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ABSTRACT

THE EFFECT OF IMPLICIT THEORIES OF JUDGMENT ON ATTITUDES AND EVALUATIVE OUTCOMES

by Clifford D. Evans

Extensive research has demonstrated outcome differences between judgments based on feelings and judgments based on reasons. Dispositional preference for feelings- or reasons-based judgment may guide the use of implicit and explicit attitude information in evaluation and judgment when contextual cues are not available. Two studies examined the effect of implicit theories of judgment on the use of implicit and explicit attitudes to make judgments of a target. In Study 1, implicit attitudes were influenced by explicit evaluative information for feelings-based theorists, but not reasons-based theorists. Implicit attitudes correlated with explicit attitudes and judgment for feelings-based theorists, but not for reasons-based theorists. Study 2 replicated this correlational pattern especially when situational theories of judgment were congruent with dispositional theories of judgment.

THE EFFECT OF IMPLICIT THEORIES OF JUDGMENT ON ATTITUDES AND EVALUATIVE OUTCOMES

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The Effect of Implicit Theories of Judgment on Attitudes and Evaluative Outcomes

One of the most frequent distinctions made in matters of judgment is that between judgments based on emotion and judgments based on logic. This distinction has found its way both into everyday usage as requests to "listen to your heart" or "use your head" when making decisions, as well as into psychological research. Beginning with Jung's (1964) intuitive/deliberative model of decision-making, evaluations and judgments based on automatic associations or deliberate reasoning have been the subject of many dual-process models, including the heuristic-systematic model (Chaiken, Liberman, & Eagly, 1989), the experiential-rational model (Epstein, 1990), the systems of reasoning model (Sloman, 1996), the implicit-explicit model (Wilson, Lindsey, & Schooler, 2000), and the associative-propositional model (Gawronski & Bodenhausen, 2006), among others. Although particulars differ, evaluation and judgment are in each instance posited to be based on basic feelings and associations, reasons and propositional logic, or a combination of both. Extensive research based on these models has demonstrated outcome differences between judgments based on feelings and judgments based on reasons, and this research has outlined boundary conditions under which each type occurs. However, the research to date has focused primarily on contextual manipulation of feelings or reasons as a source of evaluative information. To the extent that social perceivers engage in evaluation and judgment on a regular basis, it is likely that there are also dispositional differences in how evaluations and judgments are made. These dispositional differences may manifest themselves as implicit theories of judgment - common-sense assumptions about the best source of evaluative information. The purpose of the current research is to examine how implicit theories of judgment moderate sensitivity to implicit and explicit evaluative information, as well as the relationship of implicit and explicit attitudes to the process of judgment.

Feelings and Reasons in Judgment

A great deal of research has examined the effect of feelings and reasons on judgment. In research on the relationship between affect and judgment (see Schwarz & Clore, 1996, for a review), perceivers in a persuasion paradigm were influenced by their emotions as a function of their perceived informational value (Albarracín & Tarcan Kumkale, 2003). Gasper and Clore (2000) found that perceiver estimations of risk increased as a function of trait anxiety and dispositional attention to emotions. Likewise, research on motivated correction suggests that propositional processes facilitate the ability to discount or correct for information provided by automatic associations. When cognitive load deprived participants in a guilt-judgment task of the ability to correct an initial impression of a target, participants assigned harsher sentences based on explicitly false information than participants who were not deprived of the ability to discount that information (Gilbert, Tafarodi, & Malone, 1993). Cognitive load also prevented motivated attributional correction in participants chronically predisposed to correct (Skitka, Mullen, Griffin, Hutchison, & Chamberlin, 2002, Study 5). In research examining stereotype use, participants low in prejudice were more likely to correct for an activated racial stereotype when given the opportunity to do so, compared to high-prejudice participants who perceived their activated associations to be appropriate sources of judgment (Devine, 1989). Thus, reliance on feelings or automatic associations leads to different judgmental outcomes than those arrived at through reliance on reasons or propositional logic.

Findings from the research to date thus suggest a common principle: Individuals who attend to their feelings or otherwise perceive them as informative make judgments in line with

those feelings. Individuals who do not attend to their feelings, who are motivated to correct for their feelings, or otherwise perceive them as uninformative make judgments incongruent with those feelings. Individuals may be motivated to correct for or discount their feelings after employing propositional logic processes in evaluation. In studies examining implicit and explicit attitude change, implicit and explicit evaluations of a target were correlated following an appeal to feelings-based judgment, whereas implicit and explicit evaluations were uncorrelated or negatively correlated following an appeal to reasons-based judgment (for a meta-analysis, see Hofmann, Gawronski, Gschwendner, Le, & Schmitt; 2005, see also Gawronski & LeBel, 2007). Likewise, direct appeals to either fact-based or feelings-based judgment, along with dispositional attention to emotion, affected the degree to which trait anxiety was used as an informational source in estimating risk (Gasper & Clore, 1998, Experiment 3). These findings suggest that contextual manipulation of reliance on feelings or reasons as a source of information for judgment yields effects similar to those associated with dispositional preference for feelings or reasons as a source of information.

Within a dual-process framework, however, two different mechanisms by which feelings or reasons influence evaluation and subsequent judgment can be examined. The associative-propositional model of evaluation (APE; Gawronski & Bodenhausen, 2006) posits that explicit evaluations are the joint product of automatic associations and propositional processes. Consistent with the APE model, explicit evaluations of a target were congruent with subliminally conditioned information when feelings were emphasized, and congruent with supraliminally learned information when reasons were emphasized (Gawronski & LeBel, 2007). In contrast, the systems of reasoning model (Rydell & McConnell, 2006; Sloman, 1996) posits that explicit evaluations are the product of information acquired through a fast learning system (i.e., logical, verbal, symbolic representation) and implicit evaluations are the product of information acquired through a slow learning system (i.e., paired associations based on similarity and contiguity), and that implicit and explicit evaluations result from independent processes. The systems of reasoning model is supported by research demonstrating that presentation of neutral supraliminal information (intended for the fast learning system) with either positive or negative subliminal information (intended for the slow learning system) resulted in attitude change only for implicit attitudes, suggesting that information taken in via the slow learning system does not influence the content of explicit attitudes (Rydell & McConnell, 2006). Judgments made using a feelings or reasons-based theory may therefore primarily reflect either subliminal or supraliminal evaluative information respectively. Further, associative-propositional and systems-of-reasoning perspectives predict different relationships between implicit evaluations, explicit evaluations, and judgment. As predicted by the APE model, judgment would be the product of both subliminal and supraliminal evaluative information when a feelings-based theory is endorsed and the product of supraliminal evaluative information when a reasons-based theory is endorsed. As predicted by the systems of reasoning model, judgment would be primarily the product of subliminal evaluative information when a feelings-based theory is endorsed and primarily the product of supraliminal evaluative information when a reasons-based theory is endorsed. For the purposes of this research, "feelings" may be defined as affect, automatic associations based on the activation of a given associative pattern (Gawronski & Bodenhausen, 2006), or factors of similarity and contiguity with the stimulus (Sloman, 1996). "Reasons" may be defined as syllogistic inferences derived from propositional information (Gawronski & Bodenhausen, 2006), or rule-based logic (Sloman, 1996).

Insofar as social perceivers engage in evaluation and judgment frequently, chronic preferences for feelings- or reasons-based judgment may guide evaluation in situations where contextual cues are not available. Preference for feelings- or reasons-based judgment also suggests differential preferences for the use of associative or propositional attitude information in making an evaluation. Dual-process attitude theories (e.g., Wilson, Lindsey, & Schooler, 2000) suggest that the use of propositional attitude information requires both motivation to engage in effortful cognition and the cognitive capacity to do so. If, however, social perceivers possess a chronic preference for feelings-based judgment, they may make judgments based on automatic associations (i.e., implicit attitudes), even when both motivation and capacity to do otherwise are present.

Chronic reliance on feelings or reasons as a source of evaluative information also has implications for subsequent behavior, as demonstrated by research on implicit prejudice. Quality of social interaction (i.e., eye contact, open posture, general comfort level) with a cross-race target was predicted by implicit, but not explicit, measures of prejudice (McConnell & Leibold, 2001) and negative implicit evaluations (but not stereotypes) of a cross-race target predicted greater seating distance from the target (Amodio & Devine, 2006). Automatic antigay prejudice predicted less friendliness toward a gay target, but only in the absence of conscious egalitarian beliefs or behavioral control (Dasgupta & Rivera, 2006, Experiment 2). Effects on behavior similar to those observed chronically have also been obtained in an evaluative conditioning paradigm, where explicit attitudes uniquely predicted desire for social contact and implicit attitudes uniquely predicted seating distance (Rydell & McConnell, 2006, Experiment 4). Thus, implicit attitudes predict subtle, nonconscious behaviors and explicit attitudes predict conscious, deliberative behaviors.

These differences in process and outcomes suggest that feelings and reasons are potentially central constructs for judgment. However, the research to date has focused primarily on contextual use of feelings- or reasons-based evaluations and their boundary conditions. Because judgment is a process in which individuals are likely to engage on a regular basis, social perceivers may use either feelings or reasons as a chronic source of evaluative information. Thus, social perceivers likely hold implicit theories about the basis of judgments, with theory-guided reliance on feelings- or reasons-based evaluations leading to different judgmental outcomes.

Implicit Theories

The idea that individuals possess theories about behavior about the self and others has been examined in a number of domains, with research yielding evidence of implicit theories related to attribution (Kruglanski, 1980), economic scarcity (Lynn, 1992), bias (Ehrlinger, Gilovich, & Ross, 2005), and racism (Sommers & Norton, 2006). In each instance, fundamental assumptions about the meaning of information in a given domain guide attitudes and behavior in that domain. I seek to extend research on implicit theories into the domain of judgment, proposing dispositional and contextual variation in the use of implicit theories about sources of evaluative information to make judgments.

Implicit theories in the domain of judgment have until now been primarily studied in relation to attitude change. The Flexible Correction Model (Wegener & Petty, 1995) posits that implicit theories about the effectiveness of persuasion serve as a cue to correct evaluations ostensibly influenced by a persuasive message. Elaborations on this model have demonstrated that implicit theories about the meaning of persuasion resistance either increase attitude certainty (Tormala & Petty, 2002) or decrease attitude certainty (Rydell, Hugenberg, & McConnell, 2006).

Implicit theories about the effectiveness of subliminal persuasion versus persuasive speech influenced the type of persuasive video that perceivers chose to watch, as well as the estimated persuasive effectiveness of the video (Wilson, Houston, & Meyers, 1998). Implicit theories about the meaning of cognitive accessibility affect how accessibility of information influences judgment, where difficulty of information retrieval may be interpreted as a paucity of confirming information or lack of knowledge, contingent upon the theory employed (Schwarz, 2004). As an extension of prior research on implicit theories of resistance or effort in attitudes and judgment, the current research examined the influence of implicit theories about the basis of judgment on evaluation and judgment. One model for exploration of this topic is suggested by research on implicit theories of intelligence.

Research on implicit theories of intelligence (Dweck, 1999; Dweck & Leggett, 1988) articulates distinct theories about the nature of intelligence, examines chronic and contextual variation in their use, and demonstrates the importance of those theories for goal-directed motivation and person perception. In this model, perceivers possess implicit theories that describe intelligence as either fixed (entity theory) or malleable (incremental theory). Initial assumptions about fixedness and malleability derived from these theories yield differences in pursuit of learning or performance goals, response to goal failure, and task choice (Dweck & Leggett, 1988). Subsequent research has extended the entity/incremental model to a number of interpersonal processes, including trait judgment (Gervey, Chiu, Hong, & Dweck, 1999) and person perception (Plaks, Grant, & Dweck, 2005). This ongoing program of research posits two implicit theories based on distinct fundamental assumptions about the nature of intelligence, explores their implications, and observes the effects of implicit theories under individual variation and situational primes. Just as fixedness and malleability represent two basic assumptions about the nature of intelligence, feelings and reasons may represent two basic sources of information, and assumptions about the suitability of each may guide evaluation and judgment.

Cognitive-experiential self-theory (CEST; Epstein, 1990) posits that information is processed by two parallel systems. The *experiential* system is described as automatic, associationistic, and related to affect. The *rational* system is described as conscious, intentional, and analytic. Decisions made from an experiential perspective differ from those made from a rational perspective. For example, participants who were predispositionally likely to engage in heuristic reasoning chose conditions in a lottery game with a greater absolute number of winning selections (i.e., 7 in 100) over conditions with better odds (i.e., 1 in 10), even while stating that they knew the probabilities did not favor them in the absolute-number condition (Denes-Raj & Epstein, 1994). Participants for whom experiential reasoning was emphasized also chose greater over lesser absolute numbers when winning probabilities were constant across conditions (i.e., 10 in 100 vs. 1 in 10) (Kirkpatrick & Epstein, 1992). In research examining responses to vignettes with differing outcomes based on heuristic or probabilistic reasoning (e.g., near versus far misses), participants with self-reported experiential thinking styles engaged in more heuristic responding (a near miss was projected to feel worse than a far miss), and participants with self-reported rational thinking styles engaged in greater probabilistic responding (both misses were projected to feel equally bad; Epstein, Pacini, Denes-Raj, & Heier, 1996). Thus, evaluations made using experiential thinking lead to judgments informed more by heuristics, whereas rational thinking styles lead to judgments informed more by propositional logic.

These conceptual distinctions resemble those used to describe associative and propositional processes (i.e., Gawronski & Bodenhausen, 2006) as well as slow and fast-learning

systems (Rydell & McConnell, 2006), and CEST posits that individuals may vary in their preference for one thinking style over another. This model has not yet been used in conjunction with dual-process models of attitudes, but given the conceptual similarities, CEST is useful to consider as a model for feelings- or reasons-based implicit theories of judgment.

The Current Research

Previous research across different domains has examined situations in which feelings or automatic associations either do or do not serve as a basis for judgment and subsequently lead to different evaluations. Most research to date has examined these different evaluations by appealing directly to use of feelings or reasons (e.g., Gasper & Clore, 1998; Gawronski & LeBel, 2007). Less research has focused on how dispositional feelings-based or reasons-based evaluations lead to different judgments. Just as perceptions of intelligence as fixed or malleable influence goal pursuit and person perception (Dweck, Chiu, & Hong, 1995), preferences for feelings- or reasons-based evaluation may influence judgments. The proposed program of research seeks to demonstrate that a chronic preference for feelings- or reasons-based judgment predicts outcomes congruent with associative or propositional attitude processes (i.e., feelings-based judgments are congruent with implicit attitudes and reasons-based judgments are congruent with explicit attitudes) and that evaluations based on these preferences influence judgments concerning the evaluative target.

The following two studies examined the effect of chronic and contextual implicit theories of judgment on the use or discounting of automatic associations in evaluation and effects on subsequent judgments. Study 1 demonstrated that dispositional theories of judgment affected the use of associative and propositional processes in forming evaluations, as well as the relationships between implicit evaluations, explicit evaluations, and judgment. Study 2 extended the findings of Study 1 by examining whether these evaluative and judgmental effects obtained when use of a feelings- or reasons-based theory of judgment was experimentally manipulated. I thus addressed a relatively understudied aspect of attitude formation and change by examining the roles that implicit theories about the source of judgment play in evaluation.

Study 1

The purpose of Study 1 is to demonstrate that dispositional endorsement of either a feelings- or reasons-based theory of judgment will yield differences in implicit evaluation, explicit evaluation, and judgment congruent with differential use of associative or propositional processes. Participants who are predisposed to base judgments on feelings more than on reasons are predicted to make judgments of a target congruent with automatic associations (i.e., implicit attitudes). Conversely, participants who are predisposed to base judgments on reasons more than on feelings are predicted to make judgments congruent with propositional processes (i.e., explicit attitudes).

Method

Participants

Seventy-one undergraduates at a Midwestern university (35% male, 83% Caucasian, ages 18-35, median age = 19 years) participated in the study in exchange for partial course credit.

Participants completed all measures on computer workstations. One participant failed to complete the implicit measure correctly and was omitted from subsequent analyses.

Design

Participants were presented with subliminal and supraliminal information about a target to examine how dispositional theories of judgment moderated the influence of each source of information on judgment. To better assess the relationship between attitudes and judgment, each source of information was the opposite valence of the other. Thus, participants received either positive subliminal and negative supraliminal information about the target, or negative subliminal and positive supraliminal information. This procedure was intended to facilitate the development of conflicting implicit and explicit attitudes about the target. Differential emphasis of one attitude over the other in formation of a judgment would thus be indicated by the valence of the judgment. Participants completed measures of implicit evaluation, explicit evaluation, and judgment subsequent to the evaluative conditioning task, in a 2 (evaluative condition: supraliminal negative/subliminal positive, supraliminal positive/subliminal negative) × 2 (theory endorsement: feelings, reasons) between-subjects design.

Procedure

Participants in Study 1 formed attitudes about a target based on opposing subliminal and supraliminal information about the target, presented in an evaluative conditioning procedure. Participants were randomly assigned to receive either positive implicit and negative explicit information about the target, or negative implicit and positive explicit information. Participants then completed implicit and explicit measures of evaluation and made judgments about the target.

Participants first completed a measure of dispositional endorsement of feelings- or reasons-based theories of judgment (Pacini & Epstein, 1999). Next, using a procedure adapted from Rydell and McConnell (2006), participants completed an evaluative conditioning procedure presented as an opportunity to learn about a candidate for political office. In this procedure, participants were told that they would see a sequence of pictures of the candidate (named "Bob"), each accompanied by some behavior in which the candidate has engaged. Participants indicated whether the presented behavior was characteristic or uncharacteristic of Bob by pressing either the E key (for characteristic) or I key (for uncharacteristic) on the keyboard of their computer workstation.

In the evaluative conditioning task, a picture of Bob was preceded by a subliminal presentation of either negative words (e.g., *ugly, war, hurt, stink*) or positive words (e.g., *flower, friend, gift, happy*). Participants attended to a fixation point in the center of the screen, which was replaced after 1000ms by a letter string for 30ms, then a prime adjective for 25ms, then another letter string for 30ms. These subliminal pairings were designed to condition participants with either positive or negative implicit attitudes about Bob. Explicit attitudes about Bob were predicted to be influenced by varying the presentation of negative and positive behaviors. Across 50 trials, 25 positive and 25 negative behaviors were presented, with the explicit attitude influenced by feedback about which behaviors were characteristic or uncharacteristic of Bob. For positive explicit attitudes, 100% of positive behaviors were described as characteristic of Bob and 100% of negative behaviors were described as uncharacteristic of Bob. This feedback was reversed for negative explicit attitudes.

After completing the evaluative conditioning task, participants completed implicit and explicit evaluative measures of positivity and negativity toward Bob. Presentation order of these measures was counterbalanced. Participants then made a judgment, presented as a voting decision about Bob, and briefly explained the reasons why they made the choice they did. Finally, participants completed demographic measures and a pencil-and-paper word recognition manipulation check for the subliminal priming.

Measures

Theories of judgment. To assess dispositional endorsement of feelings- and reasons-based theories of judgment, participants completed the Rational Experiential Inventory (REI; Pacini & Epstein, 1999). Participants rated 40 statements measuring endorsement of experiential (feelings-based) judgment (e.g., "I believe in trusting my hunches", "I tend to use my heart as a guide for my actions") and rational (reasons-based) judgment (e.g., "I have no problem thinking things through carefully", "Using logic usually works well for me in figuring out problems in my life"). Participants rated the degree to which each item was true of themselves on 7-point Likert scales, from *definitely not true of myself* to *definitely true of myself*. Separate means were computed for endorsement of experiential and rational judgment, with each mean serving as an index of its respective construct. These indices demonstrated good internal consistency (experiential $\alpha = .85$, rational $\alpha = .90$). Relative endorsement of feelings- or reasons-based theories of judgment was computed by subtracting the experiential score from the rational score, so that higher values indicate greater emphasis on reasons-based theories and lower values indicate greater emphasis on feelings-based theories.

Implicit evaluation. Participants completed a version of the Affect Misattribution Procedure (AMP; Payne, Cheng, Govorun, & Stewart, 2005) adapted for the current research. Participants were told that they would be presented with a series of Chinese characters, and instructed to rate each target character as more pleasant or less pleasant than the average Chinese character (by pressing the A key or number pad 5 key, respectively). Characters were preceded by a 75ms presentation of either Bob or one of five control faces, and followed after 100ms by a mask of equivalent size. Implicit evaluation of Bob was assessed by computing the proportion of "more pleasant" responses to target trials (i.e., characters preceded by Bob) compared to all trials. AMP scores were then standardized for comparison to the measures of explicit evaluation.

Explicit evaluation. Participants rated the target on five 9-point semantic differential scales (*bad-good, mean-pleasant, disagreeable-agreeable, uncaring-caring,* and *cruel-kind*), as well as a feeling thermometer, ranging from 0 (negative) to 100 (positive). Semantic differential scores demonstrated very good internal reliability ($\alpha = .99$), and the average of the semantic differential items correlated strongly with the feeling thermometer ratings ($r = .91$, $p < .001$). To compute a composite measure of explicit evaluation, feeling thermometer scores and the mean of the semantic differential items were each standardized separately. The mean of these standardized scores served as an index of explicit evaluation.

Judgment. Participants indicated judgments toward the target by completing two items assessing the likelihood that they would vote for Bob or volunteer to work on Bob's political campaign on 8-point Likert scales, from *not at all likely* to *extremely likely*. These items correlated well ($r = .87$, $p < .001$), and their average served as a composite measure of judgment toward the target.

Implicit conditioning manipulation check. In a procedure adapted from Rydell and McConnell (2006, Experiment 5), participants selected 20 words from a list of 40 that they

thought they might have seen during the implicit part of the evaluative conditioning task. Ten of these words were used in the implicit conditioning portion of the evaluative conditioning task (either positive words or negative words, depending on participant assignment to condition), and the remaining 30 (20 which did not appear at all, and 10 from the other condition) were distractors.

Results

Implicit attitudes were predicted to yield only a main effect of evaluative condition, where participants who received positive implicit information about the target would have more positive implicit attitudes toward the target than participants who received negative implicit information, regardless of theory endorsement. Explicit attitudes were predicted to vary according to theory endorsement in one of two distinct patterns described by associative-propositional and systems-of-reasoning models of attitudes. In the associative-propositional model, participants who endorsed a feelings-based theory of judgment would have less evaluatively extreme explicit attitudes than participants who endorsed a reasons-based theory of judgment, reflecting the idea that explicit attitudes are a product of implicit and explicit evaluation to the degree that implicit attitudes are perceived to be useful source of information. Because participants received subliminal and supraliminal information of opposing valence, incorporation of both into an explicit attitude was predicted to lead to less extreme explicit attitudes for participants who used both than participants who relied primarily on supraliminal information to form their explicit attitude. In the systems-of-reasoning model, participants who endorsed a feelings or reasons-based theory of judgment would have explicit attitudes primarily congruent with supraliminal information, reflecting the idea that implicit and explicit attitudes are formed via two independent learning systems.

Relationships between implicit attitudes, explicit attitudes, and judgment were further predicted to differ by endorsed theory of judgment and APE and systems-of-reasoning models of attitudes. An associative-propositional model would posit congruence between implicit and explicit attitudes for feelings-based theorists, where implicit and explicit attitudes are correlated with each other and with judgment, and incongruence between implicit and explicit attitudes for reasons-based theorists, where implicit and explicit attitudes are uncorrelated and only explicit attitudes are correlated with judgment. A systems-of-reasoning model would posit incongruence between implicit and explicit attitudes for both feelings- and reasons-based theorists, where implicit and explicit attitudes would be uncorrelated for both feelings- and reasons-based theorists, implicit and explicit attitudes would correlate with judgment for feelings-based theorists, and explicit attitudes only would correlate with judgment for reasons-based theorists. Thus, the critical comparison between APE and systems-of-reasoning models was the relationship between implicit and explicit attitudes.

Manipulation Check

To ensure that participants did not recognize words presented as part of the subliminal component of the evaluative conditioning task, I assessed their mean accuracy for identifying which 20 of 40 words they thought were presented in their evaluative condition, following the procedure used by Rydell and McConnell (2006, Experiment 5). Participants were significantly lower than chance (.25) at recognizing subliminal primes, $M = .094$, $SD = 0.07$, $t\ (69) = -19.31$, $p < .001$.

Implicit and Explicit Evaluation

Implicit and explicit attitudes toward the target were analyzed in a 2 (evaluative condition: supraliminal negative/subliminal positive, supraliminal positive/subliminal negative) × 2 (attitude type: explicit, implicit) × 2 (theory endorsement: feelings, reasons) mixed-model ANOVA, with attitude type as a within-subjects factor. Theory endorsement was determined by median split of the relative theory endorsement scores, with scores below the median indicating an emphasis on feelings-based theories of judgment and scores above the median indicating and emphasis on reasons-based theories of judgment[1]. A significant Evaluative Condition × Attitude interaction emerged, F (1,66) = 14.53, p =.003, subsumed within the predicted Evaluative Condition × Theory × Attitude interaction, F (1, 66) = 6.80, p = .011. The three-way interaction was decomposed by examining effects and interactions of evaluative condition and relative theory endorsement on each attitude type separately.

Explicit attitudes. Explicit attitudes yielded only a main effect of evaluation condition, F (1, 66) = 95.14, p < .001. Participants in the supraliminal positive evaluation condition had more positive explicit attitudes about Bob (M = .71, SD = 0.53) than participants in the supraliminal negative evaluation condition (M = -.76, SD = 0.70).

Implicit attitudes. Implicit attitudes yielded a main effect of evaluation condition, F (1, 66) = 6.05, p = .017. Implicit attitudes toward the target differed significantly in directions consistent with supraliminal, rather than subliminal, information. Contrary to predictions, participants in the subliminal negative evaluation condition had more positive implicit attitudes about Bob (M = .26, SD = 0.94) than participants in the subliminal positive evaluation condition (M = -.28, SD = 0.96). In addition, the interaction of evaluative condition and theory endorsement emerged as significant, F (1, 66) = 4.66, p = .035. Implicit attitudes were significantly different by evaluation condition for feelings-based theorists, F (1, 66) = 6.38, p = .017, but not for reasons-based theorists, F (1, 66) = 0.14, p = .714 (see Figure 1).

These results suggest that although only one source of evaluative information influenced attitudes for both feelings- and reasons-based theorists, sensitivity to this information did differ as a function of the endorsed theory of judgment. Supraliminal evaluative information influenced both implicit and explicit attitudes for feelings-based theorists, but only influenced explicit attitudes for reasons-based theorists (see Figure 1).

Judgment

Measures of judgment, evaluative condition, implicit attitudes, explicit attitudes, and relative theory endorsement were entered into a multiple regression analysis, with evaluative condition, implicit attitudes, explicit attitudes, theory endorsement, and their interactions predicting judgment. The regression predicting judgment toward the target yielded effects of the evaluative condition, B = -1.30, β = -.24, p =.030, where participants in the supraliminal positive information condition made more positive judgments of the target than participants in the supraliminal negative information condition, and explicit evaluation, B = 2.46, β =.88, p <.001, where more positive explicit attitudes toward the target predicted more positive judgments. The interaction between evaluative condition and explicit evaluation also emerged as significant, B = 1.38, β =.26, p =.037. Explicit evaluation predicted judgment more strongly for participants in the supraliminal positive condition, B = 3.52, β =.84, p <.001, than participants in the supraliminal negative condition, B = 2.34, β =.79, p <.001. There was no significant effect of theory endorsement, nor did theory endorsement interact with other predictors.

Correlations

Although the results of the regression analysis suggest that supraliminal information and explicit attitudes primarily drive judgment regardless of dispositional theory endorsement, these results may be due to an especially strong manipulation of supraliminal information which leaves little room for subliminal information to affect attitudes or judgment. Examination of correlational data may further clarify how the underlying relationships among implicit attitudes, explicit attitudes, and judgment differ depending on dispositional emphasis of feelings or reasons in judgment.

Endorsement of a feelings-based theory of judgment suggests that feelings (i.e., implicit attitudes) are a valid source of evaluative information, and endorsement of a reasons-based theory of judgment suggests that feelings are not a valid source of information. Thus, implicit attitudes and judgment are predicted to be correlated for feelings-based theorists, and uncorrelated or negatively correlated for reasons-based theorists. Predicted relationships among implicit attitudes, explicit attitudes, and judgment yield distinct patterns based on associative-propositional and systems-of-reasoning attitude models.

From the perspective of the APE model, explicit evaluations can be the product of both implicit and explicit information. Thus, implicit and explicit attitudes should be positively correlated when feelings are emphasized and either uncorrelated or negatively correlated when reasons are emphasized (Gawronski and LeBel, 2007). For feelings-based theorists, implicit and explicit attitudes are predicted to positively correlate with judgment. For reasons-based theorists, only explicit attitudes are predicted to positively correlate with judgment. Implicit attitudes are predicted to either be uncorrelated or negatively correlated with judgment. From a systems-of-reasoning perspective, implicit and explicit evaluations are driven by independent learning systems. Although the systems-of-reasoning perspective does not make specific predictions regarding the emphasis of feelings or reasons as a source of information, it does provide evidence that implicit and explicit attitudes are separate, independent processes. As such, implicit and explicit attitudes should be uncorrelated regardless of whether feelings- or reasons-based theories are endorsed. For feelings-based theorists, implicit attitudes and explicit attitudes are predicted to positively correlate with judgment. For reasons-based theorists, explicit attitudes are predicted to positively correlate with judgment, and implicit attitudes are predicted to be uncorrelated with judgment.

Correlations between implicit attitudes, explicit attitudes, and target judgments were computed and compared in a median split of the sample on relative theory endorsement, revealing different patterns of correlation depending on the theory of judgment endorsed (see Table 1). For participants who endorsed a feelings-based theory of judgment, implicit and explicit attitudes were positively correlated. Both implicit attitudes and explicit attitudes were positively correlated with judgment. For participants who endorsed a reasons-based theory of judgment, implicit and explicit attitudes were uncorrelated. Implicit attitudes were uncorrelated with judgment and explicit attitudes were positively correlated with judgment. Because correlations between implicit attitudes and explicit attitudes differed depending on the endorsed theory of judgment, these results suggest support for an associative-propositional explanation of explicit attitude formation and judgment.

Discussion

These data provide partial support for hypothesized differences in evaluation and judgment between feelings-based and reasons-based implicit theorists. Contrary to predictions, supraliminal information about the target influenced both implicit and explicit evaluation, as well as judgment. Participants who learned that Bob engaged in positive behaviors and not negative behaviors made more positive explicit evaluations and judgments of Bob than participants who learned the opposite, across endorsed theories of judgment. However, the endorsed theory of judgment moderated the strong effect of supraliminal information on implicit evaluations. Implicit evaluations of Bob were influenced by supraliminal information in directions consistent with explicit evaluation, but only for feelings-based theorists. Implicit and explicit attitudes correlated with each other and with judgment for feelings-based theorists. For reasons-based theorists, implicit and explicit attitudes were uncorrelated and only explicit attitudes correlated with judgment. The correlation of implicit and explicit attitudes for feelings-based theorists - who perceive feelings as a valid source of information - supports hypotheses consistent with the APE model (Gawronski & LeBel, 2007).

Although these results did not support the hypothesis that feelings and reasons-based theorists place greater weight on implicit and explicit attitudes respectively for making judgments, they do suggest that feelings- and reasons-based theorists are differentially sensitive to a strong source of evaluative information (i.e., the behaviors attributed to Bob) and dispositional theories of judgment affect the role of implicit evaluations in judgment. The correlational data replicate Gawronski and LeBel's (2007, Study 2) findings, where contextual manipulation of the use of feelings in evaluation led to a correlation between implicit and explicit attitudes, and the use of reasons led to either no correlation between implicit and explicit attitudes. Further, they extend those findings both by replicating them in a dispositional context and by relating them to judgments made subsequent to evaluation. For feelings-based theorists, both implicit and explicit attitudes correlated with judgment, and for reasons-based theorists, only explicit attitudes correlated with judgment.

Study 1 demonstrated that dispositional differences in reliance on feelings or reasons as a source of evaluative information led to different levels of sensitivity to new information in forming implicit and explicit attitudes, as well as different relationships between implicit attitudes, explicit attitudes, and judgment depending on the dispositional theory of judgment endorsed. Study 2 sought to replicate and extend these results by demonstrating that these differences in reliance on associative and propositional processes would also influence judgment when the preferred source of evaluative information was contextually manipulated, rather than dispositionally measured.

Study 2

The purpose of Study 2 is to demonstrate that contextually manipulated use of either a feelings- or reasons-based theory of judgment will yield differences in implicit evaluation, explicit evaluation, and judgment consistent with dispositional endorsement of feelings- or reasons-based theories of judgment. Participants who are instructed to base judgments on feelings are predicted to make judgments of a target congruent with automatic associations (i.e., implicit attitudes) and propositional processes (i.e., explicit attitudes). Conversely, participants who are instructed to base judgments on reasons are predicted to make judgments congruent with propositional processes, but not automatic associations. Given the strong effect of supraliminal evaluative information in Study 1, both implicit and explicit attitudes are predicted to be

influenced in a direction consistent with explicit evaluative information, but only for participants instructed to use a feelings-based theory of judgment. Explicit evaluative information is predicted to have no effect on implicit attitudes for participants instructed to use a reasons-based theory of judgment.

Method

Participants

One hundred twenty-eight undergraduates at a Midwestern university (32% male, 89% Caucasian, ages 18-27, median age = 19 years) participated in the study in exchange for partial course credit. Participants completed all measures on computer workstations.

Design

As in Study 1, participants received either positive subliminal and negative supraliminal information about the target, or negative subliminal and positive supraliminal information. This procedure was intended to facilitate the development of conflicting implicit and explicit attitudes about the target. Situational emphasis of one attitude over the other in formation of a judgment would thus be indicated by the valence of the judgment. Participants completed measures of implicit evaluation, explicit evaluation, and judgment subsequent to the evaluative conditioning task, in a 2 (evaluative condition: supraliminal negative/subliminal positive, supraliminal positive/subliminal negative) × 2 (theory endorsement: feelings, reasons) × 2 (explicit evaluation instructions: feelings, reasons) between-subjects design.

Procedure

As in Study 1, participants in Study 2 formed attitudes about a target based on opposing subliminal and supraliminal information about the target, presented in an evaluative conditioning procedure. Participants were randomly assigned to receive either positive subliminal and negative supraliminal information about the target, or negative subliminal and positive supraliminal information. In addition, participants were randomly assigned to receive instructions to make explicit evaluations and judgments of the target while relying either on feelings or reasons as a source of judgment. Participants completed implicit and explicit measures of evaluation and made judgments about the target. The evaluative conditioning procedure was identical to that used in Study 1, with the addition of the instructions to use feelings or reasons when completing the explicit measures.

Manipulation of Theory of Judgment

Before completing the explicit measures, participants received a set of instructions emphasizing either feelings (i.e., “in the following task, we would like to learn about your personal preference for or against Bob. For this purpose, please take a moment to think about how you FEEL about Bob”) or reasons (i.e., “In the following task, we would like to learn about your personal preference for or against Bob. For this purpose, please take a moment to think about everything you KNOW about Bob”). Because the presentation of the explicit and implicit measures were counterbalanced as in Study 1, implicit data for half of the sample are not meaningful for examining the situational hypotheses.

Measures

With the exception of the instructions preceding the explicit measures, all measures were identical to those used in Study 1. Participants completed the REI as a measure of dispositional reliance on feelings- or reasons-based judgment and the AMP as a measure of implicit attitudes. For the REI, separate means were computed for endorsement of experiential and rational judgment, with each mean serving as an index of its respective construct. These indices demonstrated good internal consistency (experiential $\alpha = .89$, rational $\alpha = .88$). As in Study 1, relative endorsement of feelings- or reasons-based theories of judgment was computed by subtracting the experiential score from the rational score, so that higher values indicate greater emphasis on reasons-based theories and lower values indicate greater emphasis on feelings-based theories. For the AMP, implicit evaluation was assessed by computing the proportion of "more pleasant" responses to target trials (i.e., characters preceded by Bob) compared to all trials. As in Study 1, AMP scores were standardized for comparison to the measures of explicit evaluation.

Explicit attitudes were measured using a composite score obtained by taking the mean of feeling thermometer scores and the average of 5 semantic differential items, each of which were standardized separately before computing the composite. Semantic differential scores demonstrated very good internal reliability ($\alpha = .99$), and the average of the semantic differential items correlated strongly with the feeling thermometer ratings ($r = .96$, $p < .001$). Judgment was measured using two 7-point Likert scale items. These items correlated well ($r = .92$, $p < .001$), and their average served as a composite measure of judgment toward the target.

Manipulation check. As in Study 1, participants selected 20 words from a list of 40 that they thought they might have seen during the implicit part of the evaluative conditioning task. Ten of these words appeared as part of the subliminal conditioning task, 10 appeared in the other subliminal condition, and 20 did not appear anywhere in the study.

Results

Manipulation Check

To ensure that participants did not recognize words presented as part of the subliminal component of the evaluative conditioning task, I assessed their mean accuracy for identifying which 20 of 40 words they thought were presented in their evaluative condition using the same procedure adapted from Rydell and McConnell (2006, Experiment 5) as in Study 1. Participants were significantly lower than chance at recognizing subliminal primes, $M = .075$, $SD = 0.07$, $t(127) = -28.96$, $p < .001$.

Implicit and Explicit Attitudes

Implicit and explicit attitudes toward the target were analyzed in a 2 (evaluative condition: subliminal positive/supraliminal negative, subliminal negative/supraliminal positive) × 2 (explicit evaluation instructions: feelings, reasons) × 2 (attitude type: explicit, implicit) mixed-model ANOVA, with attitude type as a within-subjects factor. A significant Evaluative Condition × Attitude interaction emerged, $F(1, 60) = 30.33$, $p < .001$, where no effects or interactions were significant for implicit attitudes, all ps > .22, and explicit attitudes yielded a main effect of explicit evaluation condition, $F(1,60) = 144.36$, $p < .001$ (see Figure 2) For purposes of comparison with Study 1, means are presented in the predicted three-way interaction. Participants in the supraliminal positive information condition rated the target significantly more positively ($M = .80$, $SD = 0.42$) than participants in the supraliminal negative information condition ($M = -.84$, $SD = 0.65$). Implicit attitudes did not differ by subliminal

information condition (subliminal positive information M = .15, SD = 0.96, subliminal negative information M = .19, SD = 1.11).

Judgment

Measures of judgment, evaluative condition, implicit attitudes, explicit attitudes, and instruction condition were entered into a multiple regression analysis, with evaluative condition, implicit attitudes, explicit attitudes, instruction condition, and their interactions predicting judgment. The interaction between instruction condition and explicit evaluation emerged as significant, B = -.80, β =-.21, p =.046. Explicit evaluation predicted judgment more strongly for participants in the reasons instruction condition, B = 2.46, β =.95, p <.001, than participants in the feelings instruction, B = 2.37, β =.91, p <.001. Effects of explicit evaluation, B = 2.67, β =1.02, p <.001, and instruction condition, B = -1.02, β = -.20, p =.015, also emerged as significant. More positive explicit attitudes toward the target predicted more positive judgments, and participants in the reasons instruction condition made more positive judgments than those in the feelings condition. The effect of evaluative condition was marginally significant, B = -1.01, β = -.20, p =.073. Participants in the supraliminal positive information condition made more positive judgments of the target than participants in the supraliminal negative information condition. These results are consistent with hypotheses, insofar as they suggest that use of a reasons-based theory of judgment increases the emphasis of explicit evaluations over implicit evaluations in making a judgment.

Correlations

As further support for the predicted generalizability of theories of judgment from situational to dispositional contexts, patterns of correlation between implicit attitudes, explicit attitudes, and judgment were predicted to replicate those of Study 1, where explicit and implicit attitudes were correlated for those who endorsed a feelings-based theory of judgment and uncorrelated for those who endorsed a reasons-based theory of judgment. Implicit and explicit attitudes were likewise predicted to correlate with judgment for feelings-based theorists and only explicit attitudes were predicted to correlate with judgment for reasons-based theorists. A pattern of correlations consistent with those observed in Study 1 due to dispositional endorsement of feelings- and reasons-based theories of judgment was predicted to emerge in Study 2 through the situational manipulation of feelings- and reasons-based theories of judgment.

For situational theories of judgment, correlations among implicit attitudes, explicit attitudes, and target judgments were computed and compared by evaluation instruction condition for participants who received evaluation instructions prior to the implicit measure. Contrary to predictions and the results of Study 1, implicit and explicit attitudes were uncorrelated for both feelings- and reasons-based instruction conditions, and only explicit attitudes were positively correlated with judgment across manipulated theories. Implicit attitudes were negatively (but nonsignificantly) correlated with judgment.

For dispositional theories of judgment, correlations among implicit attitudes, explicit attitudes, and judgment yielded results similar to those attained in Study 1. For feelings-based theorists, implicit and explicit attitudes were positively correlated, explicit attitudes were positively correlated with judgment, and implicit attitudes were marginally positively correlated with judgment. In contrast, for reasons-based theorists, implicit and explicit attitudes were negatively correlated, explicit attitudes were positively correlated with judgment, and implicit attitudes were negatively correlated with judgment (see Table 1). The negative correlations

between attitudes and between implicit attitudes and judgment for dispositional reasons-based theorists represent a departure from the results of Study 1, and open the possibility that dispositional reasons-based theorists are capable of correcting for their implicit attitudes, rather than discounting them or being unaware of them, as the nonsignificant correlations in Study 1 suggest.

The failure of Study 2 to replicate dispositional results from Study 1 in a situational context could be due in part to an interaction between dispositionally held and contextually manipulated theories of judgment. Correlational data from Study 1 suggest that implicit and explicit information both inform explicit attitudes and judgment for dispositionally feelings-based - but not reasons-based - theorists, and that there is no relationship between implicit attitudes and either implicit attitudes or judgment for dispositionally reasons-based theorists. If the instruction condition is facilitating or inhibiting a dispositionally held theory of judgment, then the relationship between implicit attitudes, explicit attitudes, and judgment may differ depending both on dispositional theories of judgment and instructions to rely on either feelings- or reasons-based theories of judgment. To test this possibility, correlations between implicit attitudes, explicit attitudes, and judgment were compared both by dispositional theories of judgment and instruction condition for the entire sample.[2]

Congruent theories. For participants who received evaluation instructions congruent with their dispositional theory of judgment (i.e., feelings-based theorists who received instructions to use feelings), patterns of correlation were generally consistent with those found in Study 1 and by Gawronski and LeBel (2007). For feelings-based theorists who received feelings instructions, implicit and explicit attitudes were marginally positively correlated ($p = .058$). Explicit and implicit attitudes were positively correlated with judgment. However, for reasons-based theorists who received reasons instructions, implicit and explicit attitudes were negatively correlated. Explicit attitudes were positively correlated with judgment, and implicit attitudes were negatively correlated with judgment (see Table 2). Negative correlations between implicit attitudes and explicit attitudes and between implicit attitudes and judgment for dispositional reasons-based theorists represent a departure from the results of Study 1, where null or near-zero correlations were found, but such negative correlations are consistent with results obtained in prior research (Gawronski & LeBel, 2007, Experiment 3).

Incongruent theories. For participants who received evaluation instructions incongruent with their dispositional theory of judgment (i.e., a feelings-based theorist who received instructions to use reasons), patterns of correlation for feelings-based dispositional theorists did not replicate those obtained under congruent theories. For feelings-based theorists who received reasons instructions, implicit and explicit attitudes were uncorrelated. Explicit attitudes were correlated with judgment, and implicit attitudes were uncorrelated with judgment. For reasons-based theorists who received feelings instructions, correlational patterns were consistent with those obtained under congruent theories. Implicit and explicit attitudes were uncorrelated, explicit attitudes were correlated with judgment, and implicit attitudes were marginally negatively correlated with judgment (see Table 2). Correlational patterns between implicit attitudes, explicit attitudes, and judgment thus differed both by dispositional and situational theories of judgment. Correlational patterns consistent with those in Study 1 emerged for dispositional feelings-based theorists only when they received feelings-based judgment instructions. Situational theories of judgment did not exert a complementary effect on dispositional reasons-based theorists, for whom the relationship between attitudes and judgment was consistent across instruction conditions. However, the relationship between attitudes and

judgment for dispositional reasons-based theorists differed from Study1, with negative correlations between implicit and explicit attitudes, as well as between implicit attitudes and judgment.

As shown in Table 2, these results suggest that dispositional implicit theories of judgment help determine the degree to which feelings-based information is available to influence explicit attitudes and judgment. For participants who dispositionally endorse a feelings-based theory of judgment, receiving instructions to rely on reasons inhibited the relationship between implicit and explicit attitudes, and the input of implicit attitudes into judgment. However, dispositional reasons-based theorists did not recruit implicit attitudes as a source of judgment when asked to rely on feelings, nor did the relationship among implicit attitudes, explicit attitudes, and judgment differ as a function of the instructions dispositional reasons-based theorists received. Dispositional feelings-based theorists may or may not incorporate implicit attitude information into judgment contingent on situational factors, but dispositional reasons-based theorists appear to discount or correct for implicit attitude information, even when situationally instructed to do otherwise.

Differences in correlational patterns contingent upon both dispositional and situational theories of judgment suggest two possible factors affecting the relationships among implicit attitudes, explicit attitudes, and judgment. In some cases, congruence between dispositional and situational theories moderated how attitudes relate to each other and to judgment, as evinced by differences in results by situational theory for dispositional feelings- based theorists. The mere presence of an instruction set may have also affected how attitudes related to each other and to judgment for dispositional reasons-based theorists, as indicated by differences in correlations between implicit attitudes, explicit attitudes, and judgment for dispositional reasons-based theorists between Studies 1 and 2. These data suggest that there are differences between dispositional feelings- and reason-based theorists not only in the relationship between attitudes and judgment, but also the overall effect of receiving judgment instructions.

Discussion

Contrary to original hypotheses, supraliminal information about the target influenced both explicit evaluation and judgment, but subliminal information about the target did not influence implicit attitudes or judgment. Participants who learned that Bob engaged in positive behaviors and not negative behaviors made more positive explicit evaluations and judgments of Bob than participants who learned the opposite, across evaluation instruction conditions. Implicit evaluations did not differ by evaluation instruction condition. Implicit and explicit attitudes were not significantly correlated with each other for participants in either evaluation instruction condition, although the pattern of positive correlations for feelings-based theories of judgment and negative correlations for reasons-based theories is consistent with prior research (Gawronski & LeBel, 2007, Experiment 3). Contrary to Study 1, only explicit attitudes were correlated with judgment for either theory condition, rather than implicit attitudes being correlated or uncorrelated with judgment contingent on the endorsed theory of judgment. Correlational patterns consistent with Study 1 emerged when dispositional feelings-based theorists employed situational theories of judgment congruent with their dispositional theories of judgment, but not when they employed situational theories of judgment incongruent with their dispositional theories. Correlational patterns for dispositional reasons-based theorists did not differ across congruent and incongruent instruction sets, but did differ from correlational patterns in Study 1.

These results suggest that dispositional feelings- and reasons-based theorists may respond differently to situational judgment cues. Contrary to Study 1, implicit and explicit attitudes were negatively correlated (rather than uncorrelated) for dispositional reasons-based theorists, and implicit attitudes likewise were negatively correlated with judgment. These results suggest that dispositional theories of judgment serve as an initial cue to retain implicit attitude information or correct for it, contingent upon the theory employed. Situational theories of judgment may in some cases inhibit the use of dispositionally retained implicit attitude information, but do not facilitate its retrieval.

General Discussion

Although considerable research has examined the use of implicit theories with regard to attitude change, less attention has been paid to the role implicit theories play in attitude formation and judgment. The two studies presented here take the initial step in exploring the relationship among implicit theories of judgment, evaluative processes, and judgment. It was hypothesized that social perceivers possess implicit theories of judgment - common-sense assumptions about appropriate sources of information to use when making a judgment - that emphasize the use of either feelings or reasons as a source of evaluative information. Feelings-based evaluations were hypothesized to originate in automatic associations (i.e., implicit attitudes), and reasons-based evaluations were hypothesized to originate in propositional logic (i.e., explicit attitudes). Emphasis of either implicit or explicit attitudes as a source of evaluative information was hypothesized to influence judgments made as a product of evaluation. Study 1 examined the effect of dispositionally held implicit theories of judgment on judgment of a target, with implicit and explicit attitudes toward the target manipulated in an evaluative conditioning paradigm. Study 2 used the same evaluative conditioning paradigm to assess the effect of a contextually manipulated implicit theory of judgment on judgment of a target.

In Study 1, contrary to hypotheses, information intended to inform only explicit attitudes toward the target (reports of the target's behavior) influenced the valence of both implicit and explicit attitudes. Participants who learned that the target engaged in positive behaviors and did not engage in negative behaviors had more positive explicit attitudes and made more positive judgments toward the target than participants who learned the opposite, regardless of the dispositional theory of judgment endorsed. However, this influence extended itself to implicit attitudes, and did so moderated by dispositional theory endorsement. Supraliminal information influenced implicit as well as explicit attitudes for participants who endorsed a feelings-based theory of judgment, but not for those who endorsed a reasons-based theory of judgment. In Study 2, participants who learned that the target engaged in positive behaviors and did not engage in negative behaviors had more positive explicit attitudes and made more positive judgments toward the target than participants who learned the opposite, across situationally manipulated theories of judgment. Unlike results obtained by dispositional differences in Study 1, evaluative conditioning had no effect on implicit attitudes across contextually manipulated theories of judgment. Underlying correlations among implicit attitudes, explicit attitudes, and judgment varied by contextual manipulation in a manner generally consistent with dispositional theories of judgment as in Study 1, but did so for dispositional feelings-based theorists only when participants employed situational theories of judgment congruent with their dispositional theories. For dispositional reasons-based theorists, implicit and explicit attitudes as well as

implicit attitudes and judgment were negatively correlated in Study 2 (where in Study 1 they were uncorrelated) regardless of the situational theory employed.

These results suggest not only that theories of judgment moderate the nature of the relationship among implicit attitudes, explicit attitudes, and judgment, but also that situational theories of judgment are capable of inhibiting the effect of dispositional theories of judgment. Specifically, perceivers who endorse a dispositional feelings-based theory of judgment incorporate subliminal as well as supraliminal information into judgment, and are capable of situationally inhibiting subliminal information. Perceivers who endorse a dispositional reasons-based theory of judgment do not employ subliminal information, do not situationally recruit it, and may indeed chronically correct for it.

Given research which finds that implicit attitudes can be sensitive to contextual manipulation of information (Barden, Maddux, Petty, & Brewer , 2004; Dasgupta & Greenwald, 2001), these data suggest the possibility that dispositional endorsement of either a feelings- or reasons-based theory of judgment affects the degree to which both implicit and explicit processes are sensitive to new information. However, correlational data suggest that feelings- and reasons-based theorists also differ in the degree to which implicit and explicit attitudes inform their judgments. The data presented here, although marked by a strong reliance on explicit attitudes, do suggest that attention to implicit and explicit attitudes as a source of evaluative information does differ depending on which implicit theory of judgment the social perceiver endorses. For those who dispositionally endorse a feelings-based theory of judgment, judgment is related to both implicit and explicit attitudes. For those who dispositionally endorse a reasons-based theory of judgment, judgment is related to explicit, but not implicit attitudes. Further, these dispositional relationships can be inhibited by situational theories of judgment when both implicit and explicit attitudes play a role in forming a judgment.

In Study 1, implicit and explicit attitudes were correlated for feelings-based theorists and uncorrelated for reasons-based theorists. Implicit and explicit attitudes correlated with judgment for feelings-based theorists, but only explicit attitudes correlated with judgment for reasons-based theorists. These results are consistent with an APE model perspective and results attained by Gawronski and LeBel (2007) through contextual manipulation of feelings and reasons-based judgment on implicit and explicit attitudes. Although the similarity in explicit attitude and judgment ratings between feelings- and reasons-based theorists makes it difficult to elucidate the mechanism underlying judgment, the correlational data suggest that reasons-based theorists either discount or are unaware of implicit attitude information when making a judgment and feelings-based theorists employ implicit attitude information in the service of judgment. In Study 2, correlational data compared solely by situational theories of judgment indicated only correlations between explicit attitudes and judgment for both groups.

However, further exploration of these data suggested that the presence of situational theories of judgment alongside dispositional theories of judgment affects how judgments are made. For dispositional feelings-based theorists, implicit and explicit attitudes were correlated with each other and with judgment when they received instructions to use a feelings-based theory, but not when they received instructions to use a reasons-based theory. For dispositional reasons-based theorists, instructions to use a feelings-based theory did not facilitate positive correlations between implicit attitudes and judgment. Further, correlations between implicit and explicit attitudes and between implicit attitudes and judgment were negative (rather than near-zero) when an instruction set was presented, regardless of congruence. It thus remains to be determined whether dispositional reasons-based theorists are insensitive to their implicit attitudes

(attention to emotions being a prerequisite for the ability to use them as a source of information, see Gasper and Clore, 2000), are aware of their implicit attitudes but discount them, or are aware of their implicit attitudes and actively correct against them to make a judgment.

Although the correlational results for dispositional reasons-based theorists in Study 2 lend support to a correction account, these results are at variance with the same correlations for dispositional reasons-based theorists in Study 1. This suggests that the introduction of situational judgment cues potentially obscures the means by which implicit attitudes dispositionally do or do not influence judgment. The use of an instruction set subsequent to the evaluative conditioning task may have cued introspection in the participants, focusing their attention on the process of evaluation. Prior research by Wilson and colleagues (1993) demonstrated that a focus on the reasons for a decision lead to greater post-choice dissatisfaction because social perceivers made selections based not on their initial reactions, but on what seemed like plausible reasons for a selection based on introspection. In the current research, relationships between attitudes and judgment differed both by instruction set and dispositional theories of judgment. The specific instruction set given affected correlations between attitudes and judgment for dispositional feelings-based theorists, but not for dispositional reasons-based theorists. For dispositional reasons-based theorists, correlations between attitudes and judgment differed from Study 1 results. As in prior research, instructing participants to employ a specific strategy may have facilitated a naïve examination of their implicit theories of judgment, with differential relationships between implicit attitudes, explicit attitudes and judgment emerging both from participant beliefs about how each source of information would plausibly be used and from the role of introspection within the overarching dispositional theory of judgment. Relationships between attitudes and judgment differed for dispositional feelings-based theorists as a function of the content of the instruction set, and relationships between attitudes and judgment for dispositional reasons-based theorists differed from results obtained in the previous study, regardless of content. These results suggest not only that naïve examination of theories of judgment changes results from those obtained as a result of dispositional theory use, but also that the nature of the change itself differs depending on the initial dispositional theory employed. Although the possibilities inherent in evaluative metatheories suggest fertile ground for research, further speculation along these lines is beyond the scope of the current studies.

Within dispositional theories of judgment, use of an incongruent situational theory affected correlational patterns for dispositional feelings-based theorists, but not for dispositional reasons-based theorists. These asymmetrical results suggest that situational differences in the use of implicit and explicit attitude information in judgment depend in part on the dispositional role of implicit attitude information. Dispositional attention to implicit attitude information makes inhibition of that attention possible when contextual factors suggest that it should be discounted, but dispositional correction for implicit attitude information inhibits its contextually suggested recruitment.

Differences between studies in the relationship of implicit attitudes to explicit attitudes and judgment for reasons-based theorists suggest further study aimed at isolating the nature of the mechanism by which implicit information does or does not influence judgment. Doing so would also help to provide stronger evidence for either an APE or systems-of-reasoning account of attitude formation and change. Although the correlational results of Study 1 are consistent with an APE account, their inconsistency with the results of Study 2 make a strong claim untenable.

Limitations of the Current Research

The two studies presented here may not have been able to provide strong confirmation of the hypothesized relationship among implicit theories, evaluation, and judgment because of issues related both to the manipulation used and the method of measurement. The evaluative conditioning paradigm used here, although responsible for consistent effects in prior research (e.g., Rydell & McConnell, 2006), may not have provided equal opportunity for participants to rely on explicit or implicit attitudes as a source of information for judgments. The supraliminal evaluation condition taught participants about the target by indicating that every positive behavior was characteristic of the target and every negative behavior was uncharacteristic, or vice versa. Thus, supraliminal information about the target was unambiguously good or bad, and as such may have presented such a strong evaluative profile that implicit information had less of an evaluative impact than it otherwise would when accompanied by more ambiguous supraliminal information. Indeed, the valence of the explicit evaluation condition was also reflected in implicit attitudes for feelings-based theorists in Study 1, suggesting that it overwhelmed a more subtle implicit conditioning measure.

Another possibility is suggested by the different ways in which implicit and explicit attitudes influence behavior. Explicit attitudes primarily influence deliberate, verbal behavior, and implicit attitudes primarily influence nonconscious, nonverbal behavior (McConnell & Liebold, 2001; Rydell & McConnell, 2006). For implicit attitudes to influence explicit attitudes, judgment, or both, there would need to be an opportunity for nonconscious processes to play an evaluative role. One possible means by which nonconscious processes could influence evaluation would be through the interpretation of ambiguous information (e.g., Fazio, Powell, & Herr, 1983). In the current research, all interpretable information about the target was unambiguous. In the face of an extreme, unambiguous explicit attitude, implicit attitudes may have had little opportunity to influence judgment and social perceivers who would otherwise rely to a degree on their implicit attitudes (i.e., dispositional feelings-based theorists) would not have done so. Future research examining the relationships among implicit theories of judgment, evaluation, and judgment should incorporate manipulations of explicit attitudes which present less extreme representations of the target, as well as more sensitive measures of evaluation which allow both implicit and explicit attitudes opportunities to influence judgment.

One possibility for further study is a paradigm in which explicit information is held constant and implicit information is manipulated to test the degree to which feelings-and reasons-based theorists incorporate implicit attitudes into explicit evaluation and judgment. Dispositional feelings-based theorists would show greater movement on their explicit evaluations and subsequent judgments of a target than dispositional reasons-based theorists. Another possibility would be a paradigm in which participants are provided with an opportunity to interpret ambiguous information about the target prior to judgment, allowing one to assess the degree to which implicit and explicit attitudes influence the perception of the target. In this paradigm, the crossed-valence evaluative conditioning procedure employed in the current research would be more demonstrative, insofar as interpretation of the ambiguous information would reflect implicit conditioning for feelings-based theorists. Thus, subliminal as well as supraliminal information would be available to feelings-based theorists for the formulation of explicit evaluations and judgment. Reasons-based theorists would be less sensitive to subliminal information, and would thus be less likely to use it in interpreting ambiguous information. Subsequently, their explicit evaluations and judgments of the target would more strongly reflect explicit attitude information.

Although the current research does not conclusively demonstrate that implicit theories of judgment lead to primacy of either implicit or explicit attitudes as a source of evaluative information, it does provide support for an associative-propositional model of attitudes by demonstrating different relationships among implicit attitudes, explicit attitudes, and judgment as a function of dispositional and situational theories of judgment. Furthermore, it provides evidence that dispositional theories of judgment affect the sensitivity of implicit attitudes to new, unambiguous information. Implicit theories of judgment thus contribute to the formation of attitudes by affecting the degree to which both implicit and explicit attitudes are sensitive to new information, and contribute to the formation of judgments by affecting the degree to which implicit and explicit attitude information contributes to judgment. As such, these studies represent an important first step in the examination of implicit theories of judgment as a factor in the relationship between attitudes and judgment in a dual-process attitude framework.

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Footnotes

1

Analyses performed using the continuous measure of relative theory endorsement yielded similar results.

2.

Correlations performed using only participants who received the instruction set before the implicit measure yielded similar results.

Table 1

Correlations between Attitudes and Judgment by Dispositional Theory of Judgment

	Study 1		Study 2	
	Explicit Attitudes	Implicit Attitudes	Explicit Attitudes	Implicit Attitudes
		Dispositional Feelings		
Explicit Attitudes				
Implicit Attitudes	.53*		.25*	
Judgment	.91*	.47*	.96*	.23
		Dispositional Reasons		
Explicit Attitudes				
Implicit Attitudes	-.03		-.24*	
Judgment	.84*	.04	.89*	-.25*

Note: Study 1 Dispositional Feelings $n = 35$, Dispositional Reasons $n = 35$; Study 2 Dispositional Feelings $n = 62$, Dispositional Reasons $n = 66$

* $p < .05$

Table 2

Correlations between Attitudes and Judgment by Dispositional Theory and Instructions

	Feelings Instructions		Reasons Instructions	
	Explicit Attitudes	Implicit Attitudes	Explicit Attitudes	Implicit Attitudes
		Dispositional Feelings		
Explicit Attitudes				
Implicit Attitudes	.38		.14	
Judgment	.96*	.40*	.96*	.09
		Dispositional Reasons		
Explicit Attitudes				
Implicit Attitudes	-.22		-.41*	
Judgment	.87*	-.30	.90*	-.37*

Note: Feelings Instructions Dispositional Feelings $n = 35$, Dispositional Reasons $n = 38$; Reasons Instructions Dispositional Feelings $n = 62$, Dispositional Reasons $n = 66$

* $p < .05$

Figure 1. Study 1 implicit and explicit attitudes by dispositional theory of judgment and evaluative condition

Figure 2. Study 2 implicit and explicit attitudes by instruction condition and evaluative condition

Figure 1. Study 1 implicit and explicit attitudes by dispositional theory of judgment and evaluative condition.

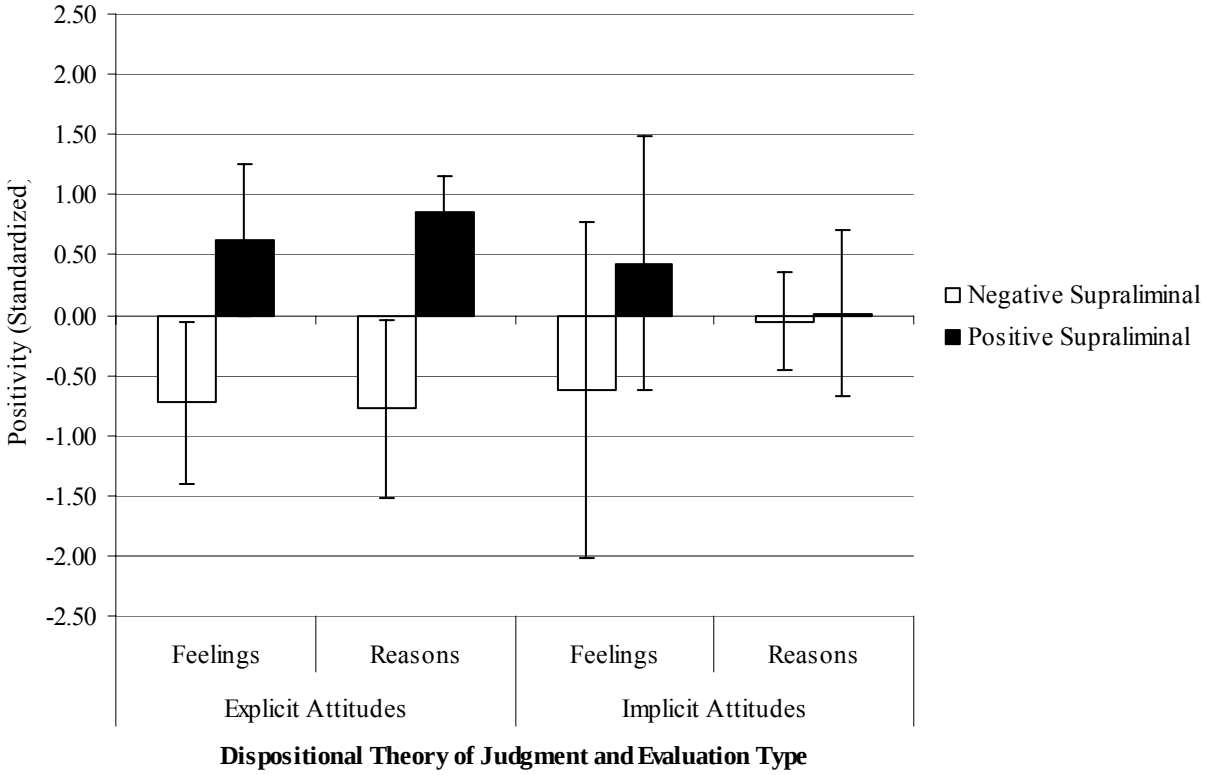

Figure 2. Study 2 implicit and explicit attitudes by instruction condition and evaluative condition.