

- Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511-524.
- Hazan, C., & Shaver, P. R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry*, 5, 1-22.
- Levy, M. B., & Davis, K. E. (1988). Love styles and attachment styles compared: Their relations to each other and to various relationship characteristics. *Journal of Social and Personal Relationships*, 5, 439-471.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation (pp. 66-104). *Monographs of the Society for Research in Child Development*, 50 (1-2, Serial No. 209).
- Marsh, H. W. (1986). Global self-esteem: Its relation to specific facets of self-concept and their importance. *Journal of Personality and Social Psychology*, 51, 1224-1236.
- Marsh, H. W. (1993). Relations between global and specific domains of self: The importance of individual importance, certainty, and ideals. *Journal of Personality and Social Psychology*, 65, 975-992.
- Marsh, H. W., & Shavelson, R. (1985). Self-Concept: Its multifaceted, hierarchical structure. *Educational Psychologist*, 20, 107-123.
- Nichols, R. (1985). *Manual for applied statistics*. Amherst, NY: MAPS & Co.
- Pelham, B. W., & Swann, W. B. (1989). From self-conceptions to self-worth: On the sources and structure of global self-esteem. *Journal of Personality and Social Psychology*, 57, 672-680.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.
- Rothbard, J., & Shaver, P. R. (1994). Continuity of attachment across the lifecourse: An attachment-theoretical perspective on personality. In M. Sperling & W. Berman (Eds.), *Adult attachment* (pp. 31-71). New York: Guilford Press.
- Shaver, P. R., & Hazan, C. (1993). Adult romantic attachment: Theory and evidence. In D. Perlman & W. Jones (Eds.), *Advances in personal relationships* (Vol. 4, pp. 29-70). London: Jessica Kingsley Publishers.
- Wall, J., Lippschultz, W., Pool, S., Bylsma, W. H., & Cozzarelli, C. (1994). *Comparison level for alternatives and attachment styles as predictors of relationship quality*. Paper presented at the meeting of the American Psychological Society, Washington, DC.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.

“By Faith Alone”: Religious Agitation and Cognitive Dissonance

Christopher T. Burris
Department of Behavioral Sciences
Christian Brothers University

Eddie Harmon-Jones
Department of Psychology
University of Texas—Arlington

W. Ryan Tarpley
Department of Psychology
University of Kansas

In two experiments, we tested the hypothesis derived from cognitive dissonance theory (Festinger, 1957) that dissonance reduction attenuates dissonance-related negative affect. Using a belief disconfirmation paradigm, we found that participants given an opportunity to reduce dissonance through transcendence (Study 1) or through maintenance of their threatened beliefs (Study 2) experienced less negative affect than did participants not given an opportunity to reduce dissonance. These results contribute to two relatively neglected areas of research on dissonance theory: the role of affect in the dissonance process and alternative modes of dissonance reduction.

“Though he slay me, yet will I trust in him.” Thus proclaimed Job (13:15) in the midst of grieving the loss of his family, health, and possessions by the presumed fiat of the Hebrew God. Job’s reaffirmation of faith in God in the face of a barrage of personal tragedies viewed as acts of God seems irrational, even masochistic.

According to cognitive dissonance theory (Festinger, 1957), however, Job's profession may have soothed, rather than intensified, his suffering by reducing the discomfort arising from the apparent conflict between his religious belief and his personal experience. This postulation is predicated on three key assumptions of cognitive dissonance theory as outlined by Festinger: (a) Dissonance, defined as occurring when two elements of information (cognitions) are psychologically or logically inconsistent with each other, produces negative affect; (b) the negative affect arising from dissonance evokes motivation to engage in strategies intended to reduce dissonance, that is, restore cognitive consistency; and (c) dissonance reduction attenuates negative affect evoked by cognitive dissonance.

Research spanning four decades has yielded substantial support for the first two assumptions: Cognitive dissonance indeed appears to cause an arousing and negative affective state, as evidenced by research using self-report measures (e.g., Elliot & Devine, 1994; Zanna & Cooper, 1974), the misattribution paradigm (e.g., Losch & Cacioppo, 1990; Zanna & Cooper, 1974), and psychophysiological measures (e.g., Gerard, 1967; Harmon-Jones, Brehm, Greenberg, Simon, & Nelson, 1996). Moreover, the negative affect evoked by dissonance motivates dissonance reduction, as evidenced by research using the misattribution paradigm (e.g., Losch & Cacioppo, 1990; Zanna & Cooper, 1974), and paradigms in which independent manipulation of the arousal and valence of affective states influenced levels of dissonance reduction (e.g., Rhodewalt & Comer, 1979; Worchel & Arnold, 1974; for reviews, see Fazio & Cooper, 1983; Harmon-Jones, 1996; Kiesler & Pallak, 1976). Convincing evidence relevant to the third assumption—that dissonance reduction attenuates the psychological discomfort associated with the experience of dissonance—is so wanting, however, that Elliot and Devine (1994) described it as “uncharted territory” (p. 384).

In response, Elliot and Devine themselves offered two experiments that provided perhaps the only extant evidence for negative affect reduction as a consequence of dissonance reduction. In each, undergraduates who had freely chosen (i.e., “high choice”) to write a counterattitudinal essay in favor of a tuition increase, and who reported substantial discomfort (an average of *uncomfortable*, *uneasy*, and *bothered*) associated therewith, subsequently reported decreased discomfort following changing their attitudes toward a more pro tuition stance; proattitudinal essay participants did not evidence a similar pattern. Moreover, in the counterattitudinal condition, the correlation between attitude change and subsequent discomfort was negative in both studies, suggesting that the more participants changed their attitudes, the less discomfort they experienced.

The observed correlations were weak, however, attaining statistical significance only when combined. Also potentially problematic was the failure to include, for comparison purposes, a “low-choice” condition in which discomfort was measured following completion of the counterattitudinal essay. Thus, Elliot and Devine's (1994) results, although certainly suggestive, are not inviolable. Given the impor-

tance of the negative affect-reduction assumption for dissonance theory, replication of the effect within a different dissonance paradigm seems warranted.

BELIEF DISCONFIRMATION: THE FORGOTTEN DISSONANCE PARADIGM

One paradigm that seems suited to this task is that of belief disconfirmation. Based on Festinger, Riecken, and Schachter's (1956) field observations of increased religious fervor among members of an apocalyptic religious group following a predicted cataclysm that failed to transpire (see also Hardyck & Braden, 1962), this paradigm assumes that cognitive dissonance can occur when a cherished belief is disconfirmed, leading to the use of dissonance-reducing strategies such as belief intensification. This paradigm has been remarkably underutilized in dissonance research relative to the so-called “induced compliance” and “free choice” paradigms.¹

A rare exception is Batson (1975), in which women attending a church youth program were asked to declare publicly whether or not they believed in the divinity of Jesus. After completing a measure of Christian orthodoxy, the young women were then presented with belief-disconfirming information. Orthodoxy was once again assessed. As expected, those who believed in the divinity of Jesus and accepted the veracity of the disconfirming information intensified their belief in Jesus's divinity, whereas those who were not believers or who believed but did not accept the veracity of the disconfirming information did not. Its quasi-experimental nature notwithstanding, Batson's study is thus an important example of the potential usefulness of the belief-disconfirmation paradigm in assessing dissonance reduction in response to cognitive inconsistency; with modifications, negative affect reduction might be assessed as well.

Transcendence: An Alternative Mode of Dissonance Reduction?

Moreover, although the bulk of dissonance research has examined dissonance reduction primarily via the routes of adding consonant cognitions or increasing the

¹Typical of the induced compliance paradigm, in which participants are subtly coerced into engaging in behavior inconsistent with their attitudes for little external justification, is the counterattitudinal essay technique used by Elliot and Devine (1994) and described herein. In the free-choice paradigm, participants are typically asked to choose between two alternatives to which they have previously assigned nearly equal value (e.g., Brehm, 1956). After their choice, participants' attitudes toward the alternatives are measured again. To reduce the dissonance aroused by not choosing the other valued alternative, participants increase the value of the chosen alternative and decrease the value of the unchosen one—the so-called “spreading of alternatives” effect.

importance of consonant cognitions (attitude change; see Simon, Greenberg, & Brehm, 1995, for a recent notable exception), the belief-disconfirmation paradigm provides an ideal context for assessing alternative modes of dissonance reduction. One such mode, according to Abelson (1959), is *transcendence*, or the reconciling of dissonant cognitions under a superordinate principle. Indeed, Abelson speculated that "the theological dilemma of God's presumed permissiveness toward evil is sometimes resolved by appeal to transcendent concepts" (p. 346), suggesting that disconfirmation of core religious beliefs, reminiscent of Batson (1975), might be sufficient to evoke dissonance-reduction attempts via transcendence.

Goals of This Research

Thus, we had two primary goals in conducting this research. First, we wished to test whether dissonance reduction in the belief disconfirmation paradigm leads to a reduction of negative affect. Second, we wished to determine whether this reduction can be accomplished by using transcendence, reconciling dissonant cognitions by appealing to a superordinate principle.

In the spirit of Abelson's (1959) speculation, Gordon Allport (1950) noted that "the suffering of innocent persons is for most people the hardest of all facts to integrate into a religious sentiment" (p. 81). In the first study, we therefore had religious participants read a veridical news story highlighting the inconsistency between belief in a loving, protecting, just, and omnipotent God and knowledge of the gratuitous suffering humans often experience. They were then either allowed to appeal to superordinate principles (transcendence-opportunity condition), or not allowed to make such appeals (no-transcendence-opportunity condition). Subsequently, all participants completed a self-report measure of negative affect. We hypothesized that endorsement of higher levels of transcendence would predict lower levels of dissonance-related negative affect in the transcendence-opportunity condition, but not in the no-transcendence-opportunity condition (i.e., when transcendence was assessed before, not after, confrontation with the tragic event).

STUDY

Method

Participants

Participants were 38 upper-level psychology undergraduates (25 men, 13 women) of predominantly Christian background (18 Protestant, 14 Catholic, 6 no affiliation). Randomly assigned to one of two experimental conditions, they completed

materials voluntarily during class time in exchange for extra course credit. Preliminary analyses indicated no effects due to participant sex or religious affiliation, so these variables will not be discussed further.

Procedure

Participants first read a consent statement that described the study as an investigation of individuals' religious perspectives, informing them that they would be given a short reading related to religion and asked to complete one or more questionnaires that would aid in interpreting their reactions to it. In order to assess the importance assigned to religion by participants, they responded to three questions: (a) "How interested are you in religion?"; (b) "How important is religion to you?"; and (c) "How frequently do you participate in religious activities?" The 9-point scale ranged from 1 (*not at all*) to 9 (*extremely*).

Transcendence-opportunity condition. In the transcendence-opportunity condition, participants then read a photocopy of a newspaper article (Rice, 1993) that vividly recounted the drive-by shooting death of an infant boy in his grandmother's arms as she and the child's father prayed for protection in response to a similar incident two nights before. The article concluded with a quote from the child's grandfather, a Baptist minister, who said, "We'll just have to depend on the Lord to get us through this" (p. A15). To focus participants' attention on the inconsistency between this tragic outcome (i.e., a child dies during a prayer for protection) and their own religious beliefs (e.g., "God is a good God who protects the innocent and answers prayer"), we added (in a different typeface): "Some people would think that Rev. Williams's [i.e., the grandfather's] continued belief and trust in a good God is naive and misguided. What do you think?"

Following the article, participants responded to six questions intended to measure transcendence, using a 1 (*not at all*) to 9 (*very*) response format: (a) "How much does God intervene in persons' lives?"; (b) "How likely is it that God would cause a person to die in order to protect them?"; (c) "How often do events simply happen, apart from God causing or permitting them?" (reverse-scored); (d) "How often does God work in mysterious ways?"; (e) "How often do things happen to persons because of God's greater purpose?"; and (f) "How often do things happen to persons that make it seem like God either doesn't exist or doesn't care?" (reverse-scored).

Finally, participants indicated their affective reactions to the article by completing a one-page "Emotional Reactions Questionnaire" consisting of twelve adjectives ranging from 1 (*not at all*) to 9 (*extremely*). Four adjectives—*angry*, *frustrated*, *distressed*, and *threatened*—were intended to measure an intense form of dissonance-related affect that we labeled Agitation. Three adjectives—*uncomfort-*

able, uneasy, and bothered—were intended to measure a milder form of dissonance-related affect that we labeled Discomfort (in keeping with Elliot & Devine's, 1994, usage). Two adjectives—*sad* and *sympathetic*—measured other-focused negative affect that we labeled Pity. In addition to these three primary measures of affect, participants also indicated how *disinterested*, *happy*, and *optimistic* they felt after reading the article.

No-transcendence-opportunity condition. Materials in the no-transcendence-opportunity condition were identical to those in the transcendence-opportunity condition; only the order of presentation differed. Specifically, participants first completed the religious importance items and the transcendence scale; they then read the newspaper article and responded to the affect measures.

Debriefing. Upon completion of the affect measures, participants were fully debriefed. They were then thanked for their participation and dismissed.

Results and Discussion

Preliminary Analyses

Total sample means, standard deviations, internal consistency (α) coefficients, and correlations for the religious importance, transcendence, and affect scales appear in Table 1. As shown, higher importance ascribed to religion predicted increased likelihood of engaging in transcendence. Moreover, our two measures of dissonance-related affect, agitation and discomfort, were rather strongly positively correlated, suggesting substantial overlap. It is noteworthy that the degree of overlap was much stronger in the transcendence-opportunity condition, $r(16) = .90, p < .001$ (two-tailed), than in the no-opportunity condition, $r(16) = .38, p > .10$.

Hypothesis Testing

We hypothesized that endorsement of higher levels of transcendence subsequent to reading of the tragic death of an infant in the midst of pleas for divine protection would predict lower levels of dissonance-related affect; similar endorsement of transcendence before the reading was not expected to predict lower levels of dissonance-related affect. In order to test this hypothesis, separate regression analyses were conducted, in which Agitation, Discomfort, Pity, and the three single-item affect measures, respectively, served as criterion variables. In each,

TABLE 1
Descriptive Statistics and Correlations for the Religious Importance, Transcendence, and Affect Scales

Scale	M (SD)	Importance	Transcendence	Agitation	Discomfort	Sol
Importance	5.41 (1.81)	.83	.41**	.30	-.26	.12
Transcendence	5.35 (1.30)		.61	.19	-.06	.18
Agitation	5.43 (1.85)			.82	.66***	.59***
Discomfort	4.91 (1.91)				.65	.35*
Pity	7.50 (1.92)					.86

Note. Means are based on a 1 (not at all) to 9 (extremely) response format. Internal consistencies (coefficient α) appear on the diagonal. Decimal points have been omitted from internal consistency and correlation coefficients. $N = 38$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

experimental condition (effect-coded) and Transcendence were first simultaneously entered as main effects, followed by their interaction.

For Agitation, neither main effect approached significance (both $ps > .15$). Consistent with predictions, however, a significant two-way interaction emerged, R^2 -increment = .162, $p < .02$. As shown in Figure 1, higher endorsement of transcendence predicted decreased agitation in the transcendence-opportunity condition (within-cell $r = -.62, p < .003$, one-tailed), whereas it did not in the no-opportunity condition ($r = .13$, ns). A similar pattern was evident for Discomfort: Neither main effect approached significance, but a significant two-way interaction emerged, R^2 -Increment = .120, $p < .04$, such that higher transcendence endorsement in the transcendence-opportunity condition predicts decreased discomfort (within-cell $r = -.41, p < .04$, one-tailed), whereas this tendency was reversed in the no-opportunity condition ($r = .26$, ns).² For Pity, Disinterested, and Optimistic, none of the main effects or two-way interactions approached significance (all $ps > .15$). For Happy, a main effect for experimental condition emerged, such that

²Suggestive of the typical finding of attitude change following dissonance induction (e.g., Elliot & Devine, 1994), Transcendence scale scores averaged somewhat higher in the transcendence-opportunity condition ($M = 5.62$) than in the no-opportunity condition ($M = 5.07$), $t = 1.33, p < .10$ (one-tailed). Although admittedly weak, perhaps due to the relative insensitivity of our posttest-only measurement procedure (versus the usual pretest-posttest), this pattern of means is nevertheless consistent with our claim concerning the dissonance-evoking properties of our tragic story stimulus.

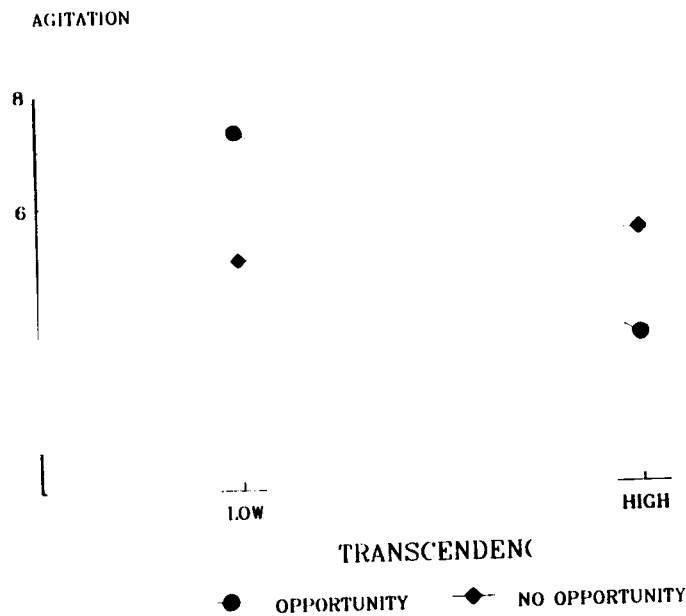


FIGURE 1 Regression slopes for Agitation by experimental condition and transcendence level (low, $z = -1$; high, $z = 1$).

no-opportunity participants reported feeling less happy after reading the article ($M = 1.05$) than did transcendence-opportunity participants ($M = 1.42$), $r(36) = .38$, $p < .02$; the two-way interaction did not approach significance, however ($p > .15$).

Thus, consistent with Abelson's (1959) speculation, transcendence indeed appeared to be a viable mode of reducing dissonance and associated negative affect: More extreme profession of transcendent beliefs (God's workings as mysterious but benevolent, etc.) following exposure to a belief-threatening article was associated with reduced dissonance-related affect (both agitation and discomfort). Profession of belief in transcendence prior to exposure to the belief-threatening article did not predict reduced dissonance-related affect. Moreover, the pattern of effects was specific to dissonance-related affect.

A potential shortcoming of Study 1's design, however, is that time and transcendence opportunity were confounded: Those who completed the transcendence scale after reading the article and before responding to the affect measures may simply have been distracted by this intervening task compared to those who completed the transcendence scale beforehand. This explanation seems unlikely, given the scale's brevity (six items), and given no main effect of transcendence-opportunity condi-

tion on dissonance-related affect, but only an interaction with level of transcendence endorsement.

Nevertheless, we conducted a second study that conceptually replicated the first. We wished to determine whether a more general affirmation of religious beliefs (as in Batson, 1975) would reduce dissonance-related negative affect as did affirmation of transcendence beliefs, and whether this reduction could not be attributable to simple distraction. Thus, religiously interested participants completed religious belief measures either after (belief-affirmation condition) or before (no-affirmation condition) reading the belief-threatening article, or completed comparable-length nonreligious measures after the article (distraction condition). All then completed affect measures (e.g., Agitation and Pity). If belief affirmation indeed reduces dissonance-related negative affect provoked by belief threat as suggested in Study 1, then belief-affirmation participants should report less agitation than either no-affirmation or distraction condition participants.³

STUDY 2

Method

Participants

Participants were 84 introductory psychology students (42 men; 42 women) of predominantly Christian background (37 Protestant, 38 Catholic, 9 no affiliation) and at least moderately interested in religion (i.e., rated themselves as 4 or more out of 9 in response to the question, "How interested are you in religion?"). They received course credit for their involvement and were randomly assigned to one of three experimental conditions, with the constraint that equal numbers of participants (and equal numbers of men and women) were present in each condition. Preliminary analyses indicated no effects due to sex or religious affiliation, so these variables will not be discussed further.

³Study 2 thus differed from Study 1 in three ways. First, the sample was restricted to relatively religiously interested participants, those who were most likely to engage in religious dissonance reduction (see the Religious Importance and Transcendence correlation in Table 1). Second, a multidimensional religion measure, rather than a specific religious belief measure (transcendence), was used. Third, absolute levels of affect as a function of experimental condition only were assessed; no attempt was made to assess possible links between the religion (dissonance reduction) measure and affect measures. Because we were primarily interested in reduction of dissonance-related negative affect following a belief affirmation opportunity rather than changes in beliefs per se—as in Batson (1975), for example—these differences did not seem problematic.

Procedure

After being greeted by the experimenter, participants were ushered individually into an experimental cubicle where they were left alone to read and sign an informed consent statement similar to the one described in Study 1. Upon their completion of the consent statement, the experimenter returned to answer questions. Participants were then left alone with an unlabeled folder containing one of three packets of ordered materials.

Religious-affirmation condition. In the religious-affirmation condition, participants first read the shooting death article described in Study 1. Following the article, participants completed an adaptation of Allport and Ross's (1967) Intrinsic and Extrinsic scales, and Batson's (1976; Batson, Schoenrade, & Ventis, 1993) Internal, External, Quest (Interactional, 12-item version), and Doctrinal Orthodoxy scales (collectively titled "Religious Life Inventory"). Participants then completed a one-page questionnaire that included eight of the twelve affect items from Study 1. Specifically, Agitation items (*frustrated, distressed, threatened, angry*) and Pity items (*sad and sympathetic*), as well as *disinterested* and *optimistic*, were included.

No-affirmation condition. Materials in the no-affirmation condition were identical to those in the religious-affirmation condition; only the order of presentation differed. Specifically, participants first completed the religious orientation measures, then read the newspaper article, and finally completed the affect measures.

Distraction condition. In the distraction condition, the order of presentation of materials was identical to that in the religious-affirmation condition. However, instead of completing the religious orientation questionnaires in between their reading the article and responding to the affect measures, participants completed Snyder and Fromkin's (1977) Need for Uniqueness scale (the "Interpersonal Role Assessment"), which measures a healthy striving for deviance from one's social milieu, and Paulhus's (1991) Balanced Inventory of Desirable Responding (BIDR; the "Self-Evaluation Inventory"), which measures two components of social desirability (impression management and self-deception). The total number of items in these two measures approximated the total number of items in the religious orientation measures. The experimenter remained blind to experimental conditions until after the dependent measures were collected.

In order to assure ourselves that our distraction treatment was fairly comparable to the belief-affirmation treatment, we needed to make sure that the questionnaires used to manipulate distraction and belief affirmation were valued equally. If the contents of the distraction questionnaires were not as highly valued as those of the belief-affirmation questionnaires, then greater negative-affect reduction among religious affirmation participants could be attributed to this differential valuation and not to the greater efficacy of belief affirmation in reducing negative affect in the present context. In order to rule out this possibility, 25 participants of Christian background who were at least moderately interested in religion completed in counterbalanced order the measures used to manipulate belief affirmation and distraction. Participants then completed a short questionnaire that asked, using a 9-point response format ranging from 1 (*not at all*) to 9 (*very much*), how much they personally valued the contents of each of the three questionnaires (the religious orientation scales were presented as a single questionnaire). Mean personal valuation responses for the religious orientation scales, the Need for Uniqueness scale, and the BIDR were 7.04, 6.64, and 6.84, respectively; none of these means significantly differed, MANOVA $F < 1$. Valuation ratings for the Need for Uniqueness scale and the BIDR were strongly related, $r(23) = .66, p < .001$; moreover, a distraction valuation index consisting of the average of the valuation ratings of these two scales was significantly positively correlated with the valuation rating of the religious orientation scales, $r(23) = .40, p < .05$. This suggests that the more participants tended to value religious affirmation, the more they tended to value the contents of the other two scales. On the basis of this set of findings, we concluded that the domains of the belief-affirmation and distraction manipulations were of comparable importance to participants.

Debriefing. Upon completion of the dependent measures, participants were probed for suspicion and fully debriefed. They were then thanked for their participation and dismissed.

Results and Discussion

As in Study 1, both Agitation and Pity evidenced adequate internal consistency (coefficient α s were .78 and .77, respectively). A one-way analysis of variance (ANOVA) indicated a significant effect of experimental condition on Agitation in response to the news story, $F(2, 81) = 4.46, p < .02$. Planned comparisons revealed that, as predicted, agitation was lower in the religious-affirmation condition ($M = 4.54$) than in either the no-affirmation ($M = 5.94$), $t(81) = 2.86, p < .005$, or the distraction condition ($M = 5.61$), $t(81) = 2.18, p < .03$; agitation levels in the latter two conditions did not differ, $t < 1$.

As in Study 1, the predicted effect was specific to dissonance-related affect; no effect emerged for Pity, $F < 1$ ($M_s = 7.45, 7.57, \text{ and } 7.59$ for belief-affirmation, no-affirmation, and distraction conditions, respectively), nor for Disinterested, $F < 1.5$ ($M_s = 2.25, 2.32, \text{ and } 1.75$ for belief-affirmation, no-affirmation, and distraction conditions, respectively). An effect did emerge for Optimistic, $F(2, 81) = 4.15, p < .02$, such that the distraction group reported feeling less optimistic after reading the article ($M = 1.46$) than either the belief-affirmation ($M = 2.75$), $t(81) = 2.79, p < .007$, or the no-affirmation group ($M = 2.39$), $t(81) = 2.02, p < .05$; the latter two groups did not differ, $t < 1$.

Thus, generally replicating the results of Study 1, a religious belief-affirmation opportunity was apparently sufficient to reduce the dissonance-related negative affect produced by confrontation with a tragic, belief-disconfirming incident. Moreover, this reduction could not be attributed to mere distraction.

GENERAL DISCUSSION

In the present experiments, religious individuals were confronted with the inconsistency of belief in a protective, responsive God and knowledge of gratuitous suffering. Some were then allowed to engage in dissonance reduction (transcendence in Study 1, and religious belief affirmation in Study 2), whereas others were not. Self-reported negative affect was then measured. Participants who engaged in either form of dissonance reduction subsequently reported less discomfort and a second form of dissonance-related negative affect, agitation, than did participants who did not (see Elliot & Devine, 1994, p. 392, for a discussion of the situational specificity of dissonance-relevant affect). Moreover, this effect was not reducible to simple distraction and was specific to dissonance-related negative affect: Pity did not show a similar reduction. The latter seems inconsistent with an alternative explanation suggesting that the religion measures offered as dissonance reduction opportunities, rather than reducing dissonance, simply made participants' religious values (e.g., compassion) salient, which may have in turn exerted a pacifying effect. From this perspective, one might expect sadness and sympathy for the victims of the tragedy to increase following completion of the religion measures, but this was not the case.

Dissonance and Transcendence

Previous work on dissonance has found that persons will change their attitudes when given the opportunity, but little research has examined alternative modes of dissonance reduction that may be more likely to occur in everyday life. Fleming

and Rudman (1993) recently found that persons will occasionally nonverbally distance themselves from their dissonant actions, and Simon et al. (1995) found that persons will at times reduce the importance of their dissonant actions. The results of Study 1 add to these recent and compelling findings by pointing to third means by which cognitive dissonance can be addressed: transcendence, in support of Abelson's (1959) contention. Further work to understand fully the way in which persons reduce dissonance, and how affect relates to dissonance, is encouraged.

Belief Disconfirmation and Revisionist Approaches to Dissonance

Also deserving of further investigation is the validity of the assumption that the self must be designated as the instigator of cognitive inconsistency for dissonance to be experienced. For Cooper and Fazio (1984), this takes the form of feeling personally responsible for the production of negative consequences; for Aronson (1968), it takes the form of "cognitions inconsistent with the self-concept" (p. 23).

We suspect that such emphasis on self-as-instigator has been the result of a near-exclusive focus on the popular induced-compliance and free-choice paradigm when testing dissonance theory (see, e.g., Brehm & Cohen, 1962; Wicklund & Brehm, 1976). Elliot and Devine (1994), for example, stated that the "self may be implicated to varying degrees in the dissonance process, and we posit self-relevance as a critical dimension of appraisal that greatly influences the qualitative nature of the affect experienced *as a result of counterattitudinal behavior* [italics added]" (p. 392). In the present research, dissonance effects were obtained even though the source of inconsistency (i.e., the tragic news story) was external to the self. The present findings thus seem more consistent with Festinger's (1957) original formulation of cognitive dissonance theory than with subsequent reformulations implicating the self. (For a related discussion, see Harmon-Jones et al., 1996; see also Lawrence & Festinger, 1962.)

At minimum, although we hesitate to make definitive statements regarding the self-as-instigator issue in lieu of having experimentally manipulated relevant variables, we think it wise that alternate dissonance paradigms, such as the belief disconfirmation paradigm used herein, no longer be neglected. As Batson (1975) has argued, results obtained in this paradigm may be purer instances of cognitive dissonance, less subject to alternative explanations such as those derived from self-perception theory (Bem, 1967). Moreover, on a more contemplative note, beneath the belief-disconfirmation paradigm lies the realization that psychologists and laypersons alike must sometimes, like Job, seek relief as our cherished beliefs topple.

ACKNOWLEDGMENTS

Thanks to Cindy Harmon-Jones, to Jack W. Brehm, and to two anonymous reviewers for the valuable comments they provided on a version of this manuscript, and to Richard Harvey, Galadriel Smith, Chad Summers, and Jackie Strnad for assistance with data collection.

REFERENCES

- Abelson, R. P. (1959). Modes of resolution of belief dilemmas. *Journal of Conflict Resolution*, 3, 343-352.
- Allport, G. W. (1950). *The individual and his religion*. New York: Macmillan.
- Allport, G. W., & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology*, 5, 432-443.
- Aronson, E. (1968). Dissonance theory: Progress and problems. In R. Abelson, E. Aronson, W. McGuire, T. Newcomb, M. Rosenberg, & P. Tannenbaum (Eds.), *Theories of cognitive consistency: A sourcebook* (pp. 5-27). Chicago: Rand McNally.
- Batson, C. D. (1975). Rational processing or rationalization?: The effect of disconfirming information on a stated religious belief. *Journal of Personality and Social Psychology*, 32, 176-184.
- Batson, C. D. (1976). Religion as prosocial: Agent or double agent? *Journal for the Scientific Study of Religion*, 15, 29-45.
- Batson, C. D., Schoenrade, P., & Ventis, W. L. (1993). *Religion and the individual: A social-psychological perspective*. New York: Oxford University Press.
- Bem, D. J. (1967). Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review*, 74, 183-200.
- Brehm, J. W. (1956). Postdecision changes in the desirability of alternatives. *Journal of Abnormal and Social Psychology*, 52, 384-389.
- Brehm, J. W., & Cohen, A. R. (1962). *Explorations in cognitive dissonance*. New York: Wiley.
- Cooper, J., & Fazio, R. H. (1984). A new look at dissonance theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 17, pp. 229-264). New York: Academic.
- Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology*, 67, 382-394.
- Fazio, R. H., & Cooper, J. (1983). Arousal in the dissonance process. In J. T. Cacioppo & R. E. Petty (Eds.), *Social Psychophysiology: A Sourcebook* (pp. 122-152). New York: Guilford.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Festinger, L., Riecken, H. W., & Schachter, S. (1956). *When prophecy fails*. Minneapolis: University of Minnesota Press.
- Fleming, J. H., & Rudman, L. A. (1993). Between a rock and a hard place: Self-concept regulating and communicative properties of distancing behaviors. *Journal of Personality and Social Psychology*, 64, 44-59.
- Gerard, H. B. (1967). Choice difficulty, dissonance and the decision sequence. *Journal of Personality and Social Psychology*, 35, 91-108.
- Hardyck, J. A., & Braden, M. (1962). Prophecy fails again: A report of a failure to replicate. *Journal of Abnormal and Social Psychology*, 65, 136-141.
- Harmon-Jones, E. (1996). *Cognitive dissonance and affect*. Unpublished manuscript, University of Texas—Arlington.

- Harmon-Jones, E., Brehm, J. W., Greenberg, J., Simon, L., & Nelson, D. E. (1996). Evidence that the production of aversive consequences is not necessary to create cognitive dissonance. *Journal of Personality and Social Psychology*, 70, 5-16.
- Kiesler, C. A., & Pallak, M. S. (1976). Arousal properties of dissonance manipulations. *Psychological Bulletin*, 83, 1014-1025.
- Lawrence, D. H., & Festinger, L. (1962). *Deterrents and reinforcement*. Stanford, CA: Stanford University.
- Losch, M. E., & Cacioppo, J. T. (1990). Cognitive dissonance may enhance sympathetic tonus, but attitudes are changed to reduce negative affect rather than arousal. *Journal of Experimental Social Psychology*, 6, 245-254.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. W. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (Vol. 1, pp. 17-59). San Diego, CA: Academic.
- Rhodewalt, F., & Comer, R. (1979). Induced-compliance attitude change: Once more with feeling. *Journal of Experimental Social Psychology*, 10, 549-560.
- Rice, G. E. (1993, August 14). A prayer for protection, then shot ends baby's life. *Kansas City Star*, pp. A1, A15.
- Simon, L., Greenberg, J., & Brehm, J. (1995). Trivialization: The forgotten mode of dissonance reduction. *Journal of Personality and Social Psychology*, 68, 247-260.
- Snyder, C. R., & Fromkin, H. L. (1977). Abnormality as a positive characteristic: The development and validation of a scale measuring need for uniqueness. *Journal of Abnormal Psychology*, 86, 518-527.
- Wicklund, R. A., & Brehm, J. W. (1976). *Perspectives on cognitive dissonance*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Worchel, S., & Arnold, S. E. (1974). The effect of combined arousal states on attitude change. *Journal of Experimental Social Psychology*, 10, 549-560.
- Zanna, M. P., & Cooper, J. (1974). Dissonance and the pill: An attribution approach to studying the arousal properties of dissonance. *Journal of Personality and Social Psychology*, 29, 703-709.

A prayer for protection, then shot ends baby's life

Stimulus
Article

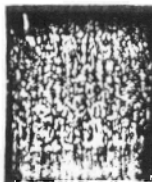
Bullet fired from car hits him as family seeks God's help.

By GLENN E. RICE
Staff Writer

Janice Arnold wanted to have a prayer with her 20-year-old son before he drove off in her car.

Twice in the last week her family had been the target of gunfire. Arnold wanted to seek God's protection.

She stood on her front lawn about 10:30 p.m. Thursday. With her were a friend, Charles Harvey, and her son, Oscar Bolton. She held her 11-month-old grandson, Gregory Bolton. They closed their eyes and



Gregory Bolton

bowed their heads.

A car rolled past the house at 6120 Walrond Ave. Arnold heard the terrible sound of gunfire and knew her sense of danger had been real.

She felt blood as she clutched the baby to her chest.

Arnold dropped to the ground as a bullet hit her right ankle. She struggled to her feet and rushed the infant into the house.

"Close the door! Close the door!" yelled her mother, Jearlene Williams, who was in-

See AS, A-15, Col. 1

As family prays, fatal shot hits infant member

Continued from A-1

side.

Outside, Oscar Bolton and Harvey were slightly injured. A 2-year-old child who was playing outside was uninjured.

Arnold looked down at Gregory. A bullet had torn through his back.

Blood poured from the child's mouth and chest, said the Rev. L.O. Williams, Gregory's great-grandfather, who arrived at the house moments later.

A family member grabbed a wet towel and wiped blood from baby's face.

"He just took two deep breaths ... " Williams said.

Then the baby went limp.

Gregory was pronounced dead at Research Medical Center. Two hours after the shooting, police arrested two men. They were released Friday without charges being filed. Homicide investigators would not discuss whether the two men were still suspects.

The dead child's father, 18-year-old Gregory Bolton, said he believed the shooting was in-

tended as a message for him.

A week ago, someone shot Bolton in the back. A large bandage covered the wound Friday. On Tuesday, bullets riddled Arnold's car, which was parked in front of her house.

In December 1991, Bolton was charged with murder in a drive-by shooting that killed a 19-year-old man. Prosecutors alleged that he killed Carlton Chappel, a Southeast High School student. The murder was believed to be gang-related, police homicide Sgt. Keith Francis said Friday.

Charges against Bolton eventually were dropped.

So a family too familiar with violence gathered Friday in front of their one-story home and mourned a baby's death. They held and comforted one another.

Blood had dried dark red on the cement porch. Furniture and other items remained strewn. Twenty-five bullets left pockmarks in the house.

L.O. Williams leaned against a rail and stared at the ground.

"If they have something against me ... fine," said Williams, who

is a minister at the Virginia Street Baptist Church of Carrollton, Mo. "That was an innocent baby who was killed for no reason."

Despite having asthma, Gregory was playful, said his mother, Angie Roberson, 16, as she paged through a photo album of the baby's pictures.

Gregory had just learned to walk. His great-grandfather had put a tricycle on layaway for the

child's first birthday gift, she said.

The family had planned to celebrate Gregory's birthday with a simple gathering at their home. Now they aren't sure what the day will bring.

"He brought sunshine into our lives. He was a happy baby," Williams said.

"We'll just have to depend on the Lord to get us through this."

Some people would think that Rev. Williams' continued belief and trust in a good God is naive and misguided. What do you think?