

The Dissonance-Inducing Effects of an Inconsistency Between Experienced Empathy and Knowledge of Past Failures to Help: Support for the Action-Based Model of Dissonance

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This research was designed to test the hypothesis that an inconsistency between an experienced emotion and another element of knowledge would evoke dissonance motivation. To test this hypothesis, participants were induced to experience either low or high levels of empathy for a young boy with cancer. Then they were reminded either of their past failures to help similar persons or of neutral events. Finally, they were provided an opportunity to help the boy who had cancer. As predicted, participants who were in the high-empathy/reminder-of-past-failures-to-help condition helped more than participants in the other conditions. Discussion focuses on the implications of this research for the conditions sufficient to evoke dissonance motivation. Discussion also suggests how this novel paradigm can be used to increase helping behavior.

Although much research has tested predictions derived from cognitive dissonance theory (for reviews, see Brehm & Cohen, 1962; Harmon-Jones & Mills, 1999; Wicklund & Brehm, 1976), we are unaware of any prior experimental research that has examined whether dissonance can be created between an emotion and another element of knowledge. This is particularly interesting given the origins of the theory. According to Festinger (1957), the theory of cognitive dissonance occurred to him after reading articles by Prasad (1950) and Sinha (1952) on the spreading of rumors. Prasad (1950) reported that subsequent to a severe Indian earthquake, persons who lived in the area of the earthquake and experienced tremors but suffered no actual damage spread rumors that predicted even more serious disasters in the near future. In contrast, Sinha (1952) reported that subsequent to a severe landslide, which was quite comparable to the Indian earthquake in terms of amount of destruction and loss of life, persons who lived in the area of the landslide and did witness actual damage did not spread rumors that predicted more serious future disasters. Festinger (1957) surmised that the latter group did not experience a discrepancy between their feeling of fear and the objective evidence, as the evidence clearly indicated that they should experience fear. Hence, they had no dissonance and no need to spread rumors predicting impending disasters. By contrast, the former group

experienced a discrepancy between their feeling of fear and the lack of objective evidence indicating that they should experience fear. To reduce this discrepancy, the individuals spread "fear-justifying" rumors to reduce the dissonance.

The idea that dissonance could arise from an inconsistency between an emotion and another element of knowledge was also suggested to us by the action-based model of cognitive dissonance (Harmon-Jones, 1999, 2000a, 2002), which accepts the tenets of the original theory of dissonance, but specifies why cognitive discrepancy evokes an aversive motivational state (dissonance) and why cognitive and behavioral changes occur to reduce the dissonance. Festinger's (1957) theory of cognitive dissonance specified that a cognitive inconsistency of sufficient importance would evoke motivation aimed at reducing the inconsistency, but it never specified why cognitive inconsistency evoked this motivation. Several revisions to the theory have been proposed to attempt to explain the motivation underlying dissonance reduction, but each of these revisions has been seriously challenged in recent years (for reviews, see Beauvois & Joule, 1996, 1999; Harmon-Jones, 1999, 2000a; Harmon-Jones & Mills, 1999; McGregor, Newby-Clark, & Zanna, 1999). In fact, much recent evidence has supported the original version of dissonance theory. But the question still remains, why is cognitive discrepancy motivating? According to the action-based model, cognitive discrepancy generates dissonance motivation because the cognitive discrepancy has the potential to interfere with effective and unconflicted action (see also Jones & Gerard, 1967). Dissonance reduction then occurs to assist

the individual in behaving in an effective and unconflicted manner.

We have recently obtained support for the action-based model of cognitive dissonance in a series of experiments testing two hypotheses derived from the model (Harmon-Jones & Harmon-Jones, 2000). According to the model, processes that facilitate an action-orientation should increase cognitive discrepancy reduction. An action-orientation is posited to prime individuals toward being more able to enact dissonance-arousing decisions and hence bring cognitions in line with their decisions. That is, an action-orientation should facilitate the ease with which individuals can reduce cognitive discrepancy. In two experiments, we induced dissonance by having persons make difficult decisions (e.g., Brehm, 1956). Then, the participants were assigned to write about action-oriented events or other non-action-oriented events (e.g., ordinary days). Each experiment induced the action orientation in a different manner (e.g., doing well on the exercise they had chosen to perform and implementing steps necessary to accomplish a goal of their own). Finally, we assessed attitude change; that is, the amount their attitudes toward the chosen and rejected alternatives changed from predecision to postdecision (i.e., spreading of alternatives). Replicating past dissonance research, we found that individuals who wrote about non-action-oriented events evidenced a significant degree of spreading alternatives—that is, they evaluated the chosen alternative relatively more positively and the rejected alternative relatively more negatively following the decision. In support of the prediction derived from the action-based model of dissonance, we also found that individuals who wrote about action-oriented events engaged in more spreading of alternatives than did individuals in the non-action-oriented conditions. Thus, these results support the hypothesis that an action-orientation would facilitate cognitive discrepancy reduction as measured by attitude change.

We also tested the theoretically derived hypothesis that an increase in action-orientation following a difficult decision would increase the degree to which individuals believe they can successfully act on their decision-relevant behavior (Harmon-Jones, 2000d). If dissonance reduction serves the function of translating cognitions into effective and unconflicted behavior, and an action orientation increases these effects, then an action orientation should increase the degree to which individuals believe they can behave in an effective and unconflicted manner. We tested this prediction by assessing the effects of a manipulated action orientation on beliefs about successfully implementing behaviors that follow from decisions (i.e., efficacy expectations). We found support for the prediction, as individuals who were in an action orientation had increased efficacy expectations for their chosen course of action, relative to individuals who wrote about an ordinary day and individuals who wrote about positive, but non-action-oriented, events. Taken together, the results of these three experiments provided strong support for two predictions derived from the action-based model of cognitive dissonance.

This research was designed to test an additional prediction derived from the action-based model of dissonance. According to the model, the cognitions most likely to be involved in generating dissonance are those cognitions that have implications for action. Consequently, the motivation to reduce dissonance should be increased when the salience of the action implications of the cognitions involved in the cognitive discrepancy are increased. In other words, if the function of dissonance reduction is the production of effective and unconflicted behavior and then if the behaviors associated with the cognitions involved in producing the dissonance are more pressing or salient, there should be more evidence of dissonance and discrepancy reduction. This research was designed to test this prediction by examining whether a discrepancy between an emotion and another element of knowledge would evoke dissonance motivation.

Several perspectives consider emotion to involve action tendencies (Frijda, 1986; Izard, 1993; Lang, 1995; Plutchik, 1984). To the extent that an emotion generates an action tendency, as the intensity of one's current emotion is increased and is involved in a dissonant relationship with other information, dissonance should be increased. Much research has demonstrated that the emotion of empathy (sympathy) increases helping behavior because it evokes altruistic motivation, that is, motivation to relieve the distress of the person in need of help (Batson, 1991, 1998). Thus, empathy could be said to have altruistic helping as an action tendency. As a consequence, when individuals experience empathy for another person in distress and then realize that they do not always act in accord with the action tendency of the currently experienced empathy, they should experience dissonance. This experiment was designed to test whether an inconsistency between the emotion of empathy and knowledge about past dissonant behavior would evoke motivation to reduce this inconsistency. Specifically, in this study, the action tendency of empathy was the motivation to help a deserving person while the dissonant information was a reminder of past failures to help similar others.¹

It is important to note that this experiment is similar to recent research using a hypocrisy paradigm (Aronson, 1999). However, this experiment differs from hypocrisy experiments in an important way. In the hypocrisy studies, the dissonance has been aroused between a public behavior (i.e., videotaped speech to be delivered to other students) and a reminder of past failures to practice what was preached. In this experiment, dissonance is aroused between a private

¹The manipulation of perspective taking used in this study has been found to evoke increased empathy, sadness, and distress. Consequently, some researchers have suggested that the increased helping associated with empathy is driven by a motivation to relieve the sadness or distress. After much careful experimental research pitting these hypotheses against the empathy-altruism hypothesis, the evidence more strongly supports the empathy-altruism hypothesis (for reviews, see Batson, 1991, 1998; Piliavin & Charng, 1990). This research was designed with this past research in mind.

emotional experience that generates an action tendency and a reminder of past failures to behave in accord with what the emotion impels the person to do. Therefore, the past hypocrisy work only shares with the present experiment the explicit reminder of past failures to behave in certain manners. Most importantly, the action-based model generated the prediction that because emotion is an action tendency, it could be involved in evoking dissonance.

In this experiment, we tested the hypothesis that after experiencing empathy for a target person in need of help, individuals will be more motivated to help that person when they are reminded of times that they failed to help similar persons (see Batson, Polycarpou, et al., 1997, for evidence that feeling empathy for one target person can transfer to the target person's group and cause attitude change toward the group, suggesting that empathy can generalize from an individual to similar others). Participants were informed that they would be listening to a pilot broadcast for a local public radio station and that the researchers would like students' reactions to the tape. Participants then listened to a tape-recorded message that was supposedly from a person in need of help (an adolescent with cancer). Before listening to the tape, participants were assigned to one of two conditions: one in which they tried to imagine how the person must feel (high empathy set) or one in which they tried to remain objective as they listened to the tape (low empathy set). Then they listened to the tape-recorded message and afterward completed questionnaires assessing self-reported emotional responses and evaluations of the tape-recorded message. Participants were then asked to list times when they failed to help other persons who were in need of help or they completed a demographic survey. Finally, participants were given an opportunity to help by volunteering time to assist the person and his family or by donating money to the person's family. The design was a 2 (Low vs. High Empathy) \times 2 (Reminded of Times That Did Not Help or Not Reminded) between-subjects factorial. The primary prediction was that more helping would occur in the high-empathy/reminder of past failures condition than in other conditions.

METHOD

Participants

Seventy-three University of Wisconsin—Madison students (33 men and 40 women) participated in the experiment in exchange for extra credit in their introductory psychology course. In the postexperiment interview (described later), no participants were able to guess the hypotheses that were being tested. Four participants, equally distributed across conditions, expressed suspicion that the broadcast interview did not concern an actual event. Data from these 4 participants were not included in the analyses, leaving a total of 69 participants (31 men and 38 women).

Procedure

Participants were run one at a time. Upon arrival to the experiment, each participant was given an oral introduction to the experiment. The experimenter explained that two new programming ideas were being pilot tested for a local public radio station. The two programs were entitled, "News from the Personal Side" and "Bulletin Board," and the participant would be randomly assigned to hear one of the broadcasts. In actuality, all participants heard the "News from the Personal Side" broadcast. The experimenter also explained that she was interested in individuals' responses to the broadcast. She explained that there were several tapes for each broadcast and that the broadcast tape they would hear was prepared as a pilot for use in this study, so the quality was below normal broadcast standards.

Then participants read a one-page, written introduction, similar to the oral introduction. Then the participant was given two folders. One folder contained the listening perspective instructions—the empathy manipulation. The other folder contained the questionnaires that were to be completed after hearing the broadcast and the reminder of past failures to help manipulation. Experimenters were blind to both conditions. After placing the folders next to the participant, the experimenter asked the participant to open the first folder and read the instructions within it. The experimenter then left the participant's room and further communication was done over an intercom.

Empathy manipulation. The empathy manipulation was modeled after one used in previous research (e.g., Batson, Polycarpou, et al., 1997; Stotland, 1969). In both conditions, the listening perspective instructions began with a description of the broadcast. It read as follows:

You will be listening to an interview with Scott Neumann, a 16-year-old and a student at Memorial High School. Recently, Scott has been re-diagnosed with cancer. He had been in remission for the past three years but will be starting a two-month period of treatment in the coming weeks. His parents are struggling to make ends meet due to the additional medical expenses. They are trying to get help through private contributions of time and money.

Participants in the low-empathy condition were instructed to "be as objective as possible about what has happened to Scott and how it has affected his life" while listening to the broadcast. Participants in the high-empathy condition were instructed to "imagine how Scott feels about what has happened and how it has affected his life" while listening to the broadcast.

After reading these instructions, participants told the experimenter that they were ready to listen to the broadcast. Participants then listened to the broadcast, which was modeled after ones used in past research (Batson, Polycarpou, et al., 1997; Coke, Batson, & McDavis, 1978).

Broadcast. In the broadcast, a female announcer, ostensibly from a local public radio station, introduced Scott Neumann, a boy who had cancer. She said:

Scott Neumann first learned he had cancer when he was 11 and in the 5th grade. Since then, he has been through chemotherapy, has gone into remission for three years, and has recently been told that the cancer has returned. His parents both have jobs with benefits but neither of their health-care programs covers extensive treatment for cancer. Many monetary issues confront them. They are about to begin another round of chemotherapy and additional treatment and they also have a 5-year-old daughter who needs part-time daycare. In addition, Scott has fallen behind in school due to sickness absences. He is already behind a semester worth of classes and will fall an entire year behind unless he gets a tutor. The Neumanns are looking for help from the private contributions of members of the Madison community.

Then Scott talked about how hard having cancer was on his family:

As much as I hate being sick and tired from the chemo, the worst is seeing how hard my sickness is on my family. I mean, my little sister didn't even recognize me after my first time through chemo, when I was bald. She still gets scared on days when I'm really sick. And my mom and dad are always having to miss work to bring me to appointments or to be with me when I'm really sick. And I know the money is getting tight. They don't know it, but a few weeks ago I overheard my parents talking about having to re-mortgage the house in order to pay for my medicine. Plus we might need to hire a tutor to keep me caught up. It makes me sad to think of how much pressure my being sick puts on them. Especially because I can't even help them out by running errands or watching Katie. I mean, sometimes I can't even get out of bed and that scares me. Everyday I wake up and pray that someone, somewhere finds a cure.

At the end, the announcer gave the number of the radio station that individuals could call if they would like to help the family. The broadcast tape was presented as a pilot broadcast tape for a local public radio station. A 16-year-old boy played the role of Scott Neumann, and his voice was recorded to audiotape using an Aiwa digital audio system (Model No. CX-NA3I) and a JVC MV-19 microphone.²

Assessments of empathy and filler materials. At the completion of the broadcast, the participants were instructed to complete the questionnaires. The first questionnaire assessed participants' self-reported emotion, the second questionnaire

assessed evaluations of the "News from the Personal Side" radio program, and the third questionnaire contained the manipulation of cognitive dissonance.

The emotion questionnaire asked participants to rate the degree to which they actually experienced each of the emotional reactions while listening to the broadcast on a 7-point scale, from 1 (*not at all*) to 7 (*extremely*). The questionnaire listed 24 adjectives that describe different emotional states, and it was used to assess empathy for Scott. Empathy was assessed with items used in much previous research (for a review, see Batson, 1991; sympathy, softhearted, warm, compassionate, tender, moved; Cronbach's $\alpha = .91$). Sadness and distress were also assessed using items used in previous research (sadness = sad, sorrowful, heavy-hearted, low spirited, feeling low, Cronbach's $\alpha = .89$; distress = alarmed, grieved, upset, worried, distressed, bothered, perturbed, troubled, Cronbach's $\alpha = .91$). The "News from the Personal Side" questionnaire was included to bolster the cover story. It contained questions asking participants to evaluate the radio program (e.g., how interesting was the broadcast, how worthwhile are programs of this type, how likely would you be to listen to programs like this one). It also contained questions further assessing the effectiveness of the empathy manipulation (To what extent did you try to be as objective as possible about the person being interviewed? and To what extent did you concentrate on the feelings of the person being interviewed?; both were answered on 9-point scales, with 1 [*not at all*] to 9 [*very much*]).

Reminder of past failures to help manipulation. The next questionnaire manipulated the reminder of past failures to help. Half of the participants randomly received a questionnaire that was intended to remind them of times that they had failed to help other similar causes. It asked them to list the types and names of organizations and people that they perceived as deserving of help but that they had not helped. The other half received a neutral questionnaire asking them general information about themselves (e.g., age, birth order, and school major). Both questionnaires began by explaining that the questions were being asked to assess how the listener's background relates to the listener's reactions to the broadcast.

Assessment of helping. After participants indicated that they had completed the questionnaires, they were given a letter from the professor in charge of the research. They were left alone to read and respond to it. The letter was modeled

will readily report that the tape does not sound veridical when it does not. The "disc jockey" was not a disc jockey for an actual radio station. However, no participant expressed concerns about her voice. In pretesting, participants thought she sounded like a disc jockey. The use of trained persons other than actors and disc jockeys for creating pilot radio broadcasts is common and quite effective in much research on empathy and helping (e.g., Batson, Polycarpou, et al., 1997).

²The boy who played Scott Neumann was not an actor. However, he gave an excellent performance, as evidenced by the low number of persons who thought that the tape did not describe an actual event. In pilot research, we had a young actor create a radio broadcast, and several participants thought that the tape was not veridical. This pilot research demonstrates that participants

after letters used in previous helping research (Coke et al., 1978; Batson et al., 1989). The letter explained that the broadcast they had heard was not going to be aired and the professor thought that some participants might have an interest in helping out the family.³ A volunteer form was attached, asking participants if they were willing to help. If they indicated that they were not willing to help, they were instructed to leave the rest of the form blank. If they indicated that they were willing to help, they were instructed to indicate how much time, money, or both they were willing to donate within the next 2 months. They were informed that if they volunteered, they could help the family by watching Katie (his younger sister), running errands, or tutoring Scott (the boy with cancer). If they were willing to help, they were asked to check one of three options (0–2 hr, 3–6 hr, or 7–10 hr) or to indicate another amount. All participants who helped selected one of the first three options, and they were coded 1, 2, and 3, respectively. Participants who did not volunteer time were given a 0. For money, they were asked to indicate on a blank line the dollar amount they could donate to help with medical expenses.

After completion of the helping form, participants were thoroughly debriefed. In the debriefing session, the experimenter began by asking participants for their reactions to the broadcast. She encouraged participants to discuss their thoughts and feelings about the broadcast, and they did. She then asked them what they thought about the questionnaires they completed, if they had any questions, if everything went smoothly, and whether anything seemed unusual. She then asked them whether they could think of what else the research might be investigating other than what they were told at the beginning of the study. We used this set of questions to inquire about suspicion. By beginning with very general and nonleading questions about reactions to the broadcast and gradually moving toward more specific and leading questions, we were able to assess whether persons had genuine reactions to the broadcast, whether they doubted the realism of the broadcast, and whether they could guess the hypotheses we were testing.

RESULTS

Empathy Manipulation Check

Even though participants heard the same taped interview, we expected participants in the high-empathy condition, who

were asked to imagine how Scott felt, would experience more empathy for him than would participants in the low-empathy condition, who were asked to remain objective. We checked the effectiveness of the empathy manipulation by assessing participants' reported emotional response after hearing the broadcast. As expected, participants in the high-empathy condition reported experiencing more empathy ($M = 5.04$) than did participants in the low-empathy condition ($M = 3.42$), $F(1, 67) = 34.18$, $p < .001$, mean square error (MSE) = 1.33, $r = .58$.⁴ In addition, participants in the high-empathy condition reported being less objective ($M = 5.88$) and more feelings oriented ($M = 7.84$) than did participants in the low-empathy condition (objective $M = 7.53$; feelings $M = 3.56$), objective $F(1, 67) = 16.64$, $p < .001$, $MSE = 2.81$, $r = .45$; feelings $F(1, 67) = 114.83$, $p < .001$, $MSE = 2.76$, $r = .79$. As expected, the empathy manipulation did not interact with the reminder of past failures manipulation in predicting experienced empathy, $F(1, 65) = 0.008$, $p = .93$, $r = .01$. Also, as expected, the two high-empathy conditions did not differ in experienced empathy, $F(1, 65) = 0.11$, $p = .74$, $r = .04$. These nonsignificant effects demonstrate that the two high-empathy conditions were equivalent in experienced empathy prior to the manipulation of reminder of past failures, as they should have been. Taken together, the effects suggest that the empathy manipulation was successful.

We also assessed sadness and distress in response to the empathy manipulation. Consistent with past research, results indicated that participants in the high-empathy condition reported more sadness ($M = 4.32$) and distress ($M = 3.67$) than participants in the low-empathy condition, sadness $M = 2.67$; distress $M = 2.59$; sadness $F(1, 67) = 32.06$, $p < .001$, $MSE = 1.46$, $r = .57$; distress $F(1, 67) = 15.45$, $p < .001$, $MSE = 1.32$, $r = .43$. As expected, the empathy manipulation did not interact with the reminder of past failures manipulation in predicting experienced sadness or distress, all F s < 0.50 , p s $> .46$, r s $< .09$. Also, as expected, the two high-empathy conditions did not differ in experienced sadness or distress, all F s < 0.70 , p s $> .40$, r s $< .11$. Although these results suggest that the empathy manipulation affected sadness and distress in addition to empathy, it is important to note that a large body of evidence has strongly suggested that the empathy manipulation induces an altruistic action tendency and that these other emotional responses that co-occur with empathy are not responsible for the altruistic motivation (for reviews, see, e.g., Batson, 1991, 1998; Piliavin & Charng, 1990). This research was built on this past research and these manipulation checks suggest that the empathy manipulation of

³In the letter from the professor in charge of the research, it is mentioned that the pilot broadcast is not going to be aired. Might this have caused participants to become suspicious regarding the purpose of the study? We believe the answer is no for a number of reasons. First, not one participant ever mentioned becoming suspicious because of this feature of the design. Second, this portion of the letter is consistent with the cover story of testing pilot broadcasts, not actual broadcasts. According to the cover story, the radio station is simply exploring the possibility of incorporating these types of programs into its broadcasting. There is never an expectation on the part of the participants that the broadcast will be aired.

⁴Effect sizes were computed for each effect. Our effect size estimate is the correlation r or more specifically the point-biserial r , which indicates the magnitude of the effect on participants of having been assigned to one condition as compared to another condition. This is the effect size estimate recommended by Rosenthal, Rosnow, and Rubin (2000).

