Reports

Consequences of discrepant explicit and implicit attitudes: Cognitive dissonance and increased information processing

Robert J. Rydell [a,*], Allen R. McConnell [b], Diane M. Mackie [c]

[a] Department of Psychological and Brain Sciences, Indiana University, Bloomington, IN 47405, USA
[b] Miami University, USA
[c] University of California, Santa Barbara, USA

A B S T R A C T

Attitudes research has shown that evaluations assessed directly (explicit attitudes) and indirectly (implicit attitudes) can diverge for many reasons. However, only recently has work begun to examine the phenomenology of experiencing discrepant explicit and implicit attitudes, and a number of important questions remain unanswered. What are the consequences of explicit–implicit attitude discrepancies on information processing? What psychological states accompany these discrepancies, and can they account for behavior? In two experiments, the current work examined whether dissonance-related discomfort results from discrepant explicit and implicit attitudes and considered its role in directing subsequent information processing. Dissonance and additional information processing were observed in experimental conditions where explicit and implicit attitudes diverged (and increased dissonance-related discomfort accounted for greater information processing; Experiment 1), but they were eliminated by a manipulation that reduced dissonance (i.e., self-affirmation; Experiment 2). The role of cognitive dissonance in explicit–implicit attitude inconsistencies and information processing is discussed.

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Introduction

At times our feelings about people or objects are conflicted. That is, our explicit attitudes (evaluations that people can report and for which expression can be controlled) and implicit attitudes (evaluations for which people may not initially have conscious access and for which activation cannot be controlled) seem discrepant. For instance, one might dislike a co-worker despite the complete inability to articulate anything other than positive details about the person or be drawn to junk food despite its expense and fat content.

Explicit and implicit attitudes can diverge for a number of reasons, including self-presentational concerns (Olson, Fazio, & Hermann, 2007), quick implicit (Karpinski & Hilton, 2001) or explicit (Rydell & McConnell, 2006) attitude change, conflicting evaluations of individuated behaviors and social group memberships (McConnell, Rydell, Strain, & Mackie, 2008), extra-personal associations (Han, Olson, & Fazio, 2006), or exposure to inconsistently valenced subliminal primes and behavioral information (Rydell, McConnell, Mackie, & Strain, 2006). Although now documented extensively, little research has examined the consequences of explicit–implicit

attitude discrepancies in terms of their phenomenology and their impact on information processing.

The only research examining the psychological consequences of divergent explicit–implicit attitudes or beliefs has shown that increased discrepancies lead to greater implicit ambivalence (a stronger association between the attitude object and doubt in memory) and increased information processing of attitude relevant information (Petty, Tormala, Briñol, & Jarvis, 2006). This research showed that once attitudes formed, they were not completely replaced when attitudes changed because increased implicit ambivalence accompanied attitude change. Briñol, Petty, and Wheeler (2006) showed that the greater the discrepancy between standardized measures of explicit and implicit self-beliefs (e.g., one's own shyness), the more extensive processing of persuasive messages related to the domain of discrepancy (e.g., arguments favoring shyness). As explicit–implicit discrepancies increased, people were motivated to carefully consider subsequently presented, relevant information. Yet, why does this outcome occur? What phenomenology is driving this increased information processing?

Although there are no data directly addressing this question, Petty, Briñol, and colleagues suggested that increased explicit–implicit attitude discrepancies lead to implicit ambivalence, which people attempt to reduce by elaborating on subsequent information about the attitude object. Indeed, research on explicit and implicit attitude ambivalence has shown that when attitudes are

ambivalent, people engage in more detailed processing of subsequently presented attitude-relevant information (e.g., Bell & Esses, 2002; Jonas, Diehl, & Bromer, 1997; Petty et al., 2006).

In the current work, we examined whether holding discrepant explicit and implicit evaluations produces cognitive dissonance, which might in turn affect social information processing. It is clear that when people hold inconsistent cognitions, these discrepancies elicit feelings of psychological tension or discomfort (e.g., Aronson, 1992; Festinger, 1957). And, in response to dissonance-induced discomfort, people may attempt to reduce these feelings with responses ranging from justifying their beliefs (Aronson, 1997; Cooper & Fazio, 1984) to engaging in self-affirmation (Steele, 1988). Because explicit–implicit attitude discrepancies represent valence inconsistent cognitions (i.e., evaluations) about an attitude object, we explored whether they would lead to feelings of dissonance-induced discomfort (Olson & Fazio, 2007). Thus, as explicit–implicit attitude discrepancies increase, greater dissonance should be aroused and, as an attempt to reduce dissonance, increased information processing of attitude relevant information observed.

The ambivalence and dissonance accounts make similar predictions for attitude discrepancies and information processing. However, it is clear that dissonance and ambivalence are not isomorphic constructs (Maio, Esses, & Bell, 2000). For the current concerns, discomfort is not a necessary aspect of ambivalence (Newby-Clark, McGregor, & Zanna, 2002), whereas dissonance is always uncomfortable (Cooper & Fazio, 1984). Because discomfort is not necessary for ambivalence, to the extent that discomfort is necessary for explaining the relation between increased explicit–implicit discrepancies and increased information processing, then a dissonance account is given relatively more credence than an ambivalence account. Moreover, if the introduction of a manipulation known to undercut dissonance affects both dissonance-induced discomfort and additional information processing but has no impact on ambivalence, a dissonance account would be further supported.

Therefore, we examined the mechanisms by which greater explicit–implicit attitude discrepancies produce increased information processing. We suggest that explicit–implicit attitude discrepancies induce dissonance (discomfort) and, when subsequent information is available about the attitude object, people will attend to and elaborate on this information to reduce dissonance arousal. Also, manipulations that neutralize dissonance (e.g., self-affirmation; Steele, 1988) should reduce information processing about an attitude object for which discrepant explicit and implicit evaluations are accessible because they should eliminate the dissonance driving information processing.

In the current work, we adopted a technique developed in our lab to establish conflicting implicit and explicit attitudes toward the same object (Rydell et al., 2006). We demonstrated that explicit attitudes can form in response to consciously available information whereas implicit attitudes can form in response to the valence of subliminally-presented primes. When participants were presented with a series of trials in which a target person ("Bob") was preceded by a subliminal prime (either positive or negative in valence) and who was described in a sentence as having performed a particular behavior (the valence of which was always opposite of the subliminal prime), implicit attitudes toward Bob reflected the valence of the subliminal primes whereas explicit attitudes corresponded to the valence of the behaviors presented.

Experiment 1

We borrowed this technique in Experiment 1, crossing the valence of the subliminal primes (positive vs. negative) with the valence of the behaviors (positive vs. negative) to produce conditions where implicit and explicit attitudes toward Bob either were, or

were not, inconsistent with each other. We predicted that when primes and behaviors were valence inconsistent (as opposed to consistent), explicit–implicit attitude discrepancies would increase as would feelings of discomfort (i.e., dissonance arousal). We then provided participants with more information about Bob's opinion on an issue. We expected increased information processing about Bob's beliefs regarding this issue in an attempt resolve discrepancies in attitude toward Bob.

Information processing was examined by having participants read the target person's opinions about (or arguments for) instituting senior comprehensive exams. Research on persuasion has shown that greater attitude change in response to strong versus weak arguments reflects greater information processing of the message (Petty & Cacioppo, 1986). We expected more persuasion (i.e., attitude change toward the position advocated by Bob) in response to strong as opposed to weak arguments, especially when explicit–implicit attitude discrepancies toward Bob were greater (i.e., when the valence of the primes and behaviors associated with the target person were inconsistent). When explicit–implicit attitude discrepancies toward the target were minimal (i.e., the valence of the primes and behaviors associated with were consistent), there should be less attitude change in the wake of Bob's strong (vs. weak) arguments.

Importantly, we examined whether dissonance and ambivalence would result from greater explicit–implicit attitude discrepancies, and we explored whether each could account for the relation between greater explicit–implicit attitude discrepancies and greater information elaboration. To the extent that dissonance could serve a mediating role, a process account highlighting the importance of discomfort in understanding how explicit–implicit attitude discrepancies affect information processing would be supported.

Method

Participants

One hundred and sixty-three undergraduates at the University of Missouri participated for research credit. They were randomly assigned to a 2 (prime valence: positive vs. negative) × 2 (behavioral valence: positive vs. negative) × 2 (argument strength: strong vs. weak) between-subjects factorial.

Presentation of primes and behavioral information

Participants learned about Bob over the course of 50 trials. For each trial, participants first saw a fixation point ("+") in the center of the computer monitor for 1000 ms that was replaced with a "rolling set of letters" randomly presented to the right or left of the fixation point. This "rolling set of letters" consisted of three letter strings. The first letter string was a non-word mask, presented for 30 ms. The second letter string was the prime word (e.g., party, ugly), which was presented for 30 ms. The final letter string was another non-word mask, also presented for 30 ms. Because of the rapid, parafoveal, and masked presentation, participants were unaware that the prime word was presented.[1] Participants were then immediately presented with just an image of Bob on the monitor for 250 ms. The image of Bob remained on the monitor while behavioral information about him was presented supraliminally in text below his photo.

The behavioral information presented about Bob varied in valence: 25 trials contained positive behaviors and 25 contained negative behaviors. For each trial, participants judged whether the behavior was characteristic or uncharacteristic of Bob using two

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[1] During an end-of-study debriefing, participants were told that words were presented subliminally during learning. None of the participants were able to correctly identify any of the prime words.