
Self-Blame Following a Traumatic Event: The Role of Perceived Avoidability

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People who have experienced a traumatic life event may blame themselves, in part, because they perceive that they could have avoided the event. A study of respondents with spinal cord injuries shows that their causal attributions for the event are distinguishable from their perceptions of avoidability, the latter frequently focusing on mutable aspects of their own behavior. Respondents with spinal cord injuries and trained raters attributed the same degree of causal significance to the respondent but differed in their assignment of blame: Respondents assumed more personal blame than raters gave them. Regression analyses suggest that a significant portion of respondents' self-blame can be attributed to their self-implicating perceptions of avoidability. The degree to which respondents believed that they could have avoided their accident predicted self-blame even after controlling for their causal attributions for the event. Implications for the study of self-blame and perceived avoidability are discussed.

Apuzzling phenomenon in the victimization literature is that people who have experienced a traumatic life event often seem to assume personal responsibility for the event despite having done little, if anything, to cause it. This has been noted perhaps most often among women who have been sexually assaulted (e.g., Abbey, 1987; Burgess & Holmstrom, 1974; Janoff-Bulman, 1979; Medea & Thompson, 1974) or battered by their partners (e.g., Frieze, 1979; Miller & Porter, 1983). However, this phenomenon has also been reported among persons with cancer (e.g., Abrams & Finesinger, 1953; Bard & Dyk, 1956;

Mechanic, 1977; Taylor, Lichtman, & Wood, 1984), the bereaved (e.g., Chodoff, Friedman, & Hamburg, 1964), and individuals who have been criminally victimized (Bard & Sangrey, 1979). Bard and Sangrey (1979), for instance, drawing on their experience with people who have been victimized by theft, robbery, and physical and sexual assault, wrote that in many cases "the victim seems almost eager to take responsibility" (p. 55).

The acceptance of such self-blame by those who have experienced traumatic events has stimulated considerable debate in the coping literature. Whereas many theorists have suggested that this self-blame is maladaptive (e.g., Beck, 1967; Frazier, 1990), Janoff-Bulman and her colleagues (e.g., Janoff-Bulman, 1979; Janoff-Bulman & Lang-Gunn, 1988) have argued that self-blame may yield positive consequences for the individual when it is focused on modifiable behavior. Although the empirical evidence on the adaptiveness of self-blame is equivocal

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(see Downey, Silver, & Wortman, 1990, for a review), several theorists have explored why people may come to blame themselves for the events that befall them (for reviews, see Janoff-Bulman & Lang-Gunn, 1988; Wortman, 1976). Most have suggested that this self-blame stems from a systematic bias in attributions of causality toward greater personal control (see, e.g., Försterling, 1992; Montada, 1992). Kelley (1971), for instance, suggested that attributional processes serve the function of giving people a sense of control over their environment. In his words,

The purpose of causal analysis—the function it serves for the species and the individual—is effective control. . . . Controllable factors will have a high salience as candidates for causal explanation. In cases of ambiguity or doubt, the causal analysis will be biased in its outcome toward controllable factors. (pp. 22-23)

As few factors are thought to be as controllable as one's own behavior, biases toward control will generally result in self-implicating attributions. Similarly, in explaining why women who have been raped often experience guilt, Medea and Thompson (1974) offer, "If the woman can believe that somehow she got herself into the situation, if she can feel that in some way she caused it, if she can make herself responsible for it, then she's established a sort of control over the rape" (p. 105).

An implicit assumption underlying this literature is that distortions in causal attributions account for the phenomenon of self-blame observed among those who have experienced traumatic life events. In fact, some researchers have not distinguished between causal attributions and assessments of responsibility or blame. Some have assessed causal attributions and referred to them as measures of blame (e.g., Bulman & Wortman, 1977), whereas others have assessed blame assignments and referred to them as causal attributions (e.g., Frazier, 1990; Tennen, Affleck, & Gershman, 1986). The suggestion has been made in the literature, then, that the two terms, if not synonymous, are at least intimately and necessarily tied. Several theorists (e.g., Fincham & Jaspars, 1980; Shaver, 1985; Shaver & Drown, 1986) have cautioned that this assumption is not valid. For instance, people are often assigned responsibility when they were not causally implicated (e.g., when a parent assumes responsibility for a child's actions) or, conversely, are not blamed when they accidentally or unintentionally caused misfortune.

In a detailed critique of the literature on attributions of responsibility, Fincham and Jaspars (1980) suggested that the dominant role that (causal) attribution theory has played in social psychology has tended to inhibit and confuse our understanding of the concept of responsibility, insofar as responsibility attributions have been

assumed to follow logically from causal attributions. Fincham and Jaspars argued that the implicit assumption that a causal attribution is a necessary and sufficient precondition for the assignment of responsibility is unwarranted and inaccurate from the perspective of both commonsense psychology and legal philosophy (cf. Hart & Honoré, 1959). Although a causal attribution may satisfy one condition for a judgment of responsibility to be made, in both law and commonsense it is neither a necessary nor a sufficient criterion. For example, we are typically excused from responsibility if we acted under duress, if the outcome was unforeseeable, or if we lacked the ability or capacity to forestall the occurrence. Conversely, from a legal and commonsense perspective, one may be deemed responsible if one fails to take reasonable precautions to prevent a negative event from occurring (Fincham & Jaspars, 1980; Heider, 1958).

Shaver (1985) has contributed significantly to our understanding of the distinctions among cause, responsibility, and blame. Borrowing from philosophical discussions of causality (e.g., Mackie, 1965) and incorporating social psychological theory on causality and blame attributions (particularly Heider, 1958), Shaver proposed a prescriptive model of the process of assigning cause, responsibility, and blame. In his model, increasing degrees of moral responsibility are assigned following a causal attribution on the basis of fulfillment of the following criteria: that the causal agent (a) was aware of the potential consequences (i.e., foreseeability), (b) intended the consequences, (c) acted freely, and (d) understood the moral wrongfulness of his or her acts. Less responsibility is ascribed if only one of the criteria is met, and most responsibility is assigned when all four criteria are met. Shaver further suggested that *blame* is assigned only when the perceiver does not accept the excuse or justification of the agent responsible for the outcome.¹

In arguing for a distinction between responsibility and cause, we are not implying that the two constructs are always independent in everyday life. As Tennen and Affleck (1990) suggested, it is very likely true that "when the mother of a premature newborn states that her obstetrician's errors are the cause of her child's medical problems, she is probably holding the doctor responsible, [and] when a woman tells an investigator that the rapist is the cause of her rape, she most likely sees the rapist as blameworthy" (p. 210; see also Wortman, 1983). Rather, we suggest that a "cause means blame" and "blame means cause" assumption cannot account for the observation that people who experience traumatic life events often accept some blame for their victimization even when the cause is known to reside

elsewhere (e.g., Abbey, 1987; Bard & Sangrey, 1979; Burgess & Holmstrom, 1974; Miller & Porter, 1983).

A very different explanation for why people blame themselves focuses on the distinction between causal attributions and perceived avoidability.² We propose that in judging the extent to which they are personally to blame for severe negative outcomes, individuals not only evaluate their and others' causal roles (as well as the roles of chance and other situational factors) but also consider whether they could have done something differently to have prevented the event from occurring. These perceptions of avoidability are examples of counterfactual thinking (see, e.g., Kahneman & Miller, 1986; Kahneman & Tversky, 1982), in that the individual is imagining a different scenario from the one that actually occurred.

In generating alternative scenarios that "undo" an outcome, research on counterfactual thinking suggests that people tend to focus on highly mutable antecedents. Factors that influence the mutability (as well as salience) of an antecedent event include its exceptionality (usually relative to intrapersonal or scripted norms), the locus of the behavior (self vs. others), and the extent to which the behavior was free from external constraints. To the extent that a given antecedent event, relative to other events in the chain of events leading up to the outcome, is unusual, personally enacted, and freely chosen, it is more likely to be mutated in a counterfactual mental simulation (Kahneman & Miller, 1986; Miller, Turnbull, & McFarland, 1990; Roese & Olson, 1995; Wells & Gavanski, 1989). Conversely, to the extent that outcomes lack mutable antecedents, they are more likely to be perceived as unavoidable or inevitable.

In fleshing out our position, we first review a small body of real-life and hypothetical scenario research suggesting that counterfactuals influence blame or responsibility assignments. We then present evidence from a study of people coping with spinal cord injuries demonstrating (a) that individuals are concerned with notions of avoidability that are often independent of their causal attributions and (b) that such perceptions of avoidability significantly predict judgments of self-blame.

COUNTERFACTUAL THINKING AND BLAME

Counterfactual thoughts are post hoc mental constructions or simulations of alternative outcomes (Kahneman & Miller, 1986; Kahneman & Tversky, 1982). They are exemplified in statements such as "If only I had driven a different route, the accident would have been avoided." In constructing counterfactuals, people are assumed to start with the supposition that a given outcome need not have occurred and then attempt to mentally simulate alternative scripts that effectively undo the outcome (Davis & Lehman, 1995; Gleicher et al., 1990).

Although the counterfactual literature has generally focused on role-playing subjects' perceptions of outcomes, six studies of people actually coping with traumatic life events suggest that counterfactuals (or perceptions of avoidability) may be implicated in blame assignments (Abbey, 1987; Branscombe, Owen, & Allison, 1994; Bulman & Wortman, 1977; Frazier, 1990; Kiecolt-Glaser & Williams, 1987; Schulz & Decker, 1985). All these studies indicate that the more individuals perceived that they could have avoided their victimization, the more they blamed themselves. Unfortunately, none of these studies controlled for causal attributions or outcome foreseeability, and thus the distinction between causal attributions and perceptions of avoidability was left ambiguous.

In addition to these real-life studies, a number of counterfactual researchers employing role-playing designs have suggested that counterfactuals may influence blame assignments (e.g., Kahneman & Miller, 1986; Miller & Gunasegaram, 1990; Wells & Gavanski, 1989). For example, Miller and Turnbull (1990) asked half their subjects to estimate how much self-blame a victim would experience following an out-of-character, and thus highly mutable, action and the other half to estimate how much self-blame a victim would experience following a routine action. The former subjects felt that a person shot when he walked in on a robbery in a store he rarely frequented would experience greater self-blame than did the latter subjects responding to a scenario wherein a person was shot in a store he normally frequented. This was so even though it was clear to both groups of subjects that neither victim *caused* his injury. Miller and Turnbull suggested that such presumed self-blame would occur in the former case because it would be very easy for that victim to imagine going to his usual store and hence avoiding the shooting. The ease with which this counterfactual would come to mind would lead him to believe that he *ought* to have gone to the usual store. That is, the victim will perceive that by acting out of character, he has brought on the tragedy himself and hence will feel blameworthy. In contrast, the latter victim, because he did not do anything out of the ordinary, presumably can only feel that he *might* have gone to a different store. The highly mutable condition of the first victim's scenario apparently leads him to confuse what *might* have been the case with what *ought* to have been the case. Miller and Turnbull term this the counterfactual fallacy.

Coming from a slightly different perspective, Wells and Gavanski (1989) suggest that counterfactuals influence blame assignment through their effect on causal ascriptions. They contend that people assign causal significance, in part, by considering the likelihood of the counterfactual that would undo the outcome. They

demonstrated this in a scenario study involving a cab driver who refused to pick up a disabled couple. Subjects were told that following the cab driver's refusal, the couple decided to drive their own car and were injured when they drove off a collapsed bridge. Subjects were requested to rate the extent to which the cab driver caused, and was responsible for, the accident. Importantly, from a counterfactual perspective, causality and responsibility ratings assigned to the cab driver were attenuated for other subjects who were told that the cab driver also drove off the bridge. This suggests that when the counterfactual, "if only he had picked up the couple," failed to undo the outcome, the cab driver was seen as less causally significant, and was blamed less, even though his behavior was the same.³

Without denying that counterfactual thoughts may influence, or be influenced by, causal ascriptions (see, e.g., Hilton, 1990; Lipe, 1991), we suggest that distinctions can be made between the two processes. Although it is likely true, as Hilton (1990) and Lipe (1991) suggested, that the initial stages of the counterfactual process may be employed to identify possible causes (e.g., if antecedent X is absent, does the outcome still occur?), the means by which these antecedents are weighed relative to other elements in the set of possible causes, is different. Specifically, in an attribution of causality, the relative importance of each possible cause is evaluated with reference to the extent to which it was a necessary, but also sufficient, condition (either alone or in conjunction with other conditions) to produce the particular outcome observed (Shaver, 1985). In contrast, the counterfactual process evaluates antecedents in terms of the relative ease with which they could have been undone or avoided (i.e., their mutability). Thus antecedents that are unusual or personally enacted will be grist for the counterfactual mill but will tend to be overlooked in the causal attribution process if they are not part of a minimally sufficient subset of possible causes. For example, if one is struck by a drunken driver, one will likely claim that the drunken driver *caused* the accident, yet still perceive that the accident could have been avoided had one taken a different route, left earlier, and so on.

Empirical support for this distinction comes from a study that we conducted of parents who had lost an infant to sudden infant death syndrome (SIDS; Davis, Lehman, Wortman, Silver, & Thompson, 1995). In this study we found that whereas the vast majority of parents did not feel that they had caused the death, most nevertheless felt that the death could have been avoided "if only they had done something differently." Moreover, the more parents thought that the death could have been avoided, the more they experienced feelings of guilt and the more personal responsibility they reported for the death.

It seems unlikely that these perceptions of avoidability reported by parents of SIDS babies led them to feel more causally significant: Whereas 68% of parents, when asked how they thought the death could have been avoided, reported a self-implicating counterfactual, fewer than 20% reported a self-implicating causal theory for their baby's death. Moreover, a review of the counterfactuals that parents reported made clear that, for the vast majority of cases, the events parents were undoing were not so much causal as they were preventive (e.g., checking on the baby more frequently than was typical; see Davis et al., 1995).

The SIDS study was limited, however, in that parents were faced with a situation where cause of death was medically unknown. In fact, SIDS is deemed the "cause of death" when all other possible causes (including causes that might implicate the parent) have been eliminated in a postmortem examination. Lacking a clear causal agent, it is possible that parents may have relied on counterfactuals as a "next best" alternative to helping them understand why the death occurred.

THE PRESENT STUDY

We conducted a study of people coping with spinal cord injury (SCI), which provides a unique opportunity to examine relations among perceptions of avoidability, attributions of causality, and judgments of blame. The event is severe and unexpected and has long-term consequences—qualities that previous research suggests will make issues of cause and responsibility important (Wong & Weiner, 1981). As well, unlike respondents in our previous SIDS study, those in the SCI study generally knew how their injuries occurred. Moreover, because these accidents followed from a wide range of activities, the data permit examination of perceptions of avoidability over a broad array of causes. In line with previous research (e.g., Bulman & Wortman, 1977; Davis et al., 1995; Frazier, 1990), we expected that, irrespective of their causal attributions, respondents would nevertheless feel that they could have done something to avoid the outcome. Moreover, we hypothesized that these beliefs about avoidability would predict assignments of self-blame, after statistically controlling for both respondents' causal attributions and foreseeability estimates.

In interviews, respondents were asked to describe in as much detail as possible how their accident happened. In addition, respondents were questioned about who or what caused the accident, who was to blame, and whether they thought the accident could have been avoided. To establish an external measure of causality and blameworthiness, a team of raters was given extensive training on the assignment of cause and blame based on the Shaver (1985) model. Blind to the respondent's

diagnostic status, raters made their ascriptions from transcribed and carefully edited versions of each respondent's account of how his or her accident occurred. These transcripts were edited to omit any mentions by the respondent of blame, responsibility, pain, and distress, because it was felt that such references to the extent or permanence of the injury might bias raters' judgments (e.g., Lerner, 1980; Walster, 1966). Raters estimated the degree to which (a) other people, the respondent, the situation, and chance *caused* the accident, (b) other people and the respondent were to *blame* for the accident, and (c) the accident was *foreseeable* from the respondent's point of view.

We were then able to compare the data from raters with the data from respondents with SCI, with respect to their ascriptions of cause, foreseeability, and blame. We expected that, relative to raters, respondents would blame themselves more without necessarily implicating themselves more causally. We reasoned that this would be owing to respondents' perceptions that they could have done something to avoid the outcome. We were interested to learn whether this (potential) *difference* in blame ascription would be at least partly predicted by the extent to which respondents felt they could have avoided the outcome, after controlling for cause and foreseeability estimates.

METHOD

Respondents

Respondents comprised all persons who had experienced sudden, traumatic accidents who lived within a 60-mi radius of Chicago and were admitted to the SCI unit of Northwestern Memorial Hospital within 7 days of injury between August 1979 and May 1981. This group included all paraplegic, quadriplegic, and neurologically intact patients who met the selection criteria. Although neurologically intact patients (i.e., those with a neck or back injury where the spinal cord is not damaged) do not suffer loss of function or sensation in their limbs, their medical care and early hospitalization parallel those of persons with spinal cord injury.⁴ Patients were deemed eligible if they were between the ages of 15 and 65, were not experiencing acute psychosis, were not under arrest, and were not injured as a result of a suicide attempt (for further details, see Silver, 1982).

Interviews 1 week postinjury were conducted with 47 quadriplegic, 22 paraplegic, and 31 neurologically intact respondents; the diagnosis of a further 6 respondents was unknown ($N = 106$).⁵ This represents approximately 80% of all eligible respondents. Thirty-six percent of respondents with paraplegia and 38% of those with quadriplegia suffered complete lesions (i.e., no sensory or motor function below the injured area); the remainder

suffered incomplete lesions (i.e., some degree of sensory or motor function below the injured area). Eighty-one percent of respondents were male. Eighty percent were Caucasian, 18% African American, and the remaining 2% Latino. The mean age was 28.4 years ($SD = 10.1$). These demographic characteristics are consistent with those reported in other large U.S. spinal-cord-injured samples (e.g., Trieschmann, 1978; Yarkony et al., 1987).

Motor vehicle accidents were the most common cause of spinal cord injury in this study (43%), followed by sporting accidents (25%; e.g., playing recreational football, diving), falls (15%; e.g., down stairs, off a roof), and violent accidents (9%; e.g., shootings, stabbings). The remainder were injured in other, freak accidents (e.g., hit by a falling object).

Procedure

All respondents were interviewed in their hospital room over two consecutive days. Interviewers were given extensive training in interviewing techniques and were briefed on the acute care unit, hospital routines, and medical and physiological issues in spinal cord injury.

Interview Instrument

At the beginning of the interview, respondents were asked to describe in detail the circumstances that led up to their accident. Interviewers carefully probed respondents for sufficient information regarding the accident (e.g., why respondents were doing what they were doing, what motivated their actions, whether the activities were planned, spontaneous, chosen, or forced) so that the details were clear. Subsequently, respondents were asked to rate on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) the degree to which they agreed with each of the following statements: (a) "The activity I was participating in at the time of my accident was something I freely chose to do myself," (b) "The activity I was participating in at the time of my accident was an enjoyable one," (c) "My behavior at the time of my accident was typical, that is, something I commonly did," and (d) "I feel I should have been able to foresee my accident."

After giving these ratings, respondents rated on the same 7-point scale the degree to which they agreed with each of the following statements: (a) "Another person or other people's behavior caused my accident," (b) "My own behavior caused my accident," (c) "Something in my situation or environment caused my accident," and (d) "Chance or fate caused my accident to occur."

Respondents were then asked a series of questions about avoidability. First, they were asked whether they ever thought their accident could have been avoided (*yes* or *no*). Second, the general frequency of such cognitions was assessed by asking respondents the extent to which they agreed that "I spend a lot of time thinking about

how my accident could have been avoided" (1 = *strongly disagree*, 7 = *strongly agree*). Third, we assessed the extent to which these avoidability notions were focused on the respondent's *own* behavior (i.e., self-implicating perceived avoidability) by asking respondents how much they agreed with the statement "I feel that I could have avoided my accident and therefore my spinal cord injury," using the same 7-point scale.

Approximately midway through the interview (after the causal attribution and avoidability questions), respondents were asked, using the same 7-point scale, the extent to which they agreed that (a) "Another person or other people are to blame for my accident" and (b) "I am to blame for my accident."

Ratings by Coders

Respondents' descriptions of their accidents were transcribed, edited for references to blame, responsibility, pain, and distress, and given to four trained raters. Raters were blind to the diagnostic status of each respondent. Before doing any rating, raters were instructed about the conceptual distinctions between causality and blame as set out by Shaver (1985) and the different criteria needed to infer each one. Specifically, cause was established by the criterion of minimal sufficiency (Mackie, 1965; Shaver, 1985). That is, each possible cause identified was evaluated for the extent to which it was sufficient (either alone or in concert with other antecedents) to cause the accident. Responsibility was rated after taking into account the extent to which the respondent's behavior was freely enacted or coerced, the extent to which the accident was foreseeable, and the extent to which the respondent or others were negligent or in some way intended the accident. Blame was subsequently rated after taking into account any excuses or justifications that might absolve the respondent or reduce blame.

Each respondent's description was coded by all four raters at the same time. To reduce extraneous sources of variance in the coding (due, for instance, to the possibility that a coder might miscategorize an antecedent), coders initially read through the entire transcript and then attempted to achieve consensus on the following points: (a) all the potential causal factors to be considered in the respondent's account and how they should be categorized (person, situation, chance, etc.), (b) the generally accepted level of risk associated with the activity, and (c) the normative standards of responsibility in the situation (e.g., employers and parents are expected to bear some responsibility for the safety of employees and children, respectively; see Shaver, 1985). This procedure ensured that raters were basing their judgments for each case on the same general understanding of the facts. Raters, however, did *not* discuss the extent to which

any of the potential causal factors were important, and in all other respects they worked independently of one another.

From the information given in respondents' accounts of their accident, raters were instructed to rate on the same 7-point scale the extent to which they felt that (a) "another person or other people's behavior caused the event," (b) "the respondent's own behavior caused the event," (c) "something in the situation or environment caused the event," and (d) "chance or fate caused the event." Next, raters were asked to rate the extent to which they felt the respondent should have been able to foresee the possibility of an accident happening in this context. Finally, raters judged the extent to which they felt that "the respondent is to blame for the event" and "another person or other people is/are to blame for the event." As a measure of interrater reliability, a coefficient alpha was calculated for each question. Alphas for the causal ratings were very high, ranging from .96 (due to chance) to .99 (due to other people). Alphas for the two blame ratings were equally high (.97 for respondent blame and .99 for other blame). The alpha for foreseeability was trivially lower (.95). As the alphas were extremely high, ratings for each of these variables were averaged across raters to obtain measures of respondent, other people, situation, and chance causality, respondent and other people blame, and foreseeability.

RESULTS

Perceptions of Avoidability

Seven days after their spinal cord injury, 85% of respondents said they had thought their accident could have been avoided. For the extent to which respondents agreed with the statement "I spend a lot of time thinking about how my accident could have been avoided," the mean response was 3.44 on the 7-point scale ($SD = 2.15$). For extent of agreement with the statement "I feel that I could have avoided my accident and therefore my spinal cord injury" (i.e., *self*implicating perceptions of avoidability), the mean rating was 3.96 ($SD = 2.26$). The correlation between the latter two variables was moderate, $r(104) = .35$, $p < .001$, such that the more time respondents spent thinking about how the accident could have been avoided, the more they felt that they personally could have avoided it.

Analyses of variance were conducted on the extent to which respondents (a) spent time thinking about how their accident could have been avoided and (b) thought they could have avoided the outcome, as a function of type of injury (quadriplegic, paraplegic, neurologically intact), degree of lesion (complete, incomplete, neurologically intact), sex, and race. The only significant effect was for sex, $F(1, 104) = 4.16$, $p = .04$, such that males

TABLE 1: Correlations Between Respondent's Perceived Avoidability Ratings, Causal Attributions, and Blame Assignment

Variable	1	2	3	4	5	6	7
1. Self-implicating perceived avoidability							
2. Time thinking accident avoidable	.35						
3. Other caused	-.19	.12					
4. Self-caused	.40	.01	-.44				
5. Situation caused	.11	.02	.04	.04			
6. Chance caused	-.05	-.22	-.17	.08	.12		
7. Blame others	-.19	.12	.73	-.43	.05	-.23	
8. Blame self	.54	.06	-.41	.66	-.02	-.08	-.48

NOTE: All items rated on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). $r_s > .18$, $p < .05$; $r_s > .32$, $p < .001$ (two-tailed). $N = 106$.

($M = 4.17$) were more likely to report that they could have avoided their accident than females ($M = 3.05$).

Behavioral Freedom, Enjoyment, Typicality of Preaccident Activity and Injury Foreseeability

The vast majority of respondents moderately or strongly agreed that the activity they were engaging in at the time of their injury was freely chosen ($M = 6.49$ on a 7-point scale, $SD = 1.40$) and something they enjoyed doing ($M = 5.68$, $SD = 1.82$). Given these highly skewed distributions, it is not surprising that neither of these situational aspects correlated significantly with perceptions of avoidability ($r_s < .10$).

Activity typicality was also skewed, such that most respondents agreed that their behavior at the time of the accident was typical ($M = 5.33$, $SD = 2.07$). Though uncorrelated with self-implicating perceived avoidability ($r < .10$), event typicality was associated with time spent thinking the accident could have been avoided ($r = -.21$, $p < .05$). Corroborating past scenario research in the counterfactual literature (e.g., Kahneman & Miller, 1986), those respondents who reported that their behavior at the time of the accident was atypical tended to spend more time thinking that their accident could have been avoided.

As might be expected, injury foreseeability ($M = 3.61$, $SD = 2.29$) was directly associated with self-implicating perceptions of avoidability ($r = .46$, $p < .001$): Accidents deemed by respondents to be foreseeable were more likely to be seen as personally avoidable. Foreseeability was unrelated to time spent thinking about avoidability ($r < .10$).

Relations Among Causal Attributions, Perceptions of Avoidability, and Blame Assignments

The correlations between respondents' causal attributions, ratings of avoidability, and blame assignments are shown in Table 1. As would be expected, the more respondents thought they caused their accident, the more they tended to blame themselves and the more they tended to agree that they personally could have avoided their accident. Interestingly, when self-blame is partialled

from the self-cause to self-avoidability relation, the correlation drops to .07 (*ns*). In contrast, when self-cause is partialled from the self-blame to self-avoidability relation, the correlation remains highly significant (partial $r = .41$). This pattern of results suggests that the self-avoidability to self-blame relation is not mediated by self-cause.

Respondents Compared With Raters: Causes and Blame

A series of paired t tests were conducted comparing respondents' and raters' estimates of the degree to which other people, the respondent, the situation, and chance caused the accident.⁶ No differences were found in the extent to which respondents and raters attributed cause either to other people (M across respondents and raters = 2.93) or the respondent (M across respondents and raters = 4.45; $t_s < 1$; r_s between respondents and raters for self- and other-cause = .52 and .71, respectively). However, respondents attributed more causal significance both to the situation ($M = 4.10$) and to chance ($M = 5.11$) than raters did (situation $M = 2.86$, chance $M = 1.18$; $t_s > 4.0$, $p_s < .001$; r_s between respondents and raters for situation = .25, for chance = .04).

Importantly, even though respondents (a) did not attribute more causal significance to themselves than did raters and (b) did attribute more causal significance both to the situation and to chance than did raters, respondents ($M = 4.20$) nevertheless were *more* likely to blame themselves than were raters ($M = 3.19$; $t[93] = 4.17$, $p < .001$; r between respondents and raters = .51), and *less* likely to blame others ($M = 2.65$) than were raters ($M = 3.07$; $t[93] = -1.94$, $p < .06$; r between respondents and raters = .63). Finally, no significant difference was found between raters' and respondents' estimates of injury foreseeability ($t < 1$).

Predicting Self-Blame From Causal Attributions, Foreseeability, and Perceptions of Avoidability

To evaluate the hypothesis that self-implicating perceptions of avoidability contribute to respondents'

assignments of self-blame, we conducted a hierarchical multiple regression. On the first step of the regression, respondents' causal ascriptions (i.e., to other people, self, situation, and chance) were entered. Table 2 shows that, as a set, these four variables accounted for 46% of the variance in respondents' ratings of self-blame ($p < .001$). Those who blamed themselves more for their accident were more likely to see themselves as causally implicated ($\beta = .58, p < .001$) and were less likely to see others ($\beta = -.18, p < .05$) and chance ($\beta = -.18, p < .05$) as causally significant.

On the second step of the regression, respondents' ratings of foreseeability were entered, resulting in a significant R^2 increment of 4% ($p < .01$). Accidents that respondents deemed foreseeable were more likely to leave the respondent feeling blameworthy ($\beta = .22$).

On Steps 3 and 4, the two avoidability variables were entered. To control for the general avoidability item, we first entered the extent to which respondents agreed that they spent a lot of time thinking how the accident could have been avoided. This did not yield a significant R^2 increment. Finally, respondents' ratings of self-implicating avoidability were entered. The addition of this variable produced a significant R^2 increment of 7% ($p < .001$). Those agreeing more with the statement "I feel that I could have avoided my accident and therefore my spinal cord injury" were more likely to blame themselves ($\beta = .36$).

Finally, to test whether self-implicating avoidability could predict the *differential* ratings of blame ascribed by respondents as compared with trained raters, we simultaneously regressed the difference score of respondents' ratings of self-blame to raters' estimates of respondent blame on respondents' ratings of self-cause, self-avoidability, and foreseeability. The analysis indicated that although self-cause uniquely accounted for some of the difference ($\beta = .21, p < .06$), self-avoidability accounted for the most unique variance ($\beta = .28, p < .02$). The effect for foreseeability was not significant ($\beta = .02$).

DISCUSSION

The present study suggests that attributions of causality and self-implicating perceptions of avoidability can contribute independently to the assignment of personal blame. Moreover, in contrast to past counterfactual research (Wells & Gavanski, 1989), these data imply that notions of avoidability not only influence blame assignments by way of their effect on ascriptions of causality but also may operate over and above causal explanations. When self-blame was controlled statistically, no relation was observed between self-avoidability and ratings of self-cause. Conversely, when self-cause was controlled,

TABLE 2: Regression of Respondents' Self-Blame on Their Causal Ascriptions, Foreseeability Estimates, and Avoidability Ratings

Step	Variable	β	R^2	
			Increment	F Change
1	Self-caused	.58***		
	Other people caused	-.18*		
	Situation caused	-.01		
	Chance caused	-.18*	.46	$F(4, 100) = 21.46***$
2	Foreseeability	.22**	.04	$F(1, 99) = 7.97**$
3	Time thinking accident avoidable	.02	.00	$F(1, 98) = 0.06$
4	Self-implicating perceived avoidability	.36***	.07	$F(1, 97) = 16.48***$
	Total Regression		.57	$F(7, 97) = 18.71***$

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

self-avoidability and ratings of self-blame remained highly related.

These results ought not be interpreted as a rejection of past work in the counterfactual literature suggesting that counterfactuals (e.g., perceptions of how the accident could have been avoided) are implicated in causal judgments (e.g., Hilton, 1990; Lipe, 1991). No doubt, counterfactual information is valuable in determining cause. Nevertheless, we contend that the counterfactual alternatives that people tend to dwell on frequently have little to do with people's causal ascriptions, yet still affect how they assign blame. Our data suggest that it is not sufficient for people to know who or what caused the negative outcome to occur; people also want to know how such outcomes could have been avoided (see also Miller & Turnbull, 1990). To the extent that one's own antecedent (in)actions are perceived as mutable or changeable, suggesting that a negative outcome could have been avoided, one will likely assign some degree of personal blame.

It is also evident from these data that the relation between self-avoidability and personal blame is not due to an exaggerated perception of foreseeability among respondents. First, no significant difference in foreseeability was observed between respondents and raters. Second, even after controlling for respondents' ratings of foreseeability (i.e., the extent to which the respondent felt he or she should have been able to foresee the injury), self-avoidability still accounted for a significant amount of variance in personal blame assignments. Rather, the data suggest that respondents may be confusing what *might* have been the case with what *ought* to have been the case (i.e., the counterfactual fallacy; Miller & Turnbull, 1990). That is, the more respondents think they could have avoided their accident, the easier it is for

them to imagine the accident not happening. In retrospect, actions that *might* not have been taken become actions that *should* not have been taken.

The present study sheds additional light on how those who have experienced traumatic life events may come to blame themselves. The data suggest that even in the absence of any reasonable causal connection, the more people think they could have avoided their accident, the more likely they are to blame themselves. Previous research (e.g., Davis et al., 1995; Dunning & Parpal, 1989; Kahneman & Miller, 1986) has demonstrated that people are more likely to focus on their own behavior when thinking about how negative outcomes might have been avoided than to focus on the behavior of others or on the situation. In focusing their avoidability thoughts on their own behaviors, people appear to be concluding that in some way they may have contributed to their injury. Although they may not have caused their accident, it remains painfully clear to many of them that, for example, had they left minutes earlier or taken a different route, they would not be disabled. That these personal actions can so easily be mutated leads people to assume greater personal responsibility and blame for their outcome.

It seems important for future research to consider more carefully the (in)actions for which people are blaming themselves. Specifically, the present study suggests that people may not be blaming themselves so much for being the cause of their injury (or rape, etc.) as much as for not avoiding it (cf. Abbey, 1987; Miller & Porter, 1983). Although respondents' self-blame ratings were higher than those made by trained raters, the two groups did not differ in their ratings of self- and other-cause.

One question that must be considered is whether perceptions of avoidability in these contexts are psychologically helpful or beneficial in some way. In work with bereaved populations (Davis et al., 1995), we have shown that perceptions of avoidability, the majority of which were self-implicating, are associated with greater negative affect (particularly guilt) and depressive symptomatology (see also Bulman & Wortman, 1977; Frazier, 1990). Nevertheless, a number of researchers have suggested recently that perceptions of avoidability may be adaptive insofar as they provide the individual with a sense of future control, or a sense that future negative outcomes can be avoided (e.g., Boninger, Gleicher, & Strathman, 1994; Markman, Gavanski, Sherman, & McMullen 1993; Roese, 1994; Taylor & Schneider, 1989). This argument is strikingly similar to Janoff-Bulman's (1979; Janoff-Bulman & Lang-Gunn, 1988) thesis that self-blame is likely to yield positive consequences if the behavior that is blamed is, from the person's perspective, behaviorally modifiable (i.e., mutable) and lends a sense of future control.

However, among those coping with spinal cord injury, as with the bereaved, avoidance of a future injury does not appear to be an important psychological issue. Most of these people will never again walk, much less drive a car, play football, or dive into a swimming hole. Nevertheless, we hesitate at this time to suggest that self-blame or notions of avoidability are therefore exclusively dysfunctional. When placed in the larger context of coping with shattered assumptions, perceptions of avoidability, like behavioral self-blame, may yield other, less obvious psychological benefits (see Janoff-Bulman, 1992). For instance, they may help people maintain the belief that negative events do not occur randomly and senselessly and thus may yield some psychological comfort. Perhaps perceptions of avoidability, like behavioral self-blame, help people maintain the belief that negative outcomes are, at a minimum, potentially controllable and thus not unpredictable and indiscriminate in their occurrence (Davis & Lehman, 1995).

Limitations and Directions for Future Research

These data challenge the implicit assumption in social psychology, as well as in naïve psychology, that a causal attribution is a necessary precondition for the assignment of responsibility and blame. We suggest that people often blame themselves for negative outcomes even if they are not causally implicated. They do so because they perceive that they could have done something to avoid the outcome. Our data in support of this are limited by their cross-sectional nature. We have tended to assume, on logical grounds (and like many past causal attribution theorists), that the direction of causation flows from perceptions of avoidability to blame, rather than from blame to perceived avoidability.⁷ Although we have controlled for other variables that could account for our results (e.g., causal ascriptions, foreseeability estimates), the possibility remains that some unmeasured third variable drives both blame and perceptions of avoidability. Clearly, further research is needed before definitive causal conclusions can be reached.

If one accepts that the causal direction proceeds from avoidability to blame, then an additional question is *why* people should accept blame simply because they can imagine that they could have done something differently to avoid the accident. Do perceptions of avoidability prime culturally defined norms that suggest "If you could have avoided it and did not, then you are blameworthy?" If so, there may be significant cultural variability in the extent of association between perceptions of avoidability and blame. For example, in societies where behavior is more readily understood to be role-defined and less a function of individual choice, the failure to avoid misfortune, even if you can imagine such avoidance, need not imply that you should feel blameworthy.

In this study, respondents with spinal cord injuries blamed themselves more than they were blamed by trained raters. We are not in a position, however, to suggest the superiority of one of the groups over the other in terms of accuracy. Although it is possible that respondents are taking more blame than is their due (as has been argued for other victim populations: see, e.g., Bard & Sangrey, 1979; Medea & Thompson, 1974), it is also possible that respondents may have omitted significant details in their accounts of the events that the trained raters read. Although this latter interpretation is inconsistent with the fact that respondents and raters did not differ in their ratings of self- and other-cause, in the absence of any clear, normative standard we are cautious about suggesting that respondents are exaggerating their blame.

Finally, it would be fruitful to investigate the interpersonal consequences of assuming blame even in cases where, from an objective standpoint, one is not causally implicated. From legal and rational perspectives, we have suggested that it is not reasonable to assign blame merely on the basis of personal avoidability. Nevertheless, any admission of blame by an individual is likely to affect his or her subsequent behavior (e.g., whether to seek legal recourse) as well as the judgments and behavior of support providers, jurors, and the general public (Branscombe, Owen, Garstka, & Coleman, 1993; Miller & McFarland, 1986).

Conclusion

This research offers further evidence that in coping with traumatic circumstances, people are not simply reacting to the obvious causal aspects of the event. It is not enough to know the cause of one's injury; people also want to know how such accidents could have been avoided (Miller & Turnbull, 1990). We still understand very little about why people are so concerned with this hypothetical, or counterfactual, world of "what might have been." By linking the burgeoning work on avoidability (counterfactual thinking) to research on self-blame, we expect that a greater understanding of reactions to trauma will be realized.

NOTES

1. Shaver argued that although various sources (e.g., people, weather) may be deemed causally significant, only people may be deemed responsible and hence blameworthy, because nonhuman entities do not fulfill any of Shaver's criteria for culpability. Thus outcomes due to mechanical failure or inclement weather would not result in a blame assignment to those sources. Blame and responsibility, however, may be assigned to technicians or officials who, for example, may have failed to maintain equipment (insofar as the outcome was deemed foreseeable).

2. This distinction asserts that the process of making a causal attribution by identifying the causal element or elements necessary to produce an outcome is not one and the same as making an avoidability judgment. It does not preclude the possibility that in some instances avoidability assessments may affect causal attributions (e.g., Lipe,

1991). In the present investigation, we are interested in assessing both the direct and indirect (by way of causal attribution) effects of respondents' avoidability thoughts on self-blame.

3. Wells and Gavanski (1989) suggest that counterfactuals influence responsibility through their effect on causal attributions (see also Lipe, 1991). Interestingly, however, the effects they report for responsibility ratings are *larger* than the effects they report for causal ratings.

4. We originally conceived of the neurologically intact group as a control group, insofar as these respondents' injuries were less severe and not permanent. However, as we note later, no differences were observed between the neurologically intact and the paralyzed groups on any variables of interest (see also Silver, 1982).

5. Respondents were also interviewed 3 weeks and 8 weeks postinjury. Although we do not report data from the second and third interviews in this article, it is worth noting that all findings relating to perceived avoidability, self-blame, and causal attributions replicate at Wave 2. The results at Wave 3 are in the expected direction but tend to fall just short of conventional significance levels owing to considerable sample attrition (N at Wave 3 = 55).

6. Occasionally, raters were unable to confidently assign cause or blame, typically because insufficient information was provided by the respondent. In some other cases, transcripts were unavailable for coding. These cases were eliminated in the computation of the following tests. Thus degrees of freedom range from 99 (for causal attributions) to 93 (for self- and other-blame).

7. Although the data presented are part of a three-wave panel design, they do not allow us to test the causal direction of cognitions that occur nearly simultaneously, immediately following the accident (and prior to the first interview).

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