to incur short term pains for long term gains are often at the helm of public policy planning, and whereas the literature suggests that consumer moods will affect self control and adherence to goals, the evidence on what the effect will be and what the underlying process may be is mixed. On the one hand, the literature on mood indicates that happy individuals are more likely than neutral or unhappy individuals to seek positive and avoid negative stimuli, which suggests that they would be less likely to engage in unpleasant tasks involving self control. On the other hand, the literature also reports that happy (vs. unhappy) individuals seek out negative information when it is self relevant, which suggests that at least on some occasions they may be more likely to engage in self control.

The current investigation addresses this controversy from a perspective of recent research on goal priming. Since the pursuit of many long-term consumer goals requires overcoming conflicting short-term motives (e.g., Loewenstein, 1996; Metcalfe & Mischel, 1999), contextual primes for an overriding goal are often not sufficient to promote goal-congruent actions. Under these conditions, happy (vs. neutral) individuals are better able to pursue primed long-term goals because positive mood is a signal to approach any accessible goal, whereas unhappy (vs. neutral) individuals are more likely to deter from pursuing primed long-term goals since negative mood is a signal to avoid an accessible goal. Importantly however, happy (vs. unhappy) individuals are expected to demonstrate increased self-control only when the higher order long-term goal is primed. Since positive mood serves as a booster, facilitating adherence to any primed goal, happy individuals are expected to demonstrate increased self-control only when any contextual goal is primed short-term goals such as maintaining their positive mood, whereas unhappy individuals would deter from such goal. As a result, happy individuals work harder on a task that serves an accessible long-term goal of self-improvement, but abstain from this task when primed with an incompatible mood-management goal. On the other hand, unhappy individuals deter from a task that serves an accessible long-term goal of self-improvement, which they are more likely to pursue when primed with an incompatible mood-management goal.

Four studies tested whether happy (vs. neutral and unhappy) individuals adhere to accessible goals regardless of their content (self-improvement or mood maintenance). These studies manipulated participants’ mood (happy, neutral, and unhappy) and accessible goal (self-improvement vs. mood maintenance) and measured for performance on self-control tasks. Study 1 indicated that happy (vs. unhappy) individuals with an accessible self-improvement goal performed better on the test compared with unhappy individuals, but happy mood led to lower test performance among participants whose accessible goal referred to mood-management. Study 3 indicates that a positive mood further facilitates physical endurance, as measured by persistence on squeezing a handgrip described to participants as an indicator of future healthiness, but only when the task was compatible with a primed self-improvement goal. When the task was incompatible with a primed goal of mood-management, happy individuals did not express greater physical endurance than others. Finally, Study 4 examines the effect of mood on recalling negative information and it finds that happy individuals spent more time than others recalling the health consequences of caffeine consumption and that they ended up recalling more information—but only to the extent that they were primed with self-improvement rather than mood-management goal.

By addressing the effect of moods on adhering to accessible goals, this research integrates two lines of research of the relationships between mood and self-regulation: research on mood as the ultimate goal of self-regulation (e.g., Diener, 2000; Gilbert et al., 1998; Kahneman, 2000) and research on mood as a resource for self-regulation (e.g., Aspinwall, 1998; Leith & Baumeister, 1996; Raghunathan & Trope, 2002). We propose that when people experience mild positive mood, they are more likely to adhere to contextual goal primes. Under these conditions, when the mood-management goal is accessible, positive mood discourages choice of actions that undermine this goal. However, when the accessible goal refers to self-improvement, positive mood improves performance and hence it serves as a resource for self-regulation. Task performance thus depends on whichever goal is more salient because of contextual primes. Happy individuals are better able to regulate either of these accessible goals.

“Individual Susceptibility to Priming Effects”
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New research in priming suggests that our old beliefs about the inefficacy of subliminal advertising may need to be qualified (Bargh 2004). Researchers have demonstrated, in diverse paradigms, how people may respond to concepts that they have been exposed to below conscious awareness. Although priming effects are robust across reported studies, within-study variance suggests that some individuals are more impacted by the primes to which they are exposed. The purpose of this research is to test this concept and identify the characteristics that would contribute to individual differences in susceptibility to priming (STP). While priming