

# Experimental Research on Just-World Theory: Problems, Developments, and Future Challenges

Carolyn L. Hafer  
Brock University

Laurent Bègue  
University of Grenoble

M. J. Lerner (1980) proposed that people need to believe in a just world; thus, evidence that the world is not just is threatening, and people have a number of strategies for reducing such threats. Early research on this idea, and on just-world theory more broadly, was reviewed in early publications (e.g., M. J. Lerner, 1980; M. J. Lerner & D. T. Miller, 1978). In the present article, focus is directed on the post-1980 experimental research on this theory. First, 2 conceptualizations of the term *belief in a just world* are described, the typical experimental paradigms are explained, and a general overview of the post-1980 experiments is provided. Second, problems with this literature are discussed, including the unsystematic nature of the research. Third, important developments that have occurred, despite the problems reviewed, are described. Finally, theoretical challenges that researchers should address if this area of inquiry is to advance in the future are discussed.

A motorist runs over a picketer—a socially concerned mother and respected local citizen—demonstrating on behalf of local port workers: Angry observers demand harsh punishment for the driver (e.g., “Sentence for Lyttleton,” 2001). A beloved public figure is the victim of a fatal car accident that occurs while her car is being chased by the paparazzi: The public expresses outrage and demands new laws to curtail the ability of the press to invade a person’s private life (see “Privacy law,” 1997; Zoglin, 1997). A woman is raped by a stranger who sneaks into her apartment while she takes out the garbage: Her emotional account of the anniversary of her victimization (Raine, 1994) draws compassionate and supportive letters from men and women around the country (e.g., Copleman, 1994; Metz, 1994; Raine, 1998).

The victims of the terrible outcomes described above were seen by many who were exposed to the event as undeserving of their fates and, thus, as victims of injustice. The perceived unfairness of the situation was likely a primary motivator for observers’ ensuing anger and compassion. However, other reactions to these events were far less sympathetic toward the victims. For example, the judge at the original trial over the picket line tragedy was criticized for arguing that the picketer was to blame for her fate because she

was blocking traffic and violating the driver’s “Freedom of movement on the roads . . . [which is] a fundamental right” (“Sentence for Lyttleton,” 2001, p. 8; see also Burrows, 2000; “Murder on the Picket Line,” n.d.). The public figure mentioned above was denigrated for being a mentally unstable individual who refused to let the paparazzi do their job (Lacayo, 1997; Morrison, 1997; Reney, 1997). The rape victim described how several people (even one close friend) suggested that she was partly to blame (Raine, 1998), in one case because of her “‘negative attitude’ that might have ‘attracted’ more ‘negativity’” (p. 91); in another, by choosing to live in that particular neighborhood.

If perceived injustice motivated the responses of anger and compassion, what motivated the tendencies to blame the victims for their fate and denigrate their character? Were these negative evaluations simply the result of a rational assessment of the facts of the situation? An interesting alternative to this proposition is presented by the work of Melvin Lerner who, in 1966, published an article with Carolyn Simmons suggesting that these types of negative reactions to victims can also be motivated by a concern with justice.

In their groundbreaking study, Lerner and Simmons (1966) found that, when presented with a victim who suffered through little fault of her own (i.e., an innocent victim), people compensated the victim if they believed they could effectively do so. Thus, under these conditions, people appeared to react with a recognition of the unfairness of the situation and were motivated to respond with compassion. However, when presented with the same victim, along with the expectation that the victim may continue to suffer, people derogated the victim’s character, describing her in relatively more negative terms. The authors interpreted both the helpful and the derogatory reaction to the innocent victim as resulting from a concern with justice. They proposed that people need to believe that the world is a just place in which individuals get what they deserve. The need to believe in a just world is reflected in how people respond to justice and injustice in the world and, more broadly, in the way people orient their lives around issues of

---

Carolyn L. Hafer, Department of Psychology, Brock University, St. Catharines, Ontario, Canada; Laurent Bègue, Department of Psychology, University of Grenoble, Grenoble, France.

Preparation of this article was supported by a Social Sciences and Humanities Research Council of Canada Grant awarded to Carolyn L. Hafer and conducted while Laurent Bègue was on leave at Brock University. We thank Anthony F. Bogaert, Willem Doise, Larry Heuer, Melvin J. Lerner, John P. Meyer, and James M. Olson for comments on drafts of this article. We also thank Carole Moss and Christine Williams for their help at various stages of this project.

Correspondence concerning this article should be addressed to Carolyn L. Hafer, Department of Psychology, Brock University, St. Catharines, Ontario L2S 3A1, Canada. E-mail: chafer@brocku.ca

deservingness. For example, when the notion of a just world is threatened by contrary evidence, like the innocent victim in Lerner and Simmons's experiment, people may engage in a variety of behaviors that help to maintain a sense of justice. These behaviors range from helping or compensating the victim to psychological rationalization of the victim's fate—for example, perceiving the victim's fate as deserved (and, therefore, less unfair) because of her unworthy character.

Lerner and Simmons's (1966) interpretation of their findings sparked a wave of similar experiments and lively debate about alternative reasons for the disturbing results. These studies were summarized in two seminal publications: a review article by Lerner and Miller published in *Psychological Bulletin* in 1978 and a 1980 book by Lerner titled *The Belief in a Just World: A Fundamental Delusion*. In these works, the authors described the relevant research from 1966 to 1980, showing how results present a persuasive case for Lerner and Simmons's notion of the need to believe in a just world. In two other major essays published in the 1970s, Lerner and his colleagues (Lerner, 1977; Lerner, Miller, & Holmes, 1976) outlined the details of justice motive theory, or just-world theory, which hypothesizes about the role of the need to believe in a just world in the development of a more general justice motive—a motive that is, in part, derived from the necessity of believing that the world is a just place. Taken together, these four publications expand on the original notion of the need to believe in a just world and take the implications of Lerner and Simmons's work far beyond the derogation of innocent victims.<sup>1</sup>

The goal of the present article is to review and critique post-1980 experimental research on just-world theory as well as to point out further research directions. The major points are as follows: First, the majority of post-1980 experiments, with hypotheses based on just-world theory, can be characterized as a relatively unsystematic collection of studies that do not attempt to refine or advance the theory, at least beyond applying some of the theory's early hypotheses (especially those regarding victim blame and derogation), to various victim groups. Furthermore, this research has often overlooked several basic aspects of just-world theory, adding to slow progress in this area. Second, despite our criticisms, some well-conducted experiments have presented important developments in just-world theorizing, suggesting interesting avenues for further investigation. Finally, future advances will depend not only on a thorough understanding of the original theory and attempts to build on recent developments but also on careful attention to ambiguities of just-world theory and to creating links with other areas of study, especially other theories of social justice. Through systematic and rigorous research, just-world theory can continue to evolve and influence our understanding of the important role that justice plays in people's lives.

The present article is divided into four major sections. We begin with a general introduction to experimental research on just-world theory, including a description of basic concepts and experimental paradigms as well as a general overview of the characteristics of the post-1980 experiments. We then focus on problems with the research that we believe have impeded progress over the past 20–25 years. Despite the problems we review, important developments have occurred in the post-1980 research, which are discussed in a third major section. Finally, in a fourth section, we describe some of the theoretical challenges that, in our opinion,

will have to be met in future investigations if research in this area is to continue to progress.

## Two Conceptualizations of the Belief in a Just World

There have been other reviews of the just-world literature published after 1980 (see Furnham, 1998, 2003; Furnham & Procter, 1989; Maes, 1998a). Aside from their relative brevity, these reviews differ from the present article in that they have tended to focus on correlational research that uses the term *belief in a just world* to refer to an explicitly endorsed individual-difference variable (Lerner, 1998). In this research, the assumption is that people differ in the extent to which they believe that the world is a just place (presumably reflecting differences in their underlying need to believe in a just world), and these variations can be measured with standard self-report instruments. Scores on individual-difference scales are correlated with a number of criteria, including attitudinal and personality variables and measures of well-being. In the most current review of the just-world literature, Furnham (2003) summarized the various directions the literature has taken from 1990 to the early 21st century. He concluded that two major trends have characterized recent research: first, the development of better measures of individual differences in a belief in a just world and, second, the investigation of a belief in a just world as a positive illusion (see S. E. Taylor & Brown, 1988) that people hold to varying degrees (again, measured with standard self-report scales) and that is related to well-being and the ability to successfully cope with one's own misfortunes (e.g., Dalbert, 1999, 2001).

We agree with Furnham's (2003) synopsis of the direction that just-world research has taken in recent years. However, we think it is important to highlight the fact that most of the research on explicitly endorsed individual differences in a belief in a just world represents a major shift in focus from the original conceptualization of the term *belief in a just world* and from the essence of the theory. In Lerner's (1997) words, "The phrase 'belief in a just world' originally was intended to provide a useful metaphor rather than a psychological construct" (p. 30; see also Lerner, 1980, p. 23).

The theory proposes that people develop a general justice motive for a variety of reasons, the most well specified and unique of which is that people need to believe in a just world in order to maintain their personal contract (Lerner, 1977; Lerner et al., 1976). Lerner proposed that children's natural development from attempts to gratify their immediate impulses to investment in (better) longer term outcomes has elements of an emerging contract. The terms of this contract are that the child agrees to withhold his or her immediate impulses and instead work toward maximizing his or her rewards in the long run. In return, the child is owed expected outcomes—outcomes that the child feels entitled to or deserving of by virtue of having done what was dictated to obtain certain

<sup>1</sup> Though Lerner was perhaps the first social psychologist to propose a fundamental justice motive, hence the term *justice motive theory* (e.g., Dalbert, 2001; Lerner et al., 1976), the idea that people care about justice is not exclusive to Lerner (see, e.g., Adams, 1965; Crosby, 1976). Therefore, we use the term *just-world theory* (as do, for example, Lerner, 1980; Pepitone & L'Armand, 1997) in this article rather than justice motive theory to highlight what we see as the unique and central component of the theory—the need to believe in a just world.

valued goals. "He learns and trusts that his world is a place where additional investments often entitle him to better outcomes, and that 'earning' or 'deserving' is an effective way of obtaining what he desires" (Lerner et al., 1976, p. 135). Thus, as the child learns to invest in better, long-term outcomes, he or she develops an increasing sensitivity to deservingness and "places greater portions of his goal-seeking activities under the rules of deserving, so that in the normal course of events, he eventually finds that his life is committed and organized on the basis of 'deserving' his outcome" (Lerner et al., 1976, p. 135). Early work by Braband and Lerner (1974) and Long and Lerner (1974) offered some support for this aspect of just-world theory by showing an association between children's developing delay of gratification (a proxy for the personal contract) and an increasing concern with deservingness.

The personal contract is only valid to the extent that the individual lives in a just world, that is, a world where each person's outcomes fit what he or she deserves (at least eventually). If the world is not just in this sense, there is little point investing time, energy, and other resources in the hopes of obtaining the rewards one believes one deserves. From this perspective, the fate of others becomes important in part because indications that others are not getting what they deserve (to the extent that others are seen as members of one's own world) threaten the notion that the world is just and, therefore, one's commitment to the personal contract, a concept around which much of life is organized. In summary, according to just-world theory (Lerner, 1977; Lerner et al., 1976), virtually all people, as a result of intrinsic developmental forces in combination with a relatively stable environment, develop a commitment to deserving their outcomes and to organizing their lives around principles of deservingness. For this commitment to be maintained, people need to believe in a just world, and, therefore, they are threatened by instances of injustice and motivated to reduce this threat to maintain the appearance that the world metes out resources and ill fate as deserved.

The need to believe in a just world will almost inevitably lead to a belief in a just world, the degree and form of which likely varies between individuals (Lerner, 1980, p. 38). Despite these probable differences, however, the essence of just-world theory is that most people have a "belief in a just world" in the sense that their underlying need to believe in a just world motivates them to behave as if they believed that the world is a just place and as if they wanted to preserve this belief, even if they do not explicitly endorse a belief in a just world on standard individual-difference scales.

The focus on standard individual-difference measures of belief in a just world is somewhat removed from this motivational core of just-world theory. Also, though there has been a continuing tradition of experimental manipulations in the post-1980 just-world literature, the increasing interest in individual differences in a belief in a just world corresponds with an increasing preference for correlational investigations rather than experimental studies in which a situational variable is proposed to yield just-world phenomena. In other words, the correlational literature on the belief in a just world tends to reflect an interest in individual differences in a belief in a just world per se (though for a few exceptions, see Dalbert, 2001; Maes, 1998c), whereas the experimental literature tends to be aimed toward testing the motivational implications of an underlying need to believe in a just world (Furnham, 2003), using individual-difference measures at times as a method for

gathering further support for the presumed process underlying the effects of situational manipulations.

The tendency to use experiments to investigate underlying just-world processes is consistent with Lerner's (1980, p. 30, 1998, 2003) claim that carefully controlled experiments are the best methodology for testing the basic motivational propositions of just-world theory. As suggested by early just-world theorizing, the need to believe in a just world will likely lead to different forms of a belief in a just world in different individuals. Often the belief in a just world will be a rather implicit assumption (Lerner, 1980, 1998; Lerner & Goldberg, 1999) that is difficult to assess with standard self-report instruments. Additionally, people may not have perfect insight into the processes proposed in just-world theory and, thus, like an assumption that the world is just, they may have trouble articulating these processes verbally on standard self-report questionnaires (see Lerner, 1980, 1998; and, more generally, Epstein, Lipson, Holstein, & Huh, 1992; Haidt, 2001; Nisbett & Wilson, 1977). Experimental manipulations, therefore, may be one of the few ways to test certain key aspects of just-world theory. Additionally, just-world theory includes defensive reactions aroused by emotionally involving events. Experiments are often a superior way to study people's responses in such situations (given appropriate ethical considerations) because measures can be more easily gathered during and/or shortly after exposure to emotionally arousing stimuli, ensuring that the motivations proposed by just-world theory are still engaged and uncontaminated by other, more thoughtful, processes (see Lerner, 2003). The post-1980 experimental studies, therefore, generally better reflect the original conceptualization of just-world theory. However, they have not been extensively and systematically reviewed. In the next subsection, we explain the basic paradigm that characterizes this research.

### *The Experimental Paradigm*

The specific manipulations relevant to hypotheses based on just-world theory vary widely. Despite this variation, experimental paradigms seem to involve one or more of the following three categories of manipulation, often considered along with an individual-difference measure of belief in a just world.

*Three broad categories of manipulation.* The majority of investigators (as in the early experiments) test their just-world hypotheses by either (a) presenting participants with a particular event and manipulating variables expected to increase or decrease the threat the event poses to the need to believe in a just world (e.g., by manipulating victim innocence, the moral character of a victim, whether or not an innocent victim continues to suffer); or (b) presenting participants with an event that should pose a threat to the need to believe in a just world and manipulating the cost or effectiveness of supposed strategies for maintaining a belief in a just world in the face of this threat (e.g., as when participants are or are not given an adequate opportunity to compensate an innocent victim, making this option a more or less viable strategy for preserving a belief in a just world). Some investigators use a combination of these manipulations (e.g., Lea & Hunsberger, 1990), as did Lerner and Simmons (1966) in their original research. In either case, participants' reactions to the victim should be affected by the manipulation, but for different reasons. In the former case, reactions should be influenced by the manipulation

because the conditions vary in the extent to which participants' motivation to maintain a belief in a just world is aroused (e.g., the motivation should be more aroused when an innocent victim continues to suffer vs. when the suffering has ended). In the latter case, reactions should be affected because the manipulation dictates what strategy for preserving a belief in a just world is most appropriate (e.g., if participants cannot compensate the victim, then they are more likely to blame or derogate the victim to preserve their belief in a just world).

One exception to the two lines of logic just presented is as follows: Several authors have manipulated the valence or intensity of stimuli meant to be ambiguous with respect to justice (e.g., K. L. Dion & Dion's, 1987, manipulation of the attractiveness of a person in a photograph) and then measured the effect of the manipulation on participants' assumptions of the stimulus person's character, behavior, or outcomes. The reasoning here is that, because people believe in a just world, they assume that individuals get what they deserve and deserve what they get, and, thus, people interpret ambiguous situations in those terms; that is, they apply a belief in a just-world schema even in the absence of a clear and extant threat to their need to believe in a just world.

The effects of these three broad classes of manipulations are often assessed in combination with an individual-difference measure of belief in a just world, with the general notion that, if a need to believe in a just world leads to certain types of responses in a given experimental condition, then this response should occur primarily for people expressing a strong endorsement of such a belief. Next, we outline a more detailed rationale for the use of individual-difference measures of belief in a just world within an experimental context.

*Individual differences in a belief in a just world as a moderator.* As mentioned earlier, many just-world researchers assume that scores on standard individual-difference measures of belief in a just world reflect differences in an underlying need to believe in a just world. The use of individual-difference scales in an experimental context, according to this view, should help uncover the underlying process behind the effects of manipulations.

The rationale for testing just-world hypotheses with an individual-difference scale in addition to a manipulation is not often outlined explicitly. However, there seems to be basic agreement among authors who do provide such an argument (e.g., Hafer & Olson, 1998; Schmitt, 1998). According to this reasoning, injustice is presumed to present a greater contradiction to people who strongly believe in a just world than to those with only a weak belief; thus, the former individuals should feel more threatened by the injustice and, therefore, should be more motivated to engage in strategies for coping with the threat (for similar reasoning, see Festinger, 1957). A belief in a just world is considered to be too important to give up easily (Lerner, 1980); thus, strategies are likely to involve responding to the target of injustice in a way that confirms the belief (or avoids the issue). In the experiments involving individual-difference measures of belief in a just world, then, the researchers usually hypothesize an interaction between the individual-difference measure and one or more experimental manipulations of, for example, the extent of threat to the need to believe in a just world and/or the appropriateness of various strategies for preserving a belief in a just world (see Schmitt, 1998).

In summary, the basic paradigms for just-world experiments appear to follow a few underlying rationales. Having described the logic of these approaches, we now turn the attention to the general characteristics of the post-1980 experiments proposing just-world-based hypotheses.

### *Overview of Experiments*

Table 1 lists the 66 experimental studies testing predictions derived from just-world theory that have been published since 1980. These studies form the backdrop for this article.

*Initial explanatory notes.* A few points of explanation are necessary to clarify the organization of Table 1. First, "experimental" studies are those that include at least one experimental manipulation that either explicitly conforms to one of the rationales articulated above (e.g., the author explicitly states that a manipulation should increase threat to the need to believe in a just world or a belief in a just world) or can be clearly inferred from the authors' discussion of just-world theory to conform to one of these rationales. The studies may also include other independent variables that are not perceived (by the researchers) as relevant to just-world theory.

Second, for some of the studies, the primary goal was not to investigate just-world theory. However, these studies are included because the authors do make at least some predictions on the basis of just-world processes (e.g., Pargament & Hahn, 1986; Schuller, Smith, & Olson, 1994), or, in a few cases (e.g., S. Williams, 1984), because the authors pit just-world theory against an alternative perspective and, thus, propose a pattern of results that would conform to just-world-based reasoning (though their intent is not to confirm or extend just-world theory itself).

Third, some of these experiments are less focused on a basic effect of just-world processes than on the influence of a belief in a just world that is conceptualized primarily as an explicitly endorsed individual-difference variable (e.g., Hafer & Olson, 1989; Shaffer, Plummer, & Hammock, 1986). These studies were still included in this review because (a) some researchers may interpret the interaction between the experimental manipulation and the individual-difference measure as a demonstration of basic just-world phenomena (with the individual-difference scale merely a moderator variable that shows the underlying reason for a situational effect) and (b) because it is not always easy to distinguish between experiments with individual-difference variables that are meant to test basic just-world processes and those for which the interest is in individual differences in a belief in a just world per se.

Fourth, certain experiments have not been included even though they could be interpreted as representing a typical just-world paradigm. For these studies, the analyses that would test a just-world hypothesis were not performed (e.g., Perrott, Miller, & Delaney, 1997), or no predictions were made on the basis of just-world theory (e.g., Esses & Beaufoy, 1994). Although such investigations are not included in Table 1, some are, of course, referred to at various points in this article when they contribute to an issue raised for discussion.

Fifth, the Primary stimulus column in Table 1 refers to the key experimental situation toward which participants' responses were directed. The Primary dependent variables column in Table 1 means the dependent variables that are most obviously relevant to just-world theory, as outlined here, even those for which the

Table 1  
*Characteristics of Post-1980 Experiments Proposing Just-World-Based Hypotheses*

Study	Primary stimulus	Primary dependent variable <sup>a</sup>	Stimuli format <sup>b</sup>	Instrument
Anderson (1992) Braman & Lambert (2001)	Victim of illness (HIV/AIDS) Victim of illness (cancer)	Blame/resp. Blame/resp., character, negative affect, general reaction (combination of avoidance, positive affect, favorability of reaction)	Scenario, reality unknown Scenario/photo, real	None R & P
Comby et al. (1995) Study 1	Victim of illness (HIV/AIDS)	Blame/resp., character	Written interview excerpts, real	None
Study 2	Victim of illness (HIV/AIDS)	Blame/resp., character	Written interview excerpts, real	None
Correia et al. (2001)	Victim of illness (HIV/AIDS)	Blame/resp., character, fair/deserve, avoidance, harm	Written interview excerpts, real	Items from R & P and Dalbert et al.'s (1987) GBJWS
Correia & Vaia (2003) Study 1	Victim of illness (HIV/AIDS)	Character, fair/deserve	Written interview excerpts, real	Dalbert's et al.'s (1987) GBJWS
Study 2	Victim of illness (HIV/AIDS)	Character, fair/deserve	Written interview excerpts, real	None
Covati et al. (2001) Dalbert (2002) Study 2	Victim of bereavement	Helping	Video, real	R & P
Study 3	Self as victim of unfairness	Negative affect	Recalled event, real	Dalbert's (1999) PBJWS and Dalbert et al.'s (1987) GBJWS
DePalma et al. (1999) K. L. Dion & Dion (1987)	Self as victim of unfairness	Self-esteem	Recalled event, real	Dalbert's (1999) PBJWS and Dalbert et al.'s (1987) GBJWS
Drout & Gaertner (1994)	Victim of illness (blood disorder) Physically attractive individuals	Helping Character, likelihood of future success/happiness	Scenario, real Photographs, real	R & P
Eillard & Bates (1990, Study 1)	Victim of sexual assault Self as beneficiary of (random) assignment of status, other as victim of (random) status assignment	Helping, character, distancing Character, comfort/satisfaction with fate	Victim a coparticipant, real Participant in situation, victim a coparticipant, real	R & P None
Eillard et al. (2002) Study 1	Perpetrator of kidnapping	Character (including evilness)	Case materials (e.g., witness report, victim impact statement), real	Lipkus (1991)
Study 2	Perpetrator of break-in and shooting	Character (including evilness)	Newspaper article, real	R & P
Feinberg et al. (1982, Experiment 1) Ferrari (1990)	Victim of electric shock Self failing at cognitive task	Character Self-punishment	Witnessed victimization, real Participants in situation, real	None R & P
Gilmartin-Zena (1983)	Victim of sexual assault	Blame/resp.	Scenario, mock	None
Gruman & Sloan, (1983)	Victim of illness (indigestion, stomach cancer, pneumonia)	Character, avoidance	Scenario, real	None
Hafer (2000a) Study 1	Victim of assault/robbery	Stroop interference	Video, real	None
Study 2	Victim of assault/robbery	Stroop interference, character, distancing	Video, real	None
Hafer (2000b) Study 1 <sup>c</sup>	Victim of illness (STD)	Blame/resp., character, distancing	Video, real	Lipkus, 1991
Study 2 <sup>c</sup>	Victim of illness (STD)	Blame/resp., character, distancing	Video, real	Lipkus, 1991

Table 1 (continued)

Study	Primary stimulus	Primary dependent variable <sup>a</sup>	Stimuli format <sup>b</sup>	Instrument
Hafer (2002c) Study 2	Victim of assault/robbery	Stroop interference	Video, real	R & P
Hafer & Olson (1989) Study 1	Victim of illness (STD)	Blame/resp., character, distancing	Video, real	None
Study 2	Self as victim of procedural unfairness	Fair/deserve, negative affect	Participants in situation, real	R & P
Hagedoorn et al. (2002)	Self as victim of procedural unfairness	Fair/deserve, negative affect	Participants in situation, real	R & P
Hammock & Richardson (1993)	Self as victim of distributive and/or procedural unfairness	Fair/deserve, negative affect, aggressive voice	Simulation, mock	Lipkus (1991)
Hergovich et al. (2003)	Victim of assault	Blame/resp., character	Scenario, reality unknown	None
Karuza & Carey (1984) <sup>c</sup>	Victim of illness (AIDS)	Character	Scenario, mock	R & P
Kerr et al. (1985)	Victim of sexual assault	Blame/resp., character	Video, real	Eight items from R & P
Kleinke & Meyer (1990) <sup>e</sup>	Victim of theft	Perp. punishment	Transcript of trial/photo, real	None
Kochler & Gershoff (2003, Study 4)	Victim of sexual assault	Blame/resp., perp. punishment, character, harm	Video, real	R & P
Kray & Lind (2002)	Incident of betrayal	Negative affect, violation of trust/promise, violation of social order	Scenario, mock	None
Kristiansen & Giulietti (1990)	Victim of procedural unfairness	Fairness, bias, and politeness of victim	Victim as coparticipant	None
Lea & Hunsberger (1990)	Victim of spousal abuse	Blame/resp., character	Scenario, real	Lydon et al. (1984) <sup>d</sup>
Lodewijckx et al. (2001)	Victim of illness (cancer, pneumonia)	Character	Scenario, real	None
Luginbuhl & Mullin (1981)	Victim of assault	Distancing, perceived senselessness	Newspaper articles, real	None
Lupfer et al. (1998)	Victim of sexual assault	Blame/resp.	Scenario, real	None
McGraw & Foley (2000)	Victims and beneficiaries of unfair outcomes	Pleasure/distress	Scenario, reality unknown	R & P
Meyerowitz et al. (1987)	Perpetrator of shooting	Perp. punishment, perp. blame/resp., perceived perp. insanity	Scenario, reality unknown	R & P
Murphy-Berman & Berman (1990)	Victim of illness (cancer, Haltmar's disease [fictional])	Character	Generic descriptions of diseases, real	None
Murphy-Berman et al. (1993)	Victim of illness (HIV/AIDS)	Helping, fair/deserve, affect	Scenario, reality unknown	Dalbert et al.'s (1987) GBIWS
Murray & Stahly (1987) <sup>c</sup>	Victim of childhood handicap and victim's mother	Character, helping, affect	Scenario, reality unknown	None
O'Quin & Vogler (1989)	Victim of spousal abuse	Character	Video, real	R & P, but not analyzed
Pancer (1988)	Victim of robbery	Blame/resp., character, fair/deserve, perp. punishment, positive affect	Scenario, reality unknown	R & P
Pargament & Hahn (1986)	Victims of poverty	Avoidance	Written vs. written/photo display, real	R & P
Schmitt (1991)	Self as beneficiary of undeserved health or self as victim of undeserved illness	Blame/resp. (i.e., several causal attribution items)	Scenario, mock	None
Schmitt et al. (1991)	Beneficiary of good luck or victim of bad luck experiences	Character	Video, real	Dalbert et al.'s (1987) GBIWS
Schuller et al. (1994)	Beneficiary of gambling gain or victim of gambling loss	Character	Video, real	Dalbert et al.'s (1987) GBIWS
	Victim of spousal abuse	Blame/resp., perp. punishment, believability	Audiotape of trial, reality unknown	R & P

(table continues)

Table 1 (continued)

Study	Primary stimulus	Primary dependent variable <sup>a</sup>	Stimuli format <sup>b</sup>	Instrument
Shaffer et al. (1986)	Victim of assault/robbery	Character, perp. punishment	Trial transcript, real	None
Sheridan et al. (2003)	Victim of stalking	Blame/resp., harm, locus of resolution (police/victim)	Scenario, reality unknown	None
Sherman et al. (1982-1983)	Victim of illness (cancer)	Helping (could not analyze because of low variability), distancing, affect	Medical report/photo, real	R & P
Simmons & Mitch (1985)	Victim of shooting	Blame/resp., perp. punishment	Scenario, mock	None
Skarlicki et al. (1998)	Victim of layoff	Fair/deserve, retributive action	Newspaper article, real	None
Sloan & Gruman (1983)	Victim of illness (cancer, heart disease)	Character	Scenario, real	None
Stephan & Holahan (1982)	Person failing or succeeding at job search	Job competence, fair/deserve	Scenario, real	None
Triplet (1992) Experiment 1	Victim of illness (possibility of two of AIDS, influenza, or leukemia, depending on condition)	Blame/resp., avoidance, harm	Medical report, reality unknown	None
Experiment 2	Victim of illness (possibility of two of AIDS, influenza, or leukemia, depending on condition)	Blame/resp., avoidance, harm	Medical report, reality unknown	None
Triplet & Sugarman (1987)	Victim of illness (HIV/AIDS, genital herpes, serum hepatitis, Legionnaire's disease)	Blame/resp., avoidance	Scenario, reality unknown	None
Villemur & Hyde (1983)	Victim of sexual assault	Blame/resp., character, perp. punishment	Audiotape of trial, slides of victim and defendant, reality unknown	None
Whatley & Riggio (1993) <sup>c</sup>	Victim of sexual assault	Blame/resp.	Scenario, reality unknown	R & P
S. Williams (1984, Study 2)	Victim of theft	Blame/resp., character, positive affect, negative affect	Scenario, reality unknown	None
Wyer et al. (1985)	Victim of sexual assault	Blame/resp., harm, perp. punishment, believability	Scenario, real	None

Note. resp. = responsibility; R & P = Rubin and Peplau's (1973, 1975) Just World Scale (JWS); GBJWS = General Belief in a Just World Scale; PBJWS = Personal Belief in a Just World Scale; STD = sexually transmitted disease; perp. = perpetrator.

<sup>a</sup> Blame/resp. = a combination or one of blame, responsibility, or perceived causality; character = overall and/or trait evaluations (may be a difference score reflecting ratings for victim minus self-ratings); negative affect, positive affect, and affect = one or more positive emotions, negative emotions, or both; fair/deserve = ratings of perceived fairness and/or deservingness and/or justice; avoidance = regulating or the desire to regulate physical exposure to the target or psychological exposure to (e.g., thinking about) the target; harm = extent of suffering and/or severity of the event itself; helping = attempts to help or compensate the victim; distancing = similarity and/or identification with the target and/or the target's situation; perp. punishment = perpetrator-related judgments such as verdict, sentence, and perceived deservingness of punishment; believability = believability of victim's account. <sup>b</sup> Many of the visual presentations are accompanied by written information and/or information given verbally by the experimenter. The stimulus format is labeled *real* if the authors explicitly stated that the stimulus was a real case or was presented as if it were real, if the event really happened to the participants, or if it could be clearly inferred from the procedure that the stimuli were intended to be perceived as real. The label *mock* is used if the authors explicitly stated that the stimulus event was presented to participants as hypothetical or if this can be clearly inferred from the procedure. The label *reality unknown* is used if the real versus mock nature of the stimuli cannot be definitively inferred from the procedure. <sup>c</sup> The author(s) made no predictions involving an experimental manipulation and just-world scale scores. <sup>d</sup> See Ellard, Lydon, and Celnar (1998).

authors did not make a priori predictions. Additional dependent measures that are not relevant to just-world theory from either our own or the researchers' perspective are not mentioned. The dependent variables listed in Table 1 may consist of more than one measure (e.g., Hagedoorn, Buunk, & Van de Vliert's, 2002, "fair/deserve" variable is actually two separate measures: one for perceived procedural fairness and one for perceived distributive fairness).

Finally, a comment on our method for collecting these references is warranted. We collected all articles found through a search of the PsycINFO, ERIC, Sociological Abstracts, and MEDLINE databases for the term *just world*. We also searched the Web of Science database for all articles citing Lerner (1980) and/or Lerner and Miller (1978) and/or Lerner and Simmons (1966). Finally, we examined articles cited by these studies and sent e-mails to researchers in the area requesting recent in press manuscripts.

The majority of articles testing experimental hypotheses based on just-world theory are written in English. However, a substantial amount of just-world research in the past 20 years has been published in German; thus, we have also included relevant German-language research in Table 1. The only other articles written in other languages that were clearly experimental and involved just-world-based hypotheses are Japanese (two articles: Moroi, 1983a, 1983b) and French (one article: Comby, Devos, & Deschamps, 1995). We have excluded the Japanese experiments only for practical reasons (the language is known to neither author, and suitable translation was difficult to find).

*General characteristics.* There are several prominent characteristics of the post-1980 experimental research addressing just-world theory. First, following the original research summarized by Lerner (1980; Lerner & Miller, 1978), most studies have focused on the reactions of third-party observers of another's situation. Less experimental work has involved reactions to one's own fate (see the second column of Table 1). Second, an area that has been relatively overlooked in the experimental literature is reactions to those who benefit from injustice. The vast majority of research is on reactions to victims (see the second column of Table 1). Third, there has been a tendency to focus on particular types of victims, most notably sexual assault victims and victims of illness, especially HIV/AIDS and cancer (see the second column of Table 1).

Fourth, as reflected in the third column of Table 1, the most common dependent variables are assessments of the target's blame or responsibility for his or her fate and evaluations of the target's character. These variables are most often used to test for the phenomena of victim blame and derogation (i.e., evaluating an innocent victim's character more negatively than some comparison, such as reported in the original Lerner & Simmons, 1966, study). Interestingly, compensating or helping victims as a method of maintaining a belief in a just world, although playing a prominent role in the original theory and the early research using the Lerner and Simmons paradigm, has received little research attention since 1980.

Fifth, although many of the authors predict main effects for experimental manipulations on the basis of just-world theory (e.g., Anderson, 1992; Kleinke & Meyer, 1990; Kray & Lind, 2002; Triplet & Sugarman, 1987), it is also common to predict interaction effects using individual differences and/or other manipulations as additional independent variables. Thus, predictions often take the form of two-way (e.g., Dalbert, 2002, Studies 2 & 3; K. L.

Dion & Dion, 1987; Hafer, 2000b, Studies 1 & 2; Schmitt et al., 1991) and sometimes three-way interactions (e.g., Braman & Lambert, 2001; Correia & Vala, 2003; Lea & Hunsberger, 1990; Shaffer et al., 1986).

As mentioned, many researchers incorporate into the experimental design a measure of individual differences in the strength with which someone endorses a belief in a just world. The fifth column of Table 1 notes the specific individual-difference instrument used, if any. The most popular measure is Rubin and Peplau's (1975) Just World Scale.

Finally, most of the experiments are not designed to test basic theoretical issues (for some exceptions, see K. L. Dion & Dion, 1987; Ellard & Bates, 1990; Hafer, 2000a, 2000b, 2002c; Karuza & Carey, 1984; Schmitt, 1991) but are instead attempts to apply the existing knowledge of just-world theory to different types of targets. The most frequent goal in this vein has been to apply previous research on responses to victims to help understand reactions to different victim groups (e.g., Gruman & Sloan, 1983; Hergovich, Ratky, & Stollreiter, 2003; Kerr, Bull, MacCoun, & Rathborn, 1985; Luginbuhl & Mullin, 1981; Murphy-Berman & Berman, 1990; Murphy-Berman, Sullivan, & Berman, 1993; Murray & Stahly, 1987; Schuller et al., 1994; Sheridan, Gillett, Davies, Blaauw, & Patel, 2003; Sherman, Smith, & Cooper, 1982-1983; Triplet, 1992; Triplet & Sugarman, 1987; Villemur & Hyde, 1983; Whatley & Riggio, 1993).

To summarize the introductory section of this article, we discussed two different perspectives on the concept of the belief in a just world: that focusing on the belief in a just world as an explicitly endorsed individual-difference variable, primarily represented by correlational work, and that focusing on a fundamental need to believe in a just world (which presumably leads to some form of belief in a just world that people are motivated to defend), which is represented to a larger extent in the experimental than in the correlational literature. We then explained the basic logic underlying experiments testing just-world hypotheses and reviewed some general characteristics of these experimental studies. Unfortunately, though experimental research on just-world theory has continued at a relatively steady pace since 1980 (see Table 1), there are several problems in this literature that have limited our ability to draw conclusions from research findings and have impeded theoretical advancement. Many of these problems stem from a tendency to overlook certain key aspects of the theory. These difficulties are the focus of the next major section of this article.

### Problems With the Post-1980 Experimental Research

Any attempts to apply, refine, extend, or modify a particular theory must start with a solid understanding of the theory itself as it was conceptualized by its founders and early supporters and critics. Although there have been many attempts to test hypotheses on the basis of just-world theory or proposed extensions of the theory in the post-1980 experimental literature, many of these exercises have been based on a seemingly superficial or, at times, inaccurate conception of the original theory and research, and/or on inadequate methodology. In the present section, we review several of the problems with post-1980 experimental research addressing just-world-based hypotheses that lead us to this conclusion. Specifically, we examine the unsystematic nature of the research, the impact of the stimuli delivered to study participants,

and the presence of experimental confounds and problematic hypotheses. Finally, we discuss psychometric and conceptual problems with the use of individual-difference measures of belief in a just world to investigate basic just-world processes.

### *Coherence of the Research*

One problem with the literature reviewed here is that it is relatively unsystematic. First, some of the studies containing hypotheses on the basis of just-world processes were not intended to focus on applying, extending, or modifying this particular theory; rather, just-world theory and research was used to arrive at a subset of hypotheses, whereas other theories or areas of research formed the basis of other hypotheses (e.g., Covati, Foley, & Coffman, 2001; Hergovich et al., 2003; Kray & Lind, 2002; McGraw & Foley, 2000; Murphy-Berman et al., 1993; Pargament & Hahn, 1986; Schuller et al., 1994; Shaffer et al., 1986; Sheridan et al., 2003; Simmons & Mitch, 1985; Skarlicki, Ellard, & Kelln, 1998; Stephan & Holahan, 1982; Triplet, 1992; Triplet & Sugarman, 1987; Villemur & Hyde, 1983). This use of just-world theory and research is not problematic in and of itself; indeed, the frequent application of just-world theory to social issues, especially reactions to victims, shows its intuitive appeal in this domain. However, a trend toward the kinds of investigations mentioned above means that just-world theory is often used in a rather superficial fashion as an argument for certain predictions, leading researchers to overlook other testable hypotheses (e.g., hypotheses involving other independent or dependent variables in the study) or even competing hypotheses that a more careful consideration of the literature may yield. For example, Triplet and Sugarman (1987) presented participants with scenarios of individuals who had illnesses of differing severity (with AIDS being the most severe). On the basis of just-world theory, they reasoned that the more severe the illness, the more threat the victim would pose to the need to believe in a just world; therefore, the more the participant would attempt to deal with this threat by, in this case, seeing the victim as responsible for the illness and avoiding the victim. Triplet and Sugarman also manipulated the sexual orientation of the victim. Though they made no hypothesis derived from just-world theory involving this additional manipulation, sexual orientation could affect observers' assessments of the victim's responsibility for the illness (at least for AIDS) and, therefore, the observers' perceived deservingness of the victim (see Feather, 1999). The manipulation is relevant, therefore, to just-world theory. A consideration of this issue may have led to different hypotheses (for examples of victim sexual orientation manipulations that are explicitly interpreted within a just-world context, see Anderson, 1992; Hergovich et al., 2003; Triplet, 1992).

Even among studies for which just-world theory is the primary focus, researchers sometimes overlook variables, potential hypotheses, or both that are obviously relevant. For example, O'Quin and Vogler (1989) overlooked relevant dependent variables in their experiment. They made predictions on the basis of just-world theory about how the manipulations would affect victim blame and the perceived fairness of the perpetrator's punishment. They did not discuss any potential effects on victim character evaluation or sympathy for the victim, dependent variables that were assessed and are clearly relevant to just-world theory.

A second way in which the literature reviewed here is unsystematic is in the myriad of ways in which some of the broad conceptual variables, described in the subsection on the experimental paradigm, have been manipulated. To investigate this issue, we coded the independent variables that were involved in just-world theory predictions for every study in Table 1 for how they were conceptualized by the authors. The broad categories of independent variable are threat to the need to believe in a just world, the viability of mechanisms for preserving a belief in a just world, the valence/intensity of ambiguous stimuli, and the extent/importance of a belief in a just world. This last variable is usually indicated by a score on a scale assessing individual differences in a belief in a just world and considered along with at least one independent variable of another category. Individual-difference scales are discussed at length later. We also coded the independent variables within each of these four broad conceptual categories into more specific types. The coding proceeded as follows: Carolyn L. Hafer and Laurent Bègue jointly arrived at the broad conceptual categories from their independent reading of the literature. Carolyn L. Hafer then developed the categories for specific types of variables and coded all studies for both levels of variables (again, according to the researchers' conceptualization). Laurent Bègue, then, independently coded all studies using the same categories. Disagreements were resolved through discussion. Table 2 shows the results of this coding exercise.

Specific types of variables considered as manipulations of threat to the need to believe in a just world include the presence or absence of an unjust event, the extent or duration of injustice, the salience of an injustice, the behavioral responsibility of a victim of injustice, target respectability, and perpetrator punishment, among others. Various individual-difference variables (e.g., gender; Drout & Gaertner, 1994) have also been conceptualized, within experimental investigations, as variables influencing the threat a stimulus poses to the need to believe in a just world (e.g., religiosity; Lea & Hunsberger, 1990).

Specific types of variables presumably reflecting the viability of particular just-world coping strategies are also diverse. They include manipulations of cues for victim blame, cues for victim character devaluation, and others. As with independent variables representing levels of threat to the need to believe in a just world, some experiments have also proposed individual-difference determinants of strategy viability.

Finally, there have been three types of manipulations of the valence and/or intensity of stimuli that are ambiguous with respect to fairness: the character of the target, the behavior of the target, and the valence and/or intensity of the target's outcome. These manipulations presumably lead to the application of a belief in a just-world schema (even in the absence of a clear and extant threat to the need to believe in a just world).

This heterogeneity in specific types of independent variables could be viewed as a positive aspect of the research, in that it allows for conceptual replications of just-world hypotheses. However, despite the fact that we were able to place some structure on this literature by categorizing independent variables into several primary and secondary types, there appears to be little systematic use of these variables. Specifically, sometimes little attempt is made to build on previous research using similar variables, or little theoretical justification is given as to why a particular variable might constitute, for example, a threat to the need to believe in a

just world or a determinant of what strategy for preserving a belief in a just world is most viable (e.g., McGraw & Foley, 2000; Shaffer et al., 1986; Simmons & Mitch, 1985; Villemur & Hyde, 1983; Whately & Riggio, 1993). This characteristic of the research is, in part, a function of the greater focus on just-world theory as a partial explanation for certain reactions to victims rather than on studies that attempt to refine or extend the theory's basic tenets.

A third indicator of the relatively unsystematic nature of much of the research reviewed here is that similar operationalizations have been used in separate experiments to represent different categories of independent variables. For example, in experiments in which the primary stimulus is a victim of illness, some researchers have varied whether or not the victim engaged in behavior that, at least in part, led to the illness. This variable has been seen in many instances as a manipulation of threat to the need to believe in a just world, such as in several studies that varied whether or not a victim of a sexually transmitted disease engaged in high-risk sexual practices (e.g., Comby, Devos, & Deschamps, 1995; Correia & Vala, 2003; Correia, Vala, & Aguiar, 2001; Hafer, 2000b, Study 1). According to these researchers, the victim who engaged in behavior that led to his or her illness should be seen as more behaviorally responsible and, therefore, less threatening to one's need to believe in a just world than the victim who did not engage in such behavior, presumably because the former is seen as more deserving of his or her fate (see Feather, 1999). However, pre-illness behavior has also been seen as a manipulation of the appropriateness of victim blame as a just-world-preservation strategy (by varying the presence of a cue for blame). From this perspective, the disease in both the low- and high-responsibility conditions is assumed to be perceived, at some level, as a fate that is uncommensurate with what the individual deserves. The presence of some behavioral responsibility for the unjust fate is, however, used by the observer to rationalize the situation, making it appear more fair and, therefore, less threatening to his or her need to believe in a just world. Braman and Lambert (2001) made such an argument for a manipulation of whether or not heavy smoking led to an individual's throat cancer. Heavy smoking on the part of the victim was conceived as a cue that victim blame was a viable defense against the threat the victim posed to observers' need to believe in a just world rather than conceived as the absence of a justice-related threat (also, cf. Anderson, 1992; Hergovich et al., 2003). Similarly, Kristiansen and Giulietti (1990) manipulated threat to participants' need to believe in a just world (via behavioral responsibility) by varying whether or not the victim of an assault did or did not do something to provoke her attack; whereas, Lodewijckx, Wildschut, Nijstad, Savenije, and Smit (2001) used provocation as a manipulation of the viability of victim blame as a way to preserve a belief in a just world (via the presence or absence of a cue for blame). In summary, little attempt has been made to integrate or clarify conceptualizations of independent variables across similar studies.

The oversights and inconsistencies we have just reviewed lead to a literature that consists, in part, of a relatively disconnected collection of studies. In some measure, this is due to the fact that the primary goal of many experiments is not to explore just-world theory but to apply some of its concepts to help understand a particular social situation. However, even some studies that focus on just-world theory have contributed to the inconsistencies we noted. Compounding the rather unsystematic nature of the studies

reviewed here are more specific difficulties with the stimuli themselves. These difficulties are discussed in the next subsection.

### *Nature of the Stimuli*

Two primary problems exist with the nature of stimuli used in many experiments testing just-world hypotheses: a failure to consider stimulus impact and a tendency to assume the presence of perceived injustice in relatively ambiguous situations. Each of these is described in turn.

*Stimulus impact.* In several of the experiments in Table 1, the stimuli were relatively low impact (in contrast to the original Lerner and Simmons's, 1966, paradigm), despite the fact that certain stimuli were assumed to threaten participants' need to believe in a just world. For example, the experimenter administered to participants a brief written scenario about a victim with little attempt to impress upon the participants that the stimulus is "real." It is likely that brief written scenarios of hypothetical cases are uninvolved and have little emotional impact for participants compared with exposure to a supposedly real victim, especially if the realistic victim is presented visually or is (presumably) a coparticipant rather than presented only in a written format. Hypothetical scenarios can be passed off as unrealistic and, therefore, irrelevant to the observer's world. Thus, these cases likely pose little threat to the need to believe that the world is just. If the stimuli of interest do not threaten the observer's need to believe in a just world, then his or her responses will not reflect attempts to preserve a sense of justice, as argued by the authors (e.g., Anderson, 1992; Gruman & Sloan, 1983). Stimuli in which the victim does not clearly continue to suffer may also be less impactful (see Correia & Vala, 2003; Hafer, 2000b, Study 2; Lerner & Simmons, 1966). Additionally, a real injustice may be less emotionally engaging if the offense is very minor (see Adams, 1965; Lerner, 2003).

Lerner highlighted the issue of stimulus impact in his 1980 book, in which he also pointed to early research findings indirectly supporting his claims (e.g., Lerner, 1971; Simons & Piliavin, 1972). More recently, Lerner (1998, 2003; Lerner & Goldberg, 1999) has discussed the point in the context of modern dual-process theories in social psychology (see Chaiken & Trope, 1999). According to this perspective, a stimulus that is not emotionally engaging will likely pose little threat to people's need to believe in a just world and, given adequate time and cognitive resources, will spark deliberative, thoughtful responses from individuals—responses that reflect social norms about how one should respond to such a stimulus (e.g., norms about attributions of blame and responsibility). A stimulus that is emotionally engaging will likely prime a more automatic, preconscious need to believe in a just world, motivating attempts to restore or maintain a sense of justice. If not arrested by cues and resources that allow a different motive (e.g., impression management) to dominate, the initial need to believe in a just world will influence subsequent behavior, possibly leading to counternormative reactions like derogation of innocent victims. The reasoning outlined here suggests that researchers whose aim is to study how people respond to threats to their need to believe in a just world should use relatively high-impact procedures; otherwise, participants' responses may not reflect a motivation to defend a belief in a just world in the face of threatening contrary evidence.

Table 2  
Independent Variables in Post-1980 Experiments Proposing Just-World-Based Hypotheses

Threat to the need to believe in a just world	Strategy viability	Valence/intensity	Extent/importance of a BJW
<p>Presence/absence of unjust event</p> <p>Dalbert (2002, Studies 2 &amp; 3); Drouot &amp; Gaertner (1994); Ellard &amp; Bates (1990, Study 1); Lea &amp; Hunsberger (1990); Lupfer et al. (1998); Skarlicki et al. (1998)</p>	<p>Cues for victim blame</p> <p>Anderson (1992); Braman &amp; Lambert (2001); Hafer &amp; Olson (1989, Study 1); Hafer &amp; Olson (1989, Study 2)<sup>b</sup>; Hammock &amp; Richardson (1993)<sup>c</sup>; Karuza &amp; Carey (1984); Lodewijkx et al. (2001); O'Quin &amp; Vogler (1989); Sheridan et al. (2003)</p>	<p>Character of target</p> <p>McGraw &amp; Foley (2000); Shaffer et al. (1986); Triplet (1992, Experiments 1 &amp; 2)</p>	<p>BJW scale<sup>a</sup></p> <p>Braman &amp; Lambert (2001); Comby et al. (1995, Study 1); Correia &amp; Vala (2003, Study 1); Correia et al. (2001); Dalbert (2002, Studies 2 &amp; 3); DePalma et al. (1999); K. L. Dion &amp; Dion (1987); Drouot &amp; Gaertner (1994); Ellard et al. (2002, Studies 1 &amp; 2); Ferrari (1990); Hafer (2002c, Study 2); Hafer &amp; Olson (1989, Studies 1 &amp; 2); Hagedoorn et al. (2002); Hergovich et al. (2003); Kristiansen &amp; Giulietti (1990); Lupfer et al. (1998); McGraw &amp; Foley (2000); Murphy-Berman &amp; Berman (1990); O'Quin &amp; Vogler (1989); Pancer (1988); Schmitt (1991); Schmitt et al. (1991); Schuller et al. (1994); Shaffer et al. (1986); Sherman et al. (1982–1983)</p>
<p>Extent/duration of injustice</p> <p>Correia &amp; Vala (2003, Studies 1 &amp; 2); Ellard et al. (2002, Study 1); Ellard et al. (2002, Study 2)<sup>c</sup>; Gruman &amp; Sloan (1983); Hafer (2000b, Study 2); Kray &amp; Lind (2002); Meyerowitz et al. (1987); Murphy-Berman et al. (1993); Schmitt et al. (1991); Sherman et al. (1982–1983); Triplet &amp; Sugarman (1987); S. Williams (1984, Study 2); Weyer et al. (1985)</p>	<p>Cues for victim character devaluation</p> <p>Karuza &amp; Carey (1984); Lodewijkx et al. (2001)<sup>d</sup>; Murray &amp; Stahly (1987)<sup>d</sup></p>	<p>Behavior of target</p> <p>Whatley &amp; Riggio (1993)</p>	<p>Other individual differences</p> <p>Hafer (2000b, Study 2)<sup>d</sup>; Shaffer et al. (1986)</p>
<p>Saliency of injustice</p> <p>Pancer (1988); Schuller et al. (1994); Weyer et al. (1985)</p>	<p>Individual differences</p> <p>Drouot &amp; Gaertner (1994)<sup>b</sup>; Lea &amp; Hunsberger (1990); Schmitt (1991)<sup>d</sup>; Skarlicki et al. (1998)</p>	<p>Target's outcome</p> <p>K. L. Dion &amp; Dion (1987); Ferrari (1990); McGraw &amp; Foley (2000); Pargament &amp; Hahn (1986); Shaffer et al. (1986); Stephan &amp; Holahan (1982)</p>	<p>Prime/induction of BJW or need for BJW</p> <p>Comby et al. (1995, Study 2); Correia &amp; Vala (2003, Study 2); Feinberg et al. (1982); Hafer (2000b, Study 1, 2002c, Study 6)</p>
<p>Behavioral responsibility of victim of injustice</p> <p>Comby et al. (1995, Studies 1 &amp; 2); Correia &amp; Vala (2003, Studies 1 &amp; 2); Correia et al. (2001); DePalma et al. (1999); Hafer (2000b, Study 1); Hafer &amp; Olson (1989, Study 2)<sup>b</sup>; Hergovich et al. (2003); Kerr et al. (1985); Kristiansen &amp; Giulietti (1990); Meyerowitz et al. (1987); Murphy-Berman &amp; Berman (1990); Sloan &amp; Gruman (1983)</p>	<p>Other</p> <p>Braman &amp; Lambert (2001); Covati et al. (2001); Hagedoorn et al. (2002); Lea &amp; Hunsberger (1990); Lugnbuhl &amp; Mullin (1981)</p>		

Table 2 (continued)

Threat to the need to believe in a just world	Strategy viability	Valence/intensity	Extent/importance of a BJW
Target respectability <sup>c</sup>			
Gilmartin-Zena (1983); Murphy-Berman & Berman (1990); Simmons & Mitch (1985); Villemur & Hyde (1983)			
Perpetrator punishment			
Hafer (2000a, Studies 1 & 2, 2002c, Study 2); Kleinke & Meyer (1990)			
Individual differences			
Drout & Gaertner (1994) <sup>b</sup> Kristiansen & Giulietti (1990)			
Other			
Hafer (2000a, Study 2); Koehler & Gershoff (2003, Study 4); Lupfer et al. (1998)			

Note. BJW = belief in a just world.  
<sup>a</sup> Only studies that make predictions involving a just-world scale and at least one experimental manipulation are noted here. <sup>b</sup> These studies contain an independent variable that is conceptualized as representing more than one category in this table. For Drout and Gaertner (1994), gender of the participant was seen as a variable affecting both degree of threat to the need to believe in a just world and strategy viability. For Hafer and Olson (1989, Study 2), a manipulation of whether it was the authority or the participant who was responsible for the participant's poor performance was also seen as affecting both threat and strategy viability (but in opposite directions). <sup>c</sup> A manipulation of victim intoxication was seen as both a cue for blame and a cue for derogation. <sup>d</sup> There was more than one relevant manipulation in the same study. <sup>e</sup> For three of these studies (Gilmartin-Zena, 1983; Simmons & Mitch, 1985; Villemur & Hyde, 1983), the authors referred to C. Jones and Aronson's (1973) respectability manipulation without explaining whether the manipulation was one of threat to the need to believe in a just world or viability of victim derogation as a just-world preservation strategy. In these cases, we assumed the authors conceived of the manipulation as one of threat because this is the perspective of C. Jones and Aronson (1973; see also Lerner & Miller, 1978).

The fourth column of Table 1 summarizes the stimuli format for each experiment. Several of the experiments could be classified as relatively low impact (i.e., they involve written scenarios that are not explicitly conveyed to participants as real), even though they propose hypotheses about reactions to the threat of injustice. In light of the above arguments, it is difficult to know whether these studies test what they purport.

For example, S. Williams (1984, Study 2) pitted defensive explanations for the blame of certain victims, including just-world theory, against nondefensive explanations. To test her ideas, she gave participants a scenario that described a serious versus minor robbery (the robber stole either expensive stereo equipment or \$5). Williams reasoned that, according to defensive accounts such as just-world theory, the serious robbery would lead to more victim blame and derogation (other independent variables supposedly tested different explanations for victim blame). Though several dependent variables were relevant to just-world theory, there was a significant main effect of crime severity only for victim character evaluation, and this was superceded by an interaction with political ideology. Williams concluded, therefore, that there was little support for a defensive explanation of victim blame (for another low-impact experiment leading to similar conclusions, see McCaul, Veltum, Boyechko, & Crawford, 1990). One problem with this study, however, is that it was relatively low impact. As mentioned, participants read a scenario about the theft. There is no indication that they were led to believe that the story was real. Additionally, even the "serious" theft may be seen as relatively minor. If the participants did not feel threatened by the scenario in the first place, it is not surprising that there was little evidence for defensive blame.

In the absence of a threat to one's need to believe in a just world, reactions may be guided by other motives, such as the desire to adhere to social norms, perhaps informed by, for example, one's political ideology (see S. Williams, 1984) or more general logical attribution principles (see McCaul et al., 1990). Even if participants' primary concern in the study is with justice, the main motivation affecting their behavior is not likely to be a desire to defend against a threat to their need to believe in a just world unless there is some emotional involvement. Although researchers do sometimes raise the issue of stimulus impact (e.g., DePalma, Madey, Tillman, & Wheeler, 1999; Kerr et al., 1985; Lambert & Raichle, 2000), it is usually mentioned post hoc in an attempt to explain unexpected results. In the future, researchers need to examine more closely the role that a need to believe in a just world does or does not play in lower impact hypothetical situations. We revisit this point in the Future Challenges section.

*The presence of injustice.* We have argued that, in order for a stimulus to threaten an individual's need to believe in a just world, it should have some emotional impact. Even if some researchers disagree with this proposition, at the very least researchers would no doubt agree that the stimulus should contain elements of injustice in order to challenge the notion of a just world. As obvious as this requirement may sound, elements of injustice are not always clearly present. For example, several researchers have used health problems of varying severity to manipulate the threat a victim presents to an observer's need to believe in a just world (e.g., Gruman & Sloan, 1983; Sherman et al., 1982–1983; Sloan & Gruman, 1983). In order for such victims to threaten the need to believe in a just world, according to just-world theory, they would

have to appear, at some level, as undeserving of their fate. In some of these experiments, however, participants were provided with little information relevant to perceived deservingness, or the information that was provided did not clearly imply the presence of an injustice. In either case, it is not clear that the more severe health problem would be seen as, at some level, more unjust, or that any of the health problems would be seen as unjust. Some explicit argument that the presumably threatening situation does contain elements of injustice would be helpful in such studies. For example, a rationale could be constructed on the basis of past research (e.g., Adams, 1965; Feather, 1992; Heuer, Blumenthal, Douglas, & Weinblatt, 1999; Olson & Ross, 1984) that a particular target person should be seen, at least on some level, as undeserving of his or her fate.

To summarize, problems often exist with the specific stimuli that are used to test just-world hypotheses. Researchers have not always paid enough attention to the issue of stimulus impact, even though the emotional impact of injustice is an important aspect of just-world theory. Also, experimental stimuli that supposedly represent unfairness are sometimes quite ambiguous with respect to justice and deservingness. These ambiguities make some results difficult to interpret. In the next subsection, we continue to examine problems with post-1980 experiments testing just-world hypotheses by discussing difficulties with the operationalization of independent variables.

#### *Operationalization of Independent Variables*

A third problem with some of the experiments in Table 1 is that the manipulations involve obvious confounds. One example is the study by Triplet and Sugarman (1987) mentioned earlier. The authors reasoned that a victim of serious illness should, according to just-world theory, provoke more defensive responses than a victim of less serious illness. Unfortunately, the manipulation of illness severity (AIDS vs. genital herpes vs. serum hepatitis vs. Legionnaire's disease) was confounded with the cause of the illness and likely, therefore, with the perceived injustice of the victim's situation or the viability of victim blame as a defensive coping strategy. In any case, results are difficult to interpret. A better design would have included independent manipulations of severity and cause or held one variable constant (for similar confounds, see Anderson, 1992; Gruman & Sloan, 1983; Murphy-Berman & Berman, 1990; Simmons & Mitch, 1985).

A study by Gilmartin-Zena (1983) provides another example of a problematic manipulation. Gilmartin-Zena presented participants with a respectable versus nonrespectable victim of sexual assault and, on the basis of past research by C. Jones and Aronson (1973), predicted that the respectable victim would be deemed more responsible for her victimization than the less respectable victim, thus restoring some element of deservingness and fairness to the good person's bad outcomes. Results from the study, though, failed to confirm the prediction, and thus the researcher concluded that just-world theory was not supported. However, the manipulation of respectability included five separate factors, including the victim's marital status (similar to the C. Jones & Aronson, 1973, study), the relationship between the victim and the perpetrator (the respectable victim was attacked by a stranger rather than an acquaintance), and the degree of victim resistance (the respectable victim struggled more than did the less respectable victim). Some

of the characteristics of the respectable versus nonrespectable victim may have opposite effects on attributions of responsibility; thus, it is not surprising that Gilmartin-Zena's prediction was not supported (for another example of a target respectability manipulation involving several factors, see Luginbuhl & Mullin, 1981).

We have noted that several shortcomings in the experimental research testing just-world hypotheses make results difficult to interpret and to compare across studies. An additional, perhaps even more fundamental problem with some of the studies reviewed here is that hypotheses are flawed in the first place. With inadequate hypotheses, even well-conceived methods will do little to advance our understanding of the kinds of processes proposed in just-world theory.

### *Hypotheses*

Predictions presumably based on just-world theory are not always conceptually sound. For example, Kristiansen and Giulietti (1990) manipulated the threat a victim of spousal abuse posed to observers' need to believe in a just world by varying whether or not the victim provoked her attacker (presumably a manipulation of perceived behavioral responsibility for her victimization). The authors reasoned that individuals who are motivated to preserve a belief in a just world in the face of threat should blame or derogate the high-threat or low-responsibility victim more than the low-threat or high-responsibility victim. Instead, their results showed that participants blamed the high-threat victim less than the low-threat victim. Kristiansen and Giulietti (1990) concluded, therefore, that just-world theory was not supported. However, this conclusion is not warranted from just-world theory. The low-threat victim here may indeed be seen as more to blame than the high-threat victim because participants were led to perceive that the former provoked her attack. A more appropriate test of the theory, given this particular operationalization of threat to the need to believe in a just world and the specific dependent variables, would be a comparison between the high-threat or low-responsibility victim and a similar victim who could not be helped or compensated (similar to the original Lerner & Simmon's, 1966, paradigm). The latter may be blamed more than the former. The low-threat victim, however, should not be blamed differentially depending on the probability of help or compensation. Alternatively, one could predict that observers who are highly motivated to preserve a belief in a just world in the face of threat would be more likely to blame or derogate the high-threat or low-responsibility victim than observers who are not so motivated: One would further hypothesize that a motivation to preserve a belief in a just world should not predict blame for the high-responsibility victim, who poses little threat in the first place (see Correia et al., 2001; Hafer, 2000b, Study 1).

A similar problem arises for Lodewijkx et al. (2001), who found, among other results, that an assault victim who played a role in provoking his attack was blamed more than a victim who was not so implicated. Though Lodewijkx et al., unlike Kristiansen and Giulietti (1990), saw this effect as supportive of just-world theory (see the *Coherence of the Research* section), we argue that neither Kristiansen and Giulietti's nor Lodewijkx et al.'s findings can tell us much about people's defensive responses to injustice. Participants in both studies may have been responding according to logical and nondefensive principles of attribution (for other

examples of hypotheses or results claimed to be in line with just-world defense that can be interpreted in terms of rational attribution principles, see Anderson, 1992; Hammock & Richardson, 1993). Without more appropriate hypothesized comparisons, it is impossible to gauge the extent to which participants' responses were also guided by a concern with maintaining justice.

In summary, not only does the literature reviewed here suffer from a generally unsystematic nature, as well as frequent problems regarding the appropriateness of key stimuli and manipulations, but also the experimental hypotheses are sometimes theoretically questionable. Unfortunately, these characteristics mean that results are often difficult to interpret. Additionally, meaningful meta-analyses, which might shed more light on the degree to which various aspects of just-world theory have been supported, are impossible. In the following subsection on problems with the post-1980 experimental literature, we shift our focus away from these concerns to questions regarding individual-difference measures of belief in a just world.

### *Individual Differences in a Belief in a Just World*

As should be clear by this point, researchers attempting to apply, refine, or extend aspects of just-world theory often include a measure of individual differences in a belief in a just world in their experiments in an attempt to garner more evidence of the process underlying predicted just-world effects (see Tables 1 and 2). Indeed, some studies require a significant interaction between individual differences in a belief in a just world and experimental manipulations for any evidence of just-world-based mechanisms (e.g., Braman & Lambert, 2001; Correia et al., 2001; Dalbert, 2002). However, despite this heavy reliance on individual differences, there are several reasons to believe that the relation between scores on the individual-difference scales and the original motivational conception of just-world theory is not straightforward and, thus, at best will lead to sporadic support for hypothesized interactions. In our discussion of individual differences, we first look briefly at psychometric problems with the scales, followed by a more in-depth examination of conceptual issues.

*Psychometric issues.* The majority of the studies in Table 1 have used Rubin and Peplau's (1975) Just World Scale. This instrument consists of 20 statements, 9 of which are reverse-keyed, to which respondents must indicate their degree of endorsement on 6-point scales. The items of the Just World Scale show a great deal of face validity, confronting respondents with general statements such as "Basically, the world is a just place" or "By and large, people deserve what they get" as well as items that are specific to different spheres of life, such as "The political candidate who sticks up for his principles rarely gets elected" (reverse-keyed) and "People who keep in shape have little chance of suffering a heart attack." There have been several critiques of this instrument (see Furnham, 1998, 2003; Furnham & Procter, 1989; Maes, 1998a; Schmitt, 1998). The authors of these critiques agree that the scale has many psychometric problems, including low reliability (usually indicated by Cronbach's alpha) and a multidimensional and unstable factor structure.

Newer scales addressing these issues have been developed (see Dalbert, 1999; Dalbert, Montada, & Schmitt, 1987; Furnham & Procter, 1989; Lipkus, 1991; Maes & Schmitt, 1999), although they have yet to enjoy wide popularity. These scales are similar in

their face validity to the Rubin and Peplau (1975) scale but tend to have fewer items, being limited to more general statements that are not specific to particular life domains, although multidimensional (i.e., Furnham & Procter, 1992) and domain-specific scales (e.g., Dalbert & Maes, 2002; Montada & Schneider, 1989; Reichle, Schneider, & Montada, 1998) are not unknown in the post-1980 literature.

The newer just-world scales, though generally sounder psychometrically than Rubin and Peplau's (1975) instrument (with the possible exception of Furnham & Procter's, 1989, scale; see Furnham & Procter, 1992; Lipkus, 1991), still raise measurement issues. For example, response biases may account for some of the variance in scale scores. Some authors have found a significant positive correlation between just-world scale scores and social desirability, although this relation is not entirely consistent (cf. Dalbert et al., 1987; Guzewicz & Takooshian, 1992; Heaven & Connors, 1988; Kassin & Wrightsman, 1983; Lerner, 1978; Loo, 2002; Schmitt et al., 1991). Thus, a bias toward appearing in a socially desirable light may often be one source of variance in responses to items on just-world scales. The presence of an acquiescence bias is also possible for most new scales (e.g., Dalbert, 1999; Lipkus, 1991) given that items are typically worded in only one direction. We should note that researchers have chosen to word items in one direction, despite the possibility of acquiescence bias, for a conceptual reason. Furnham (1985; Furnham & Procter, 1989) surmised that endorsing a belief in an unjust world (i.e., bad people and bad behaviors predictably reap good outcomes, and good people and behavior predictably reap bad outcomes), as indicated by participants agreeing with the reverse-keyed items of Rubin and Peplau's scale, is not the opposite (on a continuum) of endorsing a belief in a just world. For example, one who does not endorse a belief in a just world may believe in a random world where there are no predictable ties between people's characteristics and behaviors and their outcomes. Results of correlational investigations tend to support the view that individual differences in a belief in a just world and a belief in an unjust world, as assessed by just-world scales, are relatively orthogonal, or at least not consistently correlated in one direction (cf. Connors & Heaven, 1987; Couch, 1998; Dalbert, Lipkus, Sallay, & Goch, 2001; Furnham, 1995, 1998; Furnham & Karani, 1985; Furnham & Rajamanickman, 1992; Heaven & Connors, 1988; Loo, 2002; Lupfer, Doan, & Houston, 1998; Mohr & Luscri, 1995b).

These largely psychometric difficulties are not the entire story, however. There are broader conceptual issues applying to all just-world scales that add to the confusion in interpreting results of the experimental research. We discuss these issues in some detail, given that (a) about half of the experiments in Table 1 incorporate an individual-difference measure, and (b) these issues have received little attention in previous reviews of the just-world scales.

*Conceptual issues: The belief in a just world versus the need to believe in a just world.* We will assume for now that the just-world scales are valid measures of the strength with which people believe that the world is a just place. Given that this is the case, there is still the question of whether one should expect consistent relations between the strength of people's belief in a just world and the motivated responses proposed in just-world theory. These responses might be seen as motivated by the need to believe in a just world more than a belief in a just world per se (see Hafer, 2000b; Schmitt, 1998). According to the theory, people usually

develop some form of a belief in a just world (e.g., a belief in ultimate justice) in part as a result of their need to believe as such (Lerner, 1980). Thus, the concepts of a belief in a just world and a need to believe in a just world are inextricably linked in just-world theory, yet they are different constructs. For example, a belief in a just world can be influenced by many factors other than the fundamental need to believe in a just world outlined in just-world theory. Original formulations of just-world theory do acknowledge, but do little to elaborate on, other sources of belief in a just world (a point to which we refer in the Future Challenges section). According to recent just-world researchers, other factors influencing a belief in a just world may include one's personal experiences with or knowledge of justice and injustice (Schmitt, 1998; see also Janoff-Bulman, 1992), the success of one's attempts at coping with threats to the need to believe in a just world (Rubin & Peplau, 1975; Schmitt, 1998; see also Epstein, 1990; Janoff-Bulman, 1992), and the like. To the extent that there is an imperfect relation between the strength of one's belief in a just world and one's need to believe in a just world, as articulated in just-world theory, we would expect an attenuated relation between scale scores and reactions predicted by just-world theory. Schmitt (1998) has suggested, therefore, that individual differences in the need to believe in a just world may be better captured by scales measuring the importance of justice in one's life (see Dalbert et al., 1987) or one's sensitivity to justice and injustice (see Schmitt, Neumann, & Montada, 1995). As is further clarified in the next subsection, we are more pessimistic about the ability of explicit self-report instruments to reliably assess the need to believe in a just world. In any case, our points here suggest that, in the future, researchers should be clear about the distinction between the need to believe in a just world and a belief in a just world (that is partially based on the need to hold such a conviction in the first place).

*Conceptual issues: Implicit beliefs and motives.* We have argued that the just-world scales do not (at least directly) measure the need to believe in a just world, which is the driving force behind the behaviors and attitudes described in just-world theory. Compounding this problem with just-world scales is the notion that people may not always be aware of either their need to believe in a just world or, therefore, any form of belief in a just world that arises from this motive (see Dalbert, 2001; Hafer, 2000a; Kay & Jost, 2003).

Lerner (1998, p. 263) contends that a belief in a just world is not often explicitly strongly endorsed. This claim is supported by the relatively consistent skewness of the distribution of scores toward the low end of most belief-in-a-just-world scales, at least in Western samples (see Schmitt, 1998). According to just-world theory, despite this tendency, people respond to injustice (whether the response is prosocial or more counternormative, as in victim derogation) as if they believed that the world is a just place where everybody gets what they deserve. In other words, as Lerner (e.g., Lerner, 1980, 1998; Lerner & Goldberg, 1999) has continually suggested (see also Dalbert, 2001), a belief in a just world may often be implicit (see Fazio & Olson, 2003; Greenwald & Banaji, 1995). Such a conception of a belief in a just world has implications for the construct validity of just-world scales, at least as a direct measure of the degree to which people hold a belief that the world is a just place (see Dalbert, 2001). Implicit psychological constructs in social psychology are generally seen as not very

amenable to explicit measurement (Greenwald & Banaji, 1995; McClelland, Koestner, & Weinberger, 1989), although measures of presumably implicit and explicit concepts may sometimes be correlated (see Brauer, Wasel, & Niedenthal, 2000; Dovidio, Kawakami, & Beach, 2001).

Not only may people's belief in a just world often be implicit but also the need to believe in a just world may often be implicit as well (see McClelland et al., 1989; Sorrentino, 1996). Thus, the self-report individual-difference scales that Schmitt (1998) suggested as potentially better indicators of the need to believe in a just world may also be poor approximations of this motive.

Dalbert (2001) has proposed that there may be implicit and explicit versions of the justice motive similar to McClelland and others' (e.g., Biernat, 1989; McClelland et al., 1989; Woike, 1995) distinction between implicit versus explicit or self-attributed motives in other domains (e.g., achievement, power, and affiliation). It is possible that the need to believe in a just world may also occur in both implicit and explicit forms. There are some interesting implications of this proposition. For example, as well as possessing a number of other contrasting qualities, implicit versus explicit motives are hypothesized to predict different criteria. This point may help explain the relatively consistent relations between just-world scale scores and reactions to social stimuli in the correlational literature (see Furnham, 2003; Furnham & Procter, 1989) versus the sporadic support for hypothesized effects involving just-world scale scores in experimental studies (cf. Braman & Lambert, 2001; Correia et al., 2001; Drout & Gaertner, 1994; Kristiansen & Giulietti, 1990; Murphy-Berman & Berman, 1990; Pancer, 1988). For example, implicit motives, which are seen as generally outside people's conscious awareness and, thus, less amenable to traditional self-report measurement, may better predict affectively laden judgments (see Woike, 1995): Such judgments are more likely to result from the high-impact environment of certain experiments. In contrast, explicit or self-attributed motives, which are presumably more conscious and therefore measurable through self-report instruments, may be associated with less emotionally based, more cognitive assessments—the types of tasks that are often characteristic of correlational survey studies on belief in a just world (see Lerner, 2003). Thus, if scores on just-world scales are more reflective of explicit motives (see Dalbert, 2001, pp. 30–32, for a diverging opinion), then one may expect stronger correlations between these scores and judgments made under low-impact conditions provoking deliberative thought, such as those in many correlational investigations. Regardless of whether there is an explicit as well as an implicit need to believe in a just world, at the very least, the ideas we raise in this subsection underscore our broader point that future research would benefit by taking a close look at both the original conceptualization of just-world theory and recent work on implicit versus explicit processes in personality and social psychology (see also Lerner & Goldberg, 1999).

As a final point, we suggest that the term “belief in a just world” is misleading because the word *belief* seems to imply something that can necessarily be measured via self-report (though Rokeach, 1968, stated that a belief is a “proposition, conscious or unconscious,” p. 113), and that has a minimal affective or motivational component. Indiscriminate use of this term, especially as a general label for the entire theory (rather than “justice motive” theory or “just-world theory”), has perhaps contributed to the tendency to

overlook some of the theoretical points we have raised with regard to the individual-difference scales.

In summary, although the use of individual-difference measures of belief in a just world is one method for investigating the presence of just-world processes in experimental research, there are several difficulties with this strategy. We briefly raised psychometric problems such as poor reliability (at least for the Rubin & Peplau, 1975, scale) and response bias. We argued that individual-difference measures of belief in a just world do not directly assess the core component of the theory—the need to believe in a just world. Furthermore, we argued that standard explicit individual-difference measures may be especially problematic given the suggestion that the need to believe in a just world, as outlined by Lerner (1980), as well as forms of belief in a just world resulting from this need are often implicit. There are several implications of our analysis for research on just-world theory. For example, given our argument that there may be only a loose correspondence between scores on just-world scales and the need to believe in a just world as it was originally proposed in just-world theory, predictions proposing interactions between just-world scales and manipulations will be inconsistently borne out. Experiments that rely solely on a moderating effect of individual differences for evidence of just-world processes will be especially difficult to interpret if they do not produce the predicted interaction. There are also implications, of course, for future research in this and related areas. We address these additional issues in the Future Challenges section.

In the second major section of this article, we suggested that there are several problems with post-1980 experiments proposing hypotheses derived from just-world theory—problems that limit our ability to interpret the findings of many of the investigations. Furthermore, most of the difficulties raised in this section seem to stem from researchers' tendency to overlook or misinterpret fundamental components of the original theory and to be relatively unsystematic in their approach to generating just-world-related hypotheses. Investigations that do not begin with a solid grounding in the original theory and research of a given area will find it difficult to make substantial contributions. Despite such problems in some of the literature reviewed here, there have been a number of well-conducted studies that represent important developments in just-world research since this area was originally reviewed more than 20 years ago. We discuss these developments next.

### Important Developments

There have been several careful attempts in the post-1980 research to test, refine, and extend the propositions and methods associated with just-world theory. The functions of a belief in a just world and alternative strategies for preserving a belief in a just world have received attention, including functions and strategies not explicitly proposed in the original theory. Researchers have begun to examine basic questions such as, is it the injustice of innocent suffering that threatens observers (as just-world theory would suggest)? Some studies have extended the research to reactions to one's own outcomes rather than just to the reactions of third-party observers. Other theoretical issues that have received recent experimental treatment and that are discussed here are the threatening nature of unjust benefit (rather than only unjust victimization) and the application of just-world theory to other phe-

nomena in social psychology. These investigations and their likely followers will help both to erase misconceptions and to advance our conceptualization of this important theory of social justice.

### *The Function of a Belief in a Just World*

One basic theoretical issue to receive attention recently in the experimental just-world literature is the function of a belief in a just world. Though the topic of function was addressed in detail in Lerner's early essays on the development of the belief (see the Two Conceptualizations of Belief in a Just World section), little has been written on this subject until recently (e.g., Dalbert, 2001; Hafer, 2000b, 2002c).

On the basis of early writings on the need to believe in a just world and the personal contract (Lerner, 1977; Lerner et al., 1976), Hafer (2000b) argued that a primary function of a belief in a just world is to allow one to invest in long-term goals and to do so according to society's rules for deservingness (for a perspective on the personal contract that does not involve investment in long-term goals, see Dalbert, 1999, 2001). Furthermore, Hafer (2000b) argued that given this function, people should have a greater need to believe in a just world if they have a strong focus on long-term investments and a strong desire to obtain goals through socially acceptable means that society dictates deserve certain positively valued outcomes: The more people need to believe in a just world, the more they should be motivated to preserve a sense of justice in the face of contradictory evidence.

Hafer (2000b, Studies 1 and 2) found initial evidence for her reasoning in two experiments. For both experiments, participants in one condition were exposed to a victim who could potentially threaten their need to believe in a just world (e.g., an innocent victim rather than a noninnocent victim). Confronted with such a victim, participants who were more versus less concerned with long-term investments, either because of situational pressures or because of chronic tendencies, showed evidence of a stronger tendency to try to protect the notion of a just world; for example, they showed a stronger tendency to blame the victim for her fate. Also, when confronted with a potentially high-threat victim, participants who scored higher on a measure of delinquency (i.e., those with presumably a stronger desire to reach goals through means that should entitle them to positively valued outcomes) appeared to be less likely than low-delinquency participants to engage in strategies for preserving a belief in a just world; specifically, they showed a lesser tendency to blame the victim for her fate and to distance themselves from the victim (Hafer, 2000b, Study 2). Scores on Lipkus's (1991) just-world scale did not interact with the manipulations, although they were associated overall with various negative responses to the victim.

Hafer (2002c, Study 6) followed up this research with an experiment testing the following hypothesis: If a belief in a just world helps individuals maintain their commitment to long-term striving and to deserving long-term outcomes (according to means prescribed by their society), we should expect the need to believe in a just world to be most intense and, therefore, attempts to preserve a belief in a just world to be strongest when both these factors are present. This hypothesis received support. Before exposure to an innocent victim (again shown via video), participants were asked to write about (a) their long-term goals and how they might meet their goals through means that should entitle them to

those outcomes (e.g., via fair and honest behavior), or (b) their long-term goals and how they might meet their goals through means that should not entitle them to those outcomes (e.g., via unfair or dishonest behavior), or (c) a topic unrelated to long-term goals. As expected, participants who were focused on both their long-term goals and meeting those goals in ways such that they would be deserved (i.e., those whose personal contract was most salient or temporarily the strongest) reported more victim blame and more negative evaluation of the innocent victim's character than did participants in the other two conditions. Overall, the results of both Hafer (2000b, Studies 1 and 2) and Hafer (2002c, Study 6) show evidence for a long-term goal-related function of a belief in a just world. Furthermore, the manipulations of long-term focus and the nature of goal-directed behavior, to the extent that they can be interpreted as manipulations of the strength of people's need to believe in a just world, provide another experimental alternative to the just-world scales (see also Feinberg, Powell, & Miller, 1982, Experiment 1).

Dalbert (1999, 2001) has suggested other functions of a belief in a just world. Most notably, Dalbert argues that people need to believe in a just world because the belief helps foster a sense of well-being, overall and in the face of negative life events (for reviews of the relation between individual differences in a belief in a just world and well-being, see Dalbert, 1998, 2001; Furnham, 2003). Research on the relation between a belief in a just world and well-being tends to emphasize the investigation of individual differences in a belief in a just world and is, therefore, sometimes removed from the original conceptualization of just-world theory. However, we mention one example of Dalbert's work here because her research does attempt to address the basic issue of function (and at times has used an experimental methodology).

In two experimental studies, Dalbert (2002, Studies 2 and 3) reasoned that a belief in a just world acts as a buffer against anger (and its negative effects) in the face of unfair life experiences and therefore leads to a sense of well-being in these situations. To test this argument, participants in one condition were asked to recall an anger-provoking, and presumably unfair, experience. In other conditions, they recalled happy or sad experiences or simply listed their daily activities. Participants also completed Dalbert's (1999; Dalbert et al., 1987) just-world scales and measures of well-being (mood in Study 2 and self-esteem in Study 3). Participants who scored higher on the General Belief in a Just World Scale (Dalbert et al., 1987) reported less anger (Study 2) and greater self-esteem (Study 3) than did low scorers, and this relation held only in the anger-provoking condition. Dalbert (2002) interpreted these findings as indicative of the well-being function of a belief in a just world, especially in the face of unfair or at least negative events. The results of these studies should be interpreted with caution. There may be several differences in the characteristics of the recalled stories that are confounded with high versus low scores on the just-world scale (though a few of these are tested in a content analysis reported in Dalbert's, 2002, article). Despite the drawbacks of this particular study, Dalbert's work is important (e.g., Dalbert, 1993, 1997, 1999) because it raises the possibility of functions of a belief in a just world in addition to those emphasized by the original concept of the personal contract.

Whatever the additional functions of a belief in a just world, the proposition that people need to believe in a just world suggests that people must find ways of coping with evidence of injustice. One

component of just-world theory is the vast array of strategies people use for dealing with threats to the need to believe in a just world. These are discussed at length in the following subsection.

### *Alternative Strategies for Maintaining a Belief in a Just World*

Although Lerner (1980) discussed many different strategies, the pre-1980 literature tended to focus on the blame and derogation of innocent victims and, to a lesser extent, helping/compensating victims of injustice. The post-1980 experiments have emphasized primarily blame and derogation. Studies that explore other kinds of strategies for preserving a belief in a just world add to just-world theory by showing the expanse of behaviors that can be accounted for by the justice motive.

We divide our review of research on alternative strategies into several parts. First, we review the mechanisms for maintaining a belief in a just world proposed in Lerner (1980). Second, we discuss several responses to victims of injustice, focusing on nonrational strategies other than victim blame and derogation. Third, we visit the tendency to cope with unfairness by referring to ultimate justice. Fourth, we explore research on responses to perpetrators of injustice as a strategy for preserving a belief in a just world. Finally, we discuss potential predictors of different just-world preservation strategies as well as the potential co-occurrence of various coping mechanisms.

*Strategies for coping with threats to the need to believe in a just world.* In Lerner's (1980) book, nine main strategies for preserving a belief in a just world were proposed. The two rational strategies were: prevention and restitution, or acting to prevent injustice before it occurs and restoring justice to unjust situations that do occur by helping or compensating the victim, and acceptance of one's limitations, or setting priorities about who and when to help. These strategies were referred to as rational because they involve accepting the (potential) presence of injustice, and they appear to both observers and actors to be reasonable responses.

Lerner (1980) also proposed four nonrational strategies, which involve a refusal to accept the presence of injustice. Denial-withdrawal includes both the physical and mental avoidance of injustice in the first place as well as withdrawing both physically and psychologically from threats to the need to believe in a just world when they are encountered. Three ways of reinterpreting an unjust event were also classed as nonrational strategies: reinterpretation of the cause—for example, blaming innocent victims' behavior for their fate; reinterpretation of character, such as derogating the character of victims of injustice (or, presumably, upgrading the character of beneficiaries of injustice); and, finally, reinterpretation of the outcome. An example of the latter coping mechanism would be the reconstrual of undeserved suffering from negative to positive by reasoning that such suffering builds character.

In addition to the rational and nonrational coping mechanisms, Lerner (1980) hypothesized two protective strategies, which are characterized by general ways of thinking about the world. First, people preserve a belief in a just world by thinking of the world in terms of ultimate justice, reasoning that justice at least occurs in the long run. Second, people perceive their environment as consisting of at least two different worlds: a world where the sufferers (and, presumably, the beneficiaries) of unjust fates reside and

one's own just world. This "multiple worldview" (our term) allows one to deal with threats to one's need to believe in a just world by relegating cases of injustice to another sphere of existence, thus reducing their relevance to one's own environment.

Finally, Lerner (1980) proposed a *penultimate defense* in which people pretend with both themselves and with others that they do not believe in a just world (and probably also that they have no need to hold such a belief). This "false cynicism" (our term for Lerner's ideas) ensures that, superficially at least, there are no threats to the need to believe in a just world (for a report of the few pre-1980 studies related to this idea, see Holmes, Miller, & Lerner, 2002).

In summary, just-world theory includes at least nine potential strategies for dealing with threats to the need to believe in a just world. Of these tactics, only blame, derogation, and helping/compensation have received much research attention both pre- and post-1980. However, some developments have occurred involving alternative strategies.

*Reactions to victims.* A few post-1980 experiments have gone beyond the typically investigated blame and derogation to examine other nonrational strategies for preserving a belief in a just world in the face of a victim of unjust suffering. Pancer's (1988) ingenious exploration of denial-withdrawal, or avoidance of victims, is one example (for two early experiments examining avoidance, see Lerner & Agar, 1972; Novak & Lerner, 1968).

Participants in Pancer's (1988) experiment walked by a desk that displayed a sign with an appeal to help a needy child. (Participants were not aware that the appeal was part of the study.) In the experimental groups, the appeal was more or less graphic (e.g., a photograph accompanied the sign in the graphic conditions). Avoidance was assessed by measuring (a) the distance between the passersby and the table and (b) their recall for the information in the appeal. Individual differences in a belief in a just world were measured with the Rubin and Peplau (1975) scale in a prior and supposedly unrelated session. Presumably, graphic appeals should be more threatening to a belief in a just world than less graphic appeals and therefore should lead to greater avoidance. Consistent with this reasoning, when the appeal was graphic, people kept a greater distance from the table as they walked by compared with people in both the low-graphic appeal and no-appeal control group. Unfortunately, as in many such studies, the individual-difference measure did not interact with this dependent variable. In contrast, however, the recall measure of avoidance was influenced by the interaction of type of appeal with the individual-difference measure such that participants with high scores on the Just World Scale (Rubin & Peplau, 1975) recalled less about the graphic appeal than did low scorers, whereas the opposite was the case for the less graphic appeal. Keeping in mind our previous comments on just-world scales, taken together, Pancer's results suggest that avoidance may be one way of responding to the threat an innocent victim poses to one's need to believe in a just world.

Several factors, of course, may reduce the use of avoidance as a strategy for coping with threats to the need to believe in a just world. For example, there may be strong social desirability biases against admitting an unwillingness to interact with a victimized individual (Correia et al., 2001), at least when one does not have to follow up one's statement with action. Without a socially normative excuse to avoid the target (see McBride, 1998), participants may be unwilling to admit their true feelings on this matter.

An advantage of the Pancer (1988) study is that participants did not respond to a measure of hypothetical avoidance on a questionnaire but rather were free to spontaneously avoid the threatening stimulus without the possibility of evaluation from an experimenter. In the future, researchers may want to further explore more naturalistic measures of reactions to victims like the ones used in Pancer's study.

A related potential strategy that has been directly investigated can be termed *psychological distancing* from the victim. This coping mechanism allows observers to reduce the threat to their need to believe in a just world by convincing themselves that similar injustices will not befall them; that is, though injustice appears to occur in the larger world, at least their own immediate environment is just. Distancing may also reduce the threat posed by innocent suffering by providing a rationale for dismissing thoughts of the victim (e.g., "He or she is not like me; therefore, I do not have to concern myself with his or her fate"). Though this specific tactic was not one of the nine strategies highlighted in Lerner (1980), it is discussed occasionally in the early literature (see Lerner, 1980; Lerner & Miller, 1978).

Using high-impact victim stimuli, both Drout and Gaertner (1994) and Hafer (2000b, Studies 1 and 2) examined distancing, assessed through participants' ratings of the perceived similarity between themselves and another individual (or individuals). The results of these investigations showed some evidence that observers distanced themselves more from an individual who posed a strong versus weak threat to their need to believe in a just world. Unfortunately, in neither study was the distancing effect moderated by individual-difference measures of belief in a just world (see Hafer, 2002c, Study 6, for null effects for a measure of distancing). However, another experiment by Hafer (2000a, Study 2), which used an implicit measure of justice-related threat, found that when the victim could potentially threaten the need to believe in a just world, the more participants experienced justice-related threat (as indicated by the implicit measure), the greater their tendency to distance themselves from the victim (see *The Injustice of Innocent Suffering* section for more details on this study).

Reinterpretation of the outcome is another coping mechanism postulated in just-world theory. There could be several different ways of reinterpreting outcomes to make them more compatible with the notion of a just world. For example, observers of injustice may minimize the extent of the victim's suffering or the perceived seriousness of the victimization. So far in the experimental just-world literature, there is no evidence of minimization as a preservation strategy in the face of another's unjust fate (see Correia et al., 2001; Kleinke & Meyer, 1990; Wyer, Bodenhausen, & Gorman, 1985), even among well-conducted studies. Further research on this potential defense is warranted.

Aside from minimization, there may be more subtle ways of reinterpreting the outcome of an event to preserve a belief in a just world. Recent work by Kay and Jost (2003) on system justification theory (Jost & Banaji, 1994; Jost, Burgess, & Mosso, 2001) is suggestive of such a mechanism. Kay and Jost argued that complementary stereotype exemplars (i.e., cases for which a negative characteristic is offset by a positive characteristic or a positive characteristic is offset by a negative characteristic, such as in people who are perceived as "poor but happy" or "rich but unhappy") should be seen as indicative of a relatively more legitimate societal system than noncomplementary (e.g., "rich and

happy") cases. Exposure to noncomplementary stereotype exemplars, therefore, should prime justice concerns and threaten the perceived legitimacy of the broader social system. Kay and Jost found evidence of their reasoning (see *The Injustice of Innocent Suffering*). We propose that people may be motivated to look for or perceive complementary aspects of an unfair situation as a way of dealing with threats to the need to believe in a just world. For example, as suggested by Lerner (1980), people may attempt to see benefits in suffering that help "make up for" the suffering itself (for evidence of a similar tendency in victims of negative life events, see S. E. Taylor, 1983), thus creating an illusion of fairness (see also Schmitt et al., 1991). This balancing strategy may be a more common way of reinterpreting unjust events than minimization because it requires less cognitive distortion overall. For example, as long as the suffering is offset by positive elements, one can still admit that great suffering has occurred (unlike with minimization).

*Protective strategies: Ultimate justice.* Compared with the nonrational strategies, the protective strategies for dealing with threats to the need to believe in a just world, despite their importance to the theory, have received very little research attention (either pre- or post-1980). Lerner (1980) claimed that these ways of thinking characterize the mature view of the just world. Thus, they can be seen not so much as strategies that are called upon in the presence of a specific threat but rather as common forms of belief in a just world—forms that are extremely effective ways to deal with threats to the need to believe in a just world because they embody a chronic view of life that allows people to accept the presence of injustice (as opposed to some of the more reactive methods that have dominated our discussion so far). First, one can believe in ultimate justice—that although a situation may be unjust at present, justice will eventually prevail (whether in an afterworld, as in some religious thought, or during the target's existence on earth). Second, people can see targets of injustice as belonging to a different world than their own; thus, for example, individuals can separate their own just world from the unjust or random world of innocent suffering. This could be considered an extreme form of what we have called *psychological distancing*, in which targets of injustice are seen as so unlike oneself as to inhabit a different world that is governed by different rules (or has few rules at all). Both the orientation toward ultimate justice and toward a multiple worldview involve tolerating injustice while still preserving a belief in a just world: They provide relatively unassailable protection from injustice that does not require the actual or psychological effort involved in, for example, helping/compensation, denial-withdrawal, or cognitive reinterpretations of the event. Only the belief in ultimate justice has received any direct research attention.

Maes (1994, 1998b, 1998c; Maes & Kals, 2002; Maes & Schmitt, 1999) has conducted several investigations into the notion of ultimate justice as a chronic belief that helps reduce threats to the need to believe in a just world. In this work, Maes has created scales to assess the belief in ultimate justice versus a belief in more "immanent" justice (i.e., the belief that justice is inherent in a given outcome, and, therefore, people not only get what they deserve but also deserve what they get). He claims that the failure of past just-world scales to distinguish between these two types of belief helps account for mixed results, especially with regard to victim blame and derogation. In support of his claim, Maes has shown that his immanent justice scales are related to responses that

imply current deservingness of victims, such as blame and derogation, whereas his ultimate justice scales are related to responses such as believing that the problem will be solved in the future, that further such cases can be prevented, and so forth. Though typical difficulties with correlational investigations apply to these studies (e.g., there is no control group to assess whether the predicted relations occur only under conditions of potential threat), they are a good demonstration of how traditional individual-difference measures can be used to examine the explicit beliefs some people develop in order to deal with threats to the need to believe in a just world. This approach to individual differences may lead to more promising results in future research on just-world theory than attempting to further develop explicit self-report measures as tools for assessing people's need to believe in a just world, or some more general belief in a just world that may take various forms (including implicit beliefs).

*Reactions to perpetrators.* Thus far, the strategies for coping with threats to the need to believe in a just world that we have focused on involve nonrational reactions to the recipient of injustice and the broader worldview comprising the ultimate justice strategy. As Gerbasi, Zuckerman, and Reis (1977) noted some time ago, however, the perpetrator of injustice may also be the focus of just-world-restoring strategies. The punishment and sentencing of a perpetrator of injustice has been investigated in a few of the post-1980 experiments, with some results suggesting a role for just-world processes (cf. Kleinke & Meyer, 1990; Wyer et al., 1985). Interestingly, the correlational literature shows a relatively consistent association between explicit individual-difference measures of belief in a just world and punitive, or antidefendant, attitudes in matters of criminal justice (e.g., Bègue & Bastounis, 2003, Study 5; Carroll, Perkowitz, Lurigio, & Weaver, 1987; Finamore & Carlson, 1987; Kassin & Wrightsman, 1983; Mohr & Luscri, 1995a; Moran & Comfort, 1982; but see C. Taylor & Kleinke, 1992). Perhaps the correlational findings can be accounted for in part by the overlap between scores on just-world scales and ideological variables such as authoritarianism (for a review, see Furnham & Procter, 1989). Future research on the role of punishment in maintaining a belief in a just world should not only pay attention to the issues we raised in the first half of this article but also, when appropriate, control for related individual differences.

Ellard, Miller, Baumlé, and Olson (2002) have recently proposed a fascinating strategy for maintaining a belief in a just world that focuses on the perpetrator of injustice but that was not mentioned in the original accounts of just-world theory. On the basis of work by Darley (1992), Ellard and colleagues (2002) suggested that individuals faced with a particularly heinous instance of injustice, when it is virtually impossible to restore justice in actuality or to cognitively distort the outcome to make it seem more fair (e.g., in cases of torture), may label the perpetrator as *evil*. This label allows people to believe that the grave injustice is an inexplicable anomaly in the way the world usually works, something that only rarely occurs in human experience. As long as such events are not perceived as symptomatic of a common and understandable force, then one can preserve a belief in the overall justness of the world. Ellard and colleagues (2002) referred to the process of labeling a perpetrator as evil (along with the characteristics implied by such a label) as *demonizing*. Though this work is only in its initial stages, early tests reported by Ellard et al. (2002)

give some support to both cognitive and motivational underpinnings of the demonizing process. For example, in one experiment, participants were given realistic newspaper accounts in which a perpetrator broke into a house and shot a resident. Participants were also given Rubin and Peplau's (1975) Just World Scale. When the perpetrator showed no remorse for the act (and, thus, there was a cue for labeling the victimizing behavior as evil), the higher participants scored on the Just World Scale, the more they described the perpetrator as evil (and the more they described him as bad and the less they described him as moral). These relations were not present when the victimization was presumably harder to characterize as evil (i.e., when the perpetrator was remorseful). Ellard et al.'s (2002) findings are consistent with the idea that the need to believe in a just world and certain cues to evilness may prompt demonizing.

Interestingly, Lodewijckx et al. (2001) have suggested that unjust incidents for which the usual just-world preservation strategies do not apply may lead people to label the act as *senseless*. Perhaps this label similarly allows people to preserve a belief in a just world by relocating the incident to the realm of highly unusual events that cannot be explained. Future research on these ideas has the potential to expand just-world theory not only by adding to the vast array of strategies originally described by Lerner (1980) but also by extending the notion of just-world defense to extreme injustice.

*Predictors of different strategies.* Our discussion of alternative strategies for preserving a belief in a just world raises the issue of when and for whom various strategies will be preferred. This issue was addressed occasionally in the early literature (e.g., studies suggested that helping/compensation is unlikely if the helping is seen as too costly or inefficient, see Miller, 1977) and was briefly raised in the reviews by Lerner (1980) and Lerner and Miller (1978). It is somewhat surprising that the issue has not received more attention. After all, without strong theoretically driven hypotheses about when particular strategies will be most relevant, it is difficult to make a priori predictions about reactions to just-world threats (see Schmitt, 1998). For example, researchers often find predicted just-world effects on only some of their criteria (e.g., Correia & Vala, 2003; K. L. Dion & Dion, 1987; Drout & Gaertner, 1994; Hafer, 2000b, 2002c; Hagedoorn et al., 2002; Pancer, 1988; Wyer et al., 1985). Such findings may partially reflect the fact that certain strategies for maintaining a belief in a just world are preferred in a given situation. A related difficulty is that, in some experimental situations, no one strategy may be dominant across individuals, leading to null effects on the relevant dependent variables. Researchers need to adequately constrain the experimental situation so that one particular strategy is dominant (and tailor their predictions accordingly). Alternatively, they should measure multiple strategies with an understanding of what variables will predict when each strategy will prevail. In the absence of these considerations, even well-reasoned hypotheses may not be supported, and results will be difficult to interpret.

Two post-1980 investigations that we know of directly addressed the issue of when or for whom various just-world restoring strategies will be preferred. Karuza and Carey (1984) distinguished between behavior blame and character blame and suggested that observers of a victim who threatens the need to believe in a just world would prefer to blame the victim's behavior, unless that behavior was irreplicable (see also Lerner & Simmons, 1966). Their prediction received some support. Participants viewed a

realistic video of a rape victim. Blaming the victim's behavior was more extreme overall than blaming her character, but this difference was reduced when the victim's behavior was described as very careful (and, presumably, faultless). Karuza and Carey found that blaming the victim's behavior for the assault, but not her character, predicted higher postvideo scores on a short form of Rubin and Peplau's (1975) measure of individual differences in belief in a just world, controlling for prevideo scores on the same scale (as well as gender and experimental manipulations). These results are consistent with the authors' argument that behavioral blame is superior at maintaining or strengthening a belief in a just world because it provides a more proximal and direct explanation for the event than does characterological blame (cf. Janoff-Bulman, 1982; Thornton, 1984).

Hafer (2002b) has conducted preliminary work on personality predictors of different strategies for coping with threats to the need to believe in a just world. She argued that people high versus low in the trait of repression (see Weinberger, Schwartz, & Davidson, 1979) would have a greater tendency to respond to a threatening victim by seeing the suffering in a positive light (e.g., seeing benefits in suffering, claiming that justice will occur in the long run). This argument follows from research showing that repressors show a bias against emotionally laden information, especially negative information that is threatening, and may deal with this information by conjuring up positive thoughts (e.g., Boden & Baumeister, 1997; Mendolia, Moore, & Tesser, 1996). Though the work is still in progress, Hafer found evidence for her argument in a series of initial experiments.

*Co-occurrence of strategies.* If there are several different methods for maintaining a belief in a just world, then we must ask not only when and for whom these strategies will be preferred but also to what extent certain strategies will be mutually exclusive versus having the potential to co-occur. Researchers who include more than one reaction in their studies usually do not address this issue. The few exceptions include two studies described below (for a study addressing strategy co-occurrence and predictors of different strategies from a system justification theory point of view, see Kay, Jost, & Young, in press).

Correia et al. (2001) found several correlations among their measures of reactions to victims (for individuals scoring high on a just-world scale in the condition of presumably highest threat), including relations between less perceived suffering and more avoidance, more blame, and less positive character assessment, as well as associations between greater blame and less positive character assessment. Although Correia et al.'s study is difficult to interpret in light of the failure to find support for the predicted Individual Difference  $\times$  Manipulation interaction effects (though the direction of the within-cell correlations generally conform to the predicted interaction), it presents the notion that certain strategies for preserving a belief in a just world might co-occur.

Skarlicki et al. (1998) manipulated the fairness of procedures (in accordance with procedural justice research; e.g., Lind & Tyler, 1988) that surrounded a series of layoffs by varying the information presented in what seemed like an actual newspaper article. They then assessed the perceived fairness of the layoff procedures, participants' intention to boycott the offending company as punishment, as well as individual differences in participants' tendency to derogate a particular victim of the layoffs. Not surprisingly, reports of the perceived fairness of the procedures were lower

when the procedures could be described, according to procedural justice research, as unfair (i.e., no explanation was given, or employees had no voice in how the layoffs proceeded) versus fair (i.e., an explanation was given, or employees had a voice in how the layoffs proceeded). This tendency, however, was reduced or eliminated for observers who derogated the victim, consistent with the notion that derogation was a strategy for restoring a sense of fairness in unfair circumstances. Skarlicki et al. (1998) also tested whether individual differences in derogation would predict boycotting the company as retribution. Although they found a hypothesized overall negative correlation between derogation and the intent to boycott the company as a customer, the relation did not vary with the manipulations of procedural fairness. The overall correlation, however, does introduce the issue of subsequent effects of just-world preservation strategies. Derogation and blame of the victim of injustice or seeing the "good side" of innocent suffering or the "bad side" of unjust benefits (see Kay & Jost, 2003) could have the additional effect of legitimating an unjust status quo and decreasing people's tendency to engage in social change efforts (see Hafer & Olson, 1989; Jost, 1995; Jost & Burgess, 2000; Olson & Hafer, 2001). These and other additional effects that may arise from different coping mechanisms are important to study in future research.

To sum up this part of our review, one of the advances in just-world theory to come out of post-1980 research is the investigation of just-world preservation strategies other than the traditionally researched helping/compensation, blame, and derogation strategies. Alternative strategies originally proposed by Lerner (1980) have received some attention (e.g., denial-withdrawal, psychological distancing), as have some additional potential coping mechanisms (e.g., demonizing). Researchers have also begun to explore the predictors of these strategies and the extent to which certain strategies may co-occur. The tendency of both pre- and post-1980 theory and research to emphasize especially blame and derogation of innocent victims has, in our opinion, led to a false assumption that just-world theory is only relevant to these behaviors. The kinds of developments discussed in this subsection, therefore, not only provide important tests of just-world theory as well as refining its propositions but also help highlight the broad scope of the theory, beyond negative reactions to innocent victims. In the following subsection, we raise a different issue about reactions to innocent suffering: Is it really the injustice of these situations that is threatening to observers?

### *The Injustice of Innocent Suffering*

One elemental tenet of just-world theory that has been investigated recently in the experimental literature is that innocent suffering is associated with injustice, and that it is specifically a sense of injustice that provokes the kinds of coping responses suggested by Lerner (1980). Evidence of this assumption offers strong support for the motivational basis of just-world theory. Though the assumption is central to the theory, however, it is difficult to test directly. In part, this is because there are good reasons not to ask people directly whether it is the injustice of a particular victim portrayal that they find threatening. First, if the need to believe in a just world and a belief in a just world are often implicit, then people may not always be able to accurately report their internal states in the face of injustice. Also, it may be socially undesirable

to report that one feels threatened by a victim. Another possible problem is that, depending on when self-reports of threat are administered, rationalization processes may have changed these perceptions, and, thus, they may no longer reflect the respondent's initial reaction to the situation. Given these and other potential difficulties with self-report measures, Hafer (2000a, 2002c) used an alternative method to test whether it is the injustice of innocent suffering that threatens observers and that, in accordance with just-world theory, motivates certain responses to victims of injustice. Specifically, Hafer (2000a, 2002c) used a modified Stroop task, adapted from research on psychopathology, to assess the extent to which the injustice of an event threatens observers.

In the psychopathology studies, participants are typically exposed to various types of words that are presented in different colors and are asked to identify the color of each stimulus as quickly and accurately as possible. Some of the words are related to events that threaten the individual, whereas other words are emotionally neutral. For example, a person who is afraid of spiders may be shown several stimuli involving words like *hairy* and *crawl* (e.g., Watts, McKenna, Sharrock, & Trezise, 1986) as well as stimuli involving neutral words. This research shows that people often take longer to identify the color of stimuli containing threat-relevant words than stimuli containing neutral words (for a review, see J. M. G. Williams, Mathews, & MacLeod, 1996). Presumably, the meaning of the threat-relevant words interferes with the task of color naming, perhaps because these words capture attention as the person gathers cognitive resources to deal with the threat (for some possible theoretical accounts, see J. M. G. Williams et al., 1996). This interference for threat-relevant stimuli has been found for both chronic stressors (e.g., Lundh, Wikström, Westerlund, & Öst, 1999; Mogg, Bradley, Williams, & Mathews, 1993; Watts et al., 1986) and for situationally induced threat (e.g., Lundh & Dzyzykow-Czarnocka, 2001; MacLeod & Rutherford, 1992; Mogg, Mathews, Bird, & MacGregor-Morris, 1990). The effect has also been shown for subliminally presented words (e.g., Lundh et al., 1999; Mogg et al., 1993).

Hafer (2000a) used this type of Stroop task to investigate the presumed justice-related threat presented by an innocent victim. Participants in these studies viewed a videotape of an innocent victim who presumably posed either a weak or a strong threat to the need to believe in a just world. In the weak-threat condition, the individuals responsible for the victimization had been caught and punished; in the strong-threat condition, the perpetrators escaped and, therefore, were not punished. After the video, participants performed a Stroop task in which they were presented with justice-related words and neutral words (as well as words in several other categories) in different colors. The words were presented very quickly so that most were not perceived consciously. Each stimulus display consisted of a word followed by a mask in the same color so that participants could still perform the color-identification task. Hafer (2000a) reasoned that, according to just-world theory, the injustice of the victim's suffering should be threatening. Analogous to results from the psychopathology research, this threat of injustice should be reflected in a significant interference effect for justice-related words. Hafer (2000a) also reasoned that the story in which the perpetrator had escaped punishment should contradict a belief in a just world more so than the story in which the perpetrators were punished (and, hence, justice was at least partially restored). Thus, it is in the former

condition that the unjust suffering of the victim should be most threatening and that should consequently lead to the greatest justice-word interference. These hypotheses were supported in two studies. Furthermore, in the second study, for individuals exposed to the strong-threat victim, justice-word interference predicted more negative responses to the victim (as measured on a questionnaire administered directly after the Stroop task); specifically, there was greater psychological distancing from the victim (e.g., seeing the victim as dissimilar to oneself) and more negative evaluation of his character. In a similar study, Hafer (2002c, Study 2) found that people scoring high on Rubin and Peplau's (1975) Just World Scale, after exposure to the innocent victim, showed greater interference for justice-related words compared with people with low scores, although individual differences did not interact with the punishment manipulation. Overall, the results of these Stroop studies were interpreted as support for some basic premises of just-world theory: The injustice of innocent suffering can threaten observers, and, in the absence of reasonable helping responses, observers of these injustices may deal with the threat in a less prosocial manner, for example, by distancing themselves from the victim or by derogating the victim's character.

Though not a test of just-world theory per se, Kay and Jost (2003, Studies 3 and 4) used a different kind of reaction time paradigm as an implicit indicator of justice-related threat. Kay and Jost's argument, described earlier in this article, suggests that noncomplementary stereotype exemplars such as "poor and unhappy" should be more threatening to one's sense of fairness. This threat should be reflected in faster reaction times for justice-related words (but not for neutral words) in a standard lexical decision task in which people decide whether a stimulus is a word or a nonword. Note that, unlike in the Stroop paradigm used by Hafer (2000a, 2002c), faster reaction times for the justice-related words are expected in the high-threat condition rather than impeded responses because the concept of justice has been primed, but there are no competing response tendencies (such as the color identification required by the Stroop task). Results of these two studies supported Kay and Jost's hypothesis.

Studies in which the concept of injustice is primed before the experimental test of a presumed just-world effect (e.g., derogation of an innocent victim) can also be seen as offering evidence that it is the injustice of innocent suffering that accounts for the phenomenon of interest. For example, Wyer et al. (1985) used a priming paradigm to examine the influence of various factors on reactions to sexual assault cases. Participants were exposed to a series of one of several types of primes. In an injustice prime condition, the concept of injustice was activated by presenting participants with slides depicting inhumane and presumably unjust treatment of individuals. In a supposedly unrelated experiment, all participants then rated their responses to summarized testimonies from rape victims (presented as real), which varied in their details. Ratings of victim responsibility and beliefs that the perpetrator had been convicted were higher in the injustice prime condition, and these effects occurred primarily when the injustice associated with the rape was likely seen as the greatest (e.g., when the defendant tried to resist). Priming other concepts (e.g., women as sex objects) did not produce the same effects. Thus, consistent with just-world theory, these responses to the victim likely occurred as a result of the association between the victim's fate and injustice. Specifically, priming injustice may have made participants more sensitive

to this theme when exposed to the rape victim, in turn increasing their motivation to restore their belief in a just world by blaming the victim for her fate or by reasoning that justice was restored through punishment of the perpetrator, especially when the victimization was perceived as very unjust.

In a conceptually similar experiment, Correia and Vala (2003, Study 2) primed a sense of justice or injustice in their student participants by presenting them with evidence that investment in higher education would or would not pay off as deserved. As part of a supposedly separate investigation, the participants then read excerpts from an interview with a victim of HIV. As predicted, when the victim was not responsible for his or her illness and was likely to continue suffering, participants who had been primed to think of their academic world as unjust (and, therefore, whose need to restore a sense of justice had presumably been heightened) saw the victim's character more negatively than did participants who had been primed with evidence of justice (cf. Comby et al., 1995). Though unpredicted, the researchers also found that the character of the victim who was responsible for his or her illness and whose suffering would likely not continue was also seen more negatively by the injustice-prime versus the justice-prime participants. Correia and Vala suggested that this finding is also consistent with just-world theory, in that the bad person who does not suffer appropriately threatens the need to believe in a just world as does the good person who continues to suffer, thus leading to derogation amongst the injustice-prime participants.

Further work is needed to establish the precise meaning of the kinds of effects presented in this subsection. For example, the emotional assumptions underlying the reaction time results need to be investigated. The researchers assume that the effects on their dependent variables were driven by a justice-related threat; however, the mechanism might be a relatively cold assimilation of contradictory information into a justice schema. Despite such ambiguities, these kinds of tasks suggest promising methodologies for further investigation of just-world theory (and for other areas of justice research). If the need to believe in a just world and a resultant belief are often implicit, then threats to the need to believe in a just world may be experienced preconsciously. Ways of investigating the threat of injustice, therefore, should include techniques that do not rely solely on explicit self-report.

In this subsection, we discussed the proposition that the injustice of innocent suffering is threatening to observers. According to just-world theory, the injustice of one's own outcomes should also be threatening. We address this proposition next.

### *Reactions to One's Own Outcomes*

Just-world theory has mainly been examined within the context of individuals' responses to the victimization of others. This is not surprising given the emphasis on third-party observers in early theory and research (see Lerner & Miller, 1978). The focus on responses to others, however, does not mean that just-world theory was originally considered as exclusively relevant to this domain. Lerner (1980) proposed that responses to one's own victimization represent extreme tests of the theory in that one would not expect reasonable people to go so far as to justify their own unfair treatment in order to preserve an illusory belief in a just world. Although there has been a great deal of recent work on the concept of a belief in a just world and reactions to one's own situation (for

reviews, see Dalbert, 1998, 2001; Furnham, 2003; Hafer & Olson, 1998), much of the research has involved correlational investigations that focus on the belief in a just world as an individual-difference variable (e.g., Ball, Trevino, & Sims, 1994; Hafer & Olson, 1993; Tomaka & Blascovich, 1994) rather than using individual differences simply as a tool for testing the process underlying the influence of experimental manipulations (though for an alternative perspective in correlational investigations, see Dalbert, 2001). Aside from the correlational individual-difference studies, there are a few experimental investigations on this topic that more clearly address the need to believe in a just world that is associated with various strategies for defending some form of a belief in a just world in the face of threat. These experiments add to the literature by offering evidence that just-world processes extend beyond reactions to observing victims of injustice to one's own experiences of injustice.

For example, in a recent experiment by Hagedoorn et al. (2002), the authors reasoned that the need to believe in a just world might underlie the tendency for an unfair or unfavorable procedure to ameliorate negative responses in the face of an unjust or unfavorable outcome (and the opposite tendency for a fair or favorable outcome to ameliorate negative responses in light of an unfair or unfavorable procedure; for a review, see Brockner & Wiesenfeld, 1996). Specifically, they argued that a need to believe in a just world motivates one to look for fairness in situations, including one's own; therefore, if only one aspect of the situation is fair (e.g., procedures or outcomes), people will be motivated to use this fair element to justify the situation, leading to, for example, less reported injustice, less anger, and weaker attempts at change. Participants in this study performed an organizational in-basket task in which they were the recipients of an equitable or inequitable (i.e., fair or unfair) outcome via a biased or unbiased procedure. Hagedoorn et al. (2002) found support for their reasoning on participants' ratings of distributive injustice but not on the other dependent variables. The presence of one fair element (i.e., procedures or outcomes) in the situation seemed to decrease perceived distributive injustice; furthermore, this effect only occurred for people who scored high on Lipkus's (1991) measure of belief in a just world. Similarly, in an earlier investigation, Hafer and Olson (1989) found evidence that a belief in a just world may lead one to perceive an otherwise seemingly unfair procedure as fair as well as to experience less resentment about such unfairness.

Whether the target of injustice is oneself or another can be added to the list of variables that may determine what strategy for preserving a belief in a just world will be used under what conditions (see Janoff-Bulman, 1982). Certain coping mechanisms are obviously not viable when the target is oneself, such as physical avoidance (though psychological avoidance may still be used). Other responses—for example, blame and derogation—may be less frequent strategies for maintaining a belief in a just world when the target of injustice is oneself because of competing motives, such as blame avoidance or self-esteem maintenance (e.g., Shaver, 1970; Shaw & McMartin, 1977). In the future, the role of the need to believe in a just world in reactions to one's own fate and the differences between responses to one's own versus another's unjust treatment should be tested more extensively. Aside from experimental tests, correlational designs, including quasi-experiments and longitudinal methods, will be needed to examine more extreme fates that cannot be ethically reproduced in

the laboratory (for an example using an individual-difference measure of belief in a just world, see Bonanno et al., 2002).

We mentioned that there is a misconception that just-world theory is relevant only to victim blame and derogation. There may be a similar view, again based on the emphasis of much past theory and research, that the theory is relevant only to people's responses to the situations of others. The recent work noted here and its proponents will help highlight the applicability of just-world theory to one's own experiences.

In this subsection, as well as in those discussed earlier, most of the studies we have examined investigate just-world theory within the context of negative and presumably unjust situations. In the next subsection, we shift our focus to the implications of just-world theory for positive and unjust situations.

### *The Need to Believe in a Just World and Reactions to Unjust Benefit*

Just-world theory should apply not only to reactions to unjust victimization (whether another's or one's own) but also to cases of unjust benefit. Both kinds of situations should threaten people's need to believe in a just world. A few investigations examining reactions to beneficiaries of random good fortune (Lerner, 1965; Rubin & Peplau, 1973) are mentioned in the early reviews. The results of these studies are consistent with the idea that undeserved outcomes of any sort, positive or negative, pose a threat to the need to believe in a just world. However, given that a central point of just-world theory is that it is injustice in general and not simply unfair negative outcomes that threaten people's need to hold a particular conception of the world, it is surprising that just-world researchers have generally ignored responses to unjust advantage. Perhaps this oversight derives from the fact that early theorizing and research concentrated on victims of injustice and not its beneficiaries (see Lerner & Miller, 1978); thus, just-world theory has been perceived primarily as a theory of responses to victims (see Hafer, 2002c). One exception from the post-1980 experimental literature is described in this subsection.

Ellard and Bates (1990) led participants to believe that they had been randomly assigned to the supervisory rather than the worker role during an experimental task. In one condition, these roles would switch part way through the session; thus, in the long run, the two parties would have equal status. In an unequal-status condition, participants would remain in the supervisory role throughout the session. Ellard and Bates reasoned that, in accordance with just-world theory, participants' undeserved prestige in the unequal-status condition would threaten their need to believe in a just world, promoting attempts to restore that belief. In support of their reasoning, they found that participants rated their own character more positively when they were of higher rather than of equal status relative to the other. Additionally, evaluations of participants' own fate and character were positively correlated, as were their ratings of the other's fate and character. In a second study, the participants were administered Rubin and Peplau's (1975) Just World Scale, after which (in a presumably unrelated session) they were placed in the unequal-status situation of Study 1. Individuals with high scores on the individual-difference measure, but not those with low scores, rated their own character more positively than the character of the worker. The correlation between evaluations of one's own fate and character as well as the

correlation between evaluations of the other's fate and character were significant and positive as for Study 1, but this was only the case for those scoring high on the Just World Scale (Rubin & Peplau, 1975). Thus, it seems as if individuals rationalized the undeserved benefit bestowed upon them in these studies in order to maintain their notion of a just world; the rationalization was achieved by upgrading one's character to match one's status (see also Chen & Tyler, 2001).

Other aspects of just-world theory, aside from the effects of perceived injustice on character evaluations, also need to be investigated within the context of unjust benefit. For example, though almost all of Lerner's (1980) illustrative examples of the various just-world preservation strategies involve innocent victims, most of these should, theoretically, also apply to unjust advantage. The doling out of punishment may be especially relevant in this regard and is referred to later in this article.

So far, we have summarized several developments in the post-1980 just-world research. For the most part, the studies we reviewed test aspects of just-world theory that had previously received little or no attention, or suggest additional or more refined theoretical propositions. In the following subsection, we examine the application of just-world theory to other phenomena in social psychology.

### *Other Phenomena Explained by Just-World Theory*

Just-world theory is large in scope, proposing that the need to believe in a just world applies to a wide variety of social relations and social phenomena. Some of the post-1980 experimental investigations address this claim by using just-world theory to explain previously unexplained phenomena or phenomena that have been attributed to other causes. We discuss two such cases in this subsection.

K. L. Dion and Dion (1987) attempted to explain the well-documented tendency for people to associate physical attractiveness with a variety of positive characteristics and outcomes (see K. K. Dion, Berscheid, & Walster, 1972) in terms of just-world theory. They argued that people's need to believe in a just world may cause them to assume that individuals who are physically attractive deserve this positive outcome and, therefore, probably are good persons who also have success in other aspects of their lives. Some support was found for this rationale such that, among participants who scored high on Rubin and Peplau's (1975) individual-difference measure, a physically attractive male target was rated as possessing a more socially desirable personality than was a physically unattractive male target. No such effect was found for female targets. Though the results were not entirely supportive of the authors' prediction, they offer some support for the notion that the need to believe in a just world may account in part for the tendency to associate physical attractiveness with other positive qualities.

As described earlier (see *The Need to Believe in a Just World and Reactions to Unjust Benefit* section), Ellard and Bates (1990) found evidence that people's need to believe in a just world can be threatened when they continue to hold an undeserved high-status position. The primary goal of this investigation was to delineate a role for motivational processes on the basis of just-world theory in status generalization phenomena (see Berger, Cohen, & Zelditch, 1972) rather than for the typical cognitive mechanisms. The *status*

*generalization effect* refers to the tendency for people of high social status (e.g., with regard to gender, race, social class) to hold positions of more power than people of low social status, even if the basis of their social status is unrelated to the powerful position. Ellard and Bates's findings suggest that one contributor to status generalization phenomena is people's need to believe that the world is a just place in which individuals get what they deserve (see also K. L. Dion & Dion, 1987). This need may motivate people to restore a sense of fairness in unfair power hierarchies by rationalizing that individuals who have undeserved power (and those who are undeservedly lacking in power), after all, do possess the proper requirements for their position in the social structure (see also Jost, 1995). Thus, paradoxically, a need for justice may exacerbate an unjust distribution of power.

In summary, a few authors have attempted to explain other social phenomena via just-world theory. This type of endeavor will, no doubt, continue in future research, aided by newer, more sophisticated measurement techniques and experimental designs.

In the third major section of this article, we discussed several important post-1980 developments in just-world theory. Some of the studies we reviewed in this section test aspects of just-world theory that have received little empirical treatment in the past (e.g., tests of proposed just-world coping mechanisms other than helping/compensation, blame, and derogation), whereas others attempt to refine and clarify some of the theory's tenets (e.g., research on the long-term goal-related function of a belief in a just world). Still other developments represent potential extensions to just-world theory (e.g., recent research on demonizing) or applications to other social psychological phenomena. More generally, the research reviewed in this section should help erase the conception of just-world theory as relatively narrow in scope. This view is likely because of an overemphasis in theory and research on negative attitudinal responses of third-party observers to innocent victims. Despite this past emphasis, recent developments suggest that just-world theory is about responses to potential injustice other than simply defensive blame and character derogation, responses to one's own outcomes as well as the outcomes of others, and reactions to beneficiaries as well as victims of injustice.

Notwithstanding the promising developments in just-world research, there are many difficult challenges that await future researchers. In the next major section, we discuss several theoretical challenges that, in our opinion, will have to be addressed in future research if the area is to progress further.

### Future Challenges

Our goals in the last part of our article are to outline some fundamental questions relating to ambiguities in just-world theory, raise some previously overlooked issues, and point out links between the theory and other areas of social justice research. We begin with the question of what constitutes a threat to the need to believe in a just world in the first place, followed by some thoughts related to the interplay between just-world preservation strategies over time. We then continue our discussion of individual differences that we began earlier in this article to ask more specifically, what do the individual-difference scales measure? In the final subsections, we raise questions regarding the emotional assumptions of just-world theory as well as the relation of just-world theory to other work in the social psychology of justice.

### *What Constitutes a Threat to the Need to Believe in a Just World?*

In our section on problems with post-1980 experimental studies proposing just-world hypotheses, we gave examples of similar manipulations that have been differentially conceptualized, though the researchers of these varying conceptualizations all base their reasoning on just-world theory. For example, we noted that some researchers have conceptualized a particular independent variable (e.g., whether or not the victim provoked an attack) as a manipulation of threat to the need to believe in a just world because it represents differences in behavioral responsibility (and, therefore, deservingness) for a negative outcome. Others have conceptualized similar variables as a manipulation of the viability of blame as a strategy for preserving a belief in a just world in the face of threat. In part, these inconsistencies stem from a theoretical ambiguity that needs to be clarified in future research. According to Lerner and Miller (1978), "If the victim can be viewed as behaviorally causing his suffering, there appears to be no need to derogate the victim, presumably because no injustice has occurred" (p. 1041). However, in the face of the threat of injustice, people are also deemed, at times, to make attributions of blame that are motivated by a need to believe in a just world. Such defensive attributions of blame as well as character derogation are unlikely when they require a great deal of cognitive distortion (Lerner, 1980, p. 22), implying that there must be some cue in the situation that blame or derogation is plausible (e.g., Braman & Lambert, 2001; Hafer & Olson, 1989; Karuza & Carey, 1984). When, however, does a cue for blame or derogation become blatant enough to constitute little threat to the need to believe in a just world in the first place? Unfortunately, the rather unsystematic nature of the research posing just-world hypotheses has meant that this issue, even though it may lead to different interpretations of very similar or identical manipulations, has not been acknowledged.

We also noted in the Problems With the Post-1980 Experimental Research section that the stimuli in some experiments do not have clear elements of injustice, despite the researchers' (sometimes implicit) assumption that this is the case. These studies can be faulted for creating stimuli that do not match the rationale given for the just-world-based hypotheses. However, the stimuli used in these studies (as well as some of the manipulations of the valence/intensity of character, behavior, or outcome; see Table 2) raises the question, does a situation have to be currently unfair in order for it to arouse one's motivation to preserve a belief in a just world? Or does the mere potential for injustice also pose a threat (as might be suggested by the inclusion of prevention efforts as a just-world maintenance strategy; see Lerner, 1980)? If the latter, how do we predict a priori whether a situation will be perceived as having the potential for injustice? Research on the scope of justice (see Hafer & Olson, 2003; Opatow, 1990, 1995; Tyler, Boeckmann, Smith, & Huo, 1997), which attempts to specify the situational boundaries within which justice is seen as a relevant concern, may be helpful in addressing this question in the future.

Future research will also need to raise questions regarding proposed responses to threats to the need to believe in a just world. The temporal relation of responses, for example, has been virtually ignored and is discussed in the next subsection.

### *What Is the Temporal Relation of Responses to Just-World Threats?*

There are several questions that arise from a consideration of how various mechanisms for maintaining a belief in a just world relate to one another over time. We mentioned in the Important Developments section that researchers have begun to examine the potential co-occurrence of responses presumably motivated by the need to believe in a just world. A related point, which was raised by Lerner and Miller (1978) but has received no direct investigation, is the order of responses to victims. Lerner (1980) mentioned that the initial reaction to innocent suffering may be empathy or a negative emotional response, followed by actual restoration, avoidance, or cognitive restoration, depending on situational constraints. Another suggestion is that exposure to innocent victims first arouses (as well as negative emotional reactions) more primitive, automatic, and defensive strategies, after which, given cues for more deliberate processing, more thoughtful responses may occur (see also Lerner, 2003). Theory and methodology in other areas of research that address a similar sequence (e.g., Devine, 1989; Gilbert, Pelham, & Krull, 1988; Haidt, 2001; Skitka, Mullen, Griffin, Hutchinson, & Chamberlin, 2002) can help guide research on this issue.

A further challenge for researchers will be to investigate how relatively reactive mechanisms for dealing with threats to the need to believe in a just world might transform over time into more generalized belief systems. Certain coping mechanisms may begin as defensive responses to the presence of or potential for injustice that are called upon only when needed. However, with consistent use, these strategies may eventually form a more stable belief system that has a "life of its own," such that it is no longer fueled by the need to believe in a just world. Thus, for example, responding to specific injustices by defensively placing responsibility for the outcomes with the victim (or beneficiary) may lead eventually to a more general cognitive bias toward assuming that most outcomes are the result of people's own actions or character (see Furnham & Procter, 1989; Lerner, 1978). Alternatively, responding to specific injustices by providing help or compensation to victims may lead an individual to organize his or her life more generally around helping others (see Bierhoff, 2002; Bierhoff, Klein, & Kramp, 1991), regardless of the presence of elements of injustice (such as a victim's lack of responsibility for his or her negative situation; see Skitka, 1999; Skitka & Tetlock, 1992).

An even broader, but related, topic for further study is the developmental path from the child's belief in a just world to the adult version of this belief. According to just-world theory (e.g., Lerner, 1977, 1980), the adult belief in a just world is more implicit and may embody the protective mechanisms of a belief in ultimate justice and a multiple worldview. As we previously mentioned, only the first of these beliefs has been investigated, or even received much discussion, in either the pre- or the post-1980 literature. Exactly how a belief in a just world is transformed through adolescence (and possibly through adulthood) needs to be more clearly specified in formulations of just-world theory.

In summary, several challenges for future research are raised by a consideration of the interplay and transformation of just-world preservation strategies over time. Addressing these temporal issues would help refine certain aspects of just-world theory (e.g., its developmental propositions). In addition, strong evidence that

particular worldviews result from a basic need to believe in a just world would help raise the theory from its present association primarily with an individual-difference variable or with the phenomenon of victim blame/derogation to what it was meant to be—a much broader theory about how people ultimately orient their lives.

The notion that there are broad worldviews that may develop from a fundamental need to believe in a just world has implications for the individual-difference scales that we described in the Problems With the Post-1980 Experimental Research section. In the following subsection, we revisit these scales.

### *What Is the Role of Individual Differences in a Belief in a Just World in Just-World Theory?*

Our reasoning regarding individual-difference scales presented earlier in this article suggests that (a) just-world scales may not directly measure people's need to believe in a just world, the motivation driving the kinds of behaviors and attitudes proposed by just-world theory; and (b) these scales may not be very good indicators of either the need to believe in a just world or even some forms of a resulting belief in a just world because these constructs are, according to just-world theory, often implicit. How, then, might the fundamental need to believe in a just world proposed in just-world theory and the individual-difference scales be linked? An examination of relevant literature does not provide a clear answer; however, we offer some suggestions that could be pursued in further research.

The endorsement of items on just-world scales may, in part, reflect a particular way of maintaining a belief in a just world, akin to motivated denial of injustice in the world (Lerner, 1980, 1998; Lerner & Miller, 1978). Whether this denial is the result of another strategy (e.g., cognitive rationalization of people's unjust fates, a belief that justice will occur in the long run) is ambiguous, though the often noted association between scale scores and blame/dislike of victims may mean that cognitive rationalization is the strategy of choice for people scoring high on these measures, at least when helping/compensation is not a viable option (see Lerner, 1998). Low scorers perhaps have other strategies for preserving a belief in a just world—coping mechanisms that allow them to accept injustice explicitly but, at the same time, to behave as if the world is a just place (Kay & Jost, 2003; Maes, 1998c).

The possibility that just-world scales assess a particular belief system developed initially as a defensive response to injustice suggests that, when there is little threat to the need to believe in a just world, people scoring high on just-world scales still may apply the assessed belief (e.g., a belief in victim responsibility), automatically and nondefensively. Thus, one may expect a relation between the individual-difference variable and certain reactions to a target whether the injustice is of high or low impact or whether there is evidence of injustice at all. Indeed, several hypotheses in the experiments reviewed here are based on this premise (e.g., K. L. Dion & Dion, 1987), although, as mentioned earlier, this paradigm represents a minority of studies. Interestingly, this reasoning may contribute to the often-elusive nature of interactions between just-world manipulations (i.e., either manipulations of threat to the need to believe in a just world or the viability of just-world preservation techniques) and individual-difference scales (e.g., Correia et al., 2001; Covati et al., 2001; Hafer &

Olson, 1989; Hergovich et al., 2003; Kristiansen & Giulietti, 1990; Murphy-Berman & Berman, 1990; O'Quin & Vogler, 1989; Schmitt, 1991; Schmitt et al., 1991; Schuller et al., 1994; Sherman et al., 1982–1983) versus the fairly consistent overall relation between just-world scale scores and specific negative reactions to victims, such as blame and dislike, in the correlational literature (e.g., Bègue & Bastounis, 2003, Studies 3 & 4; Carr & MacLachlan, 1998; Crandall & Martinez, 1996; De Judicibus & McCabe, 2001; Furnham, 1995; Smith, 1985; Wagstaff, 1983; but see Brems & Wagner, 1994; Lambert & Raichle, 2000; Muller, Caldwell, & Hunter, 1994). A number of experimental studies with manipulations of threat to the need to believe in a just world show only main effects for just-world scales (e.g., Correia et al., 2001; Hafer, 2000b, Studies 1 & 2; Murphy-Berman & Berman, 1990; Schuller et al., 1994), further suggesting that high scorers have a tendency to respond to victims in a particular manner whether or not there are elements of justice-related threat. This view of the link between the need to believe in a just world and just-world scales raises the possibility that traditional individual-difference measures, even if largely inappropriate as a direct assessment of people's need to believe in a just world, can be useful as indicators of some of the explicit beliefs people develop as a means of coping with threats to this need (see Lerner, 1998). For example, the work of Maes (1994, 1998c; Maes & Kals, 2002; Maes & Schmitt, 1999) on explicit beliefs in immanent versus ultimate justice addresses this issue and was discussed earlier in this article.

So far in this subsection, we have discussed how the need to believe in a just world may be linked to scores on standard individual-difference measures. Perhaps a more basic question, and one that we have already alluded to, is, to what extent is a belief in a just world (whatever its form, including either implicit or explicit) the result of a fundamental need to believe in a just world versus the result of other cognitive and motivational factors? As we mentioned in the previous subsection on individual differences, the need to believe in a just world is likely only one source of a belief in a just world. The possibility of multiple sources has been obscured, however, in just-world theory (e.g., Lerner, 1980), although it has certainly been acknowledged and occasionally expanded upon (e.g., Dalbert's, 2001, discussion of various cognitive and familial influences on the development of a belief in a just world). This ambiguity has perhaps contributed (along with the tendency to overlook certain basic aspects of just-world theory) to the fact that post-1980 researchers do not always distinguish between the need to believe in a just world and a belief in a just world. Interestingly, there is significant overlap between just-world individual-difference scales and scales measuring other individual differences in ideology and personality (e.g., Furnham & Procter, 1989; H. B. Jones, 1997; Maes, 1998a), especially individual differences that are related to holding people responsible or blaming them for their fates (or a general dislike of people with negative outcomes) such as conservatism (e.g., Skitka et al., 2002), authoritarianism (e.g., Altemeyer, 1988), endorsement of the Protestant work ethic (e.g., McDonald, 1972), and internal locus of control (e.g., Carroll et al., 1987). Though the general consensus is that the individual difference assessed by just-world scales is associated with, but not identical to, these other variables (see, e.g., Bègue & Bastounis, 2003, Study 5; Cozzarelli, Wilkinson, & Tagler, 2001; Lerner, 1978; Maes, 1994; Sorrentino, 1981), the overlap may indicate that there are several paths to a belief in a just

world, and some of these are common to related individual differences.

We recognize the importance of studying the various sources of a belief in a just world and the multiple reasons for why one may be motivated to maintain such a belief in the face of evidence to the contrary. However, this task should not take attention away from testing, refining, and expanding upon the core concepts of just-world theory (which, as we have argued, is perhaps best done within an experimental context). This latter goal will perhaps require a less central role for individual differences in a belief in a just world than is presently reflected in the literature and a stronger focus on investigating the nature and emergence of a fundamental need to believe in a just world (as well as its relation to a more general justice motive) and on the conditions under which this need results in (or at least contributes to) different forms of belief in a just world, as well as other chronic beliefs, acute reactions, and so forth.

A future challenge, then, is to find alternatives for garnering evidence of just-world processes. Carefully designed experimental paradigms that are similar to the general formats we have already outlined in the introductory section of this article (and the methods used in the early research in this area) are a start. Additionally, experimental methods may be augmented with more subtle indicators of process, including reaction time measures (see *The Injustice of Innocent Suffering* section), as well as other techniques adapted from the study of implicit social cognition and implicit motives, for example, word completion tasks (e.g., Son Hing, Li, & Zanna, 2002) and projective measures (e.g., Atkinson, 1958; Sorrentino, Roney, & Hanna, 1992). A search for more alternative and nontraditional measures for use in just-world research may also help investigations of the theory's emotional assumptions—the next section in this article.

### *How Should the Emotional Assumptions of Just-World Theory Be Tested?*

The emotional assumptions underlying just-world theory, although an integral aspect of the original formulation and of much subsequent research, has received virtually no direct attention in the social justice literature. We discuss this issue in some detail here because of the dearth of coverage elsewhere and because of the implications of this aspect of just-world theory for other research on the social psychology of justice (see *Just-World Theory and Other Approaches to Social Justice*).

Just-world theory presumes that injustice (or the potential for injustice) is emotionally arousing, and that subsequent attempts to maintain a belief in a just world are driven by this emotional state. An early study by Lerner (1971, Study 1) indirectly supports this proposition by showing that an innocent victim was only derogated by observers when they believed she was truly suffering and not when they knew she was role-playing. Thus, the just-world derogation effect disappeared when the stimulus was presumably less emotionally involving and arousing (see also Simons & Piliavin, 1972).

More recently, a few studies have included self-report measures of emotion within the context of confronting participants with injustice (see Table 1, third column). We have already mentioned problems with self-report measures of justice-related threat; similar problems may be present for self-report indicators of the

emotional arousal caused by exposure to injustice (see Olson, Hafer, Couzens, & Kramins, 2000; Olson, Hafer, & Taylor, 2001). First, emotions experienced after exposure to a victim may have already been altered by strategies for preserving a belief in a just world. Indeed, this is the point behind the studies by Hafer and Olson (1989) and Hagedoorn et al. (2002)—that the need to believe in a just world may lead people to rationalize their own unfair situation as fair, ultimately lowering feelings of anger and resentment (cf. Dalbert, 2002). Also, people may have difficulties describing their emotions when confronted with a threat to their need to believe in a just world if the need is often implicit (though they may recognize that they feel vaguely “bad”). Given the possible problems with self-reports of emotion, more subtle indicators or physiological measures may be of greater use in future research. Both types of indicators would be easier to collect during exposure to the threatening situation compared with self-report; in addition, these indicators would not require participants’ ability to precisely describe their own internal states.

One early study that did attempt to address the emotional assumptions of just-world theory using a physiological measure is an unpublished study reported in Lerner (1980, pp. 76–77). In this experiment, galvanic skin response (GSR) recordings showed some evidence that arousal increased in the presence of an innocent victim who was perceived as real, and this arousal was related to derogation (see also Markovsky, 1988, who showed effects for inequity on GSR). More recent inquiry into the physiological measurement and theory of arousal and threat (e.g., Blascovich & Kelsey, 1990; Blascovich & Tomaka, 1996; Neiss, 1988; Porges, 1995; Sherwood et al., 1990) will be helpful in future investigations. Researchers choosing physiological measures of arousal will have to be aware, however, of the complex interplay of different indicators under conditions of potential stress. For example, in a study of the effect of beliefs on stress responses, Tomaka and Blascovich (1994) found that individuals scoring high versus low on Rubin and Peplau’s (1975) Just World Scale showed different physiological arousal patterns across several indicators during a potentially stressful mental arithmetic task. Though these results are not directly relevant to the present discussion, given that the focus was on individual-difference predictors of stress responses and not reactions to potential injustice, this study (along with other work on similar issues; e.g., Tomaka, Blascovich, Kibler, & Ernst, 1997) makes the point that one may have to use several types of measures to gain a clear picture of the meaning of physiological arousal under different conditions.

An investigation by Thornton (1984), although not intended to investigate just-world theory, used a misattribution paradigm to assess the mediating role of arousal in responses to a victim under different conditions. His results can be interpreted as supporting just-world theory’s emotional assumptions (see Lerner & Goldberg, 1999). In the first experiment, participants were presented with a description of a rape, presumably written by the actual victim. Results showed that, when participants were made to misattribute their negative arousal to a cause other than the victim (i.e., the novelty of their involvement in a psychological experiment), they were less likely to hold the victim responsible for her fate. In a second experiment, participants who were induced to be more self-aware and, presumably, more in tune with their emotional states showed a greater tendency to hold the victim responsible for her fate. These studies suggest that negative arousal (and

an awareness of that arousal, although the reason for the arousal may be ambiguous; Haidt, 2001) is necessary for a defensive victim-blame response. Thornton’s work also presents a paradigm for investigating the arousal assumptions of just-world theory other than direct physiological measurement. Similar misattribution designs have been used to test the role of arousal in cognitive dissonance (e.g., Higgins, Rhodewalt, & Zanna, 1979; Zanna & Cooper, 1974).

The literature on cognitive dissonance and arousal offers methods in addition to misattribution paradigms that could be applied to just-world theory (for a review, see Olson & Stone, in press). For example, if people find particular instances of injustice arousing, their behavior should show effects of arousal that have been previously established in the general learning and motivation literature. Facilitation of dominant responses and decreased performance of nondominant responses, for instance, should occur for individuals whose need to believe in a just world has presumably been threatened, even if the responses are unrelated to the threat (see, e.g., Pallack & Pittman, 1972; Waterman, 1969). Indeed, a study of cognitive dissonance and arousal by Cottrell and Wack (1967) could be interpreted as evidence of the motivationally arousing nature of injustice. These authors produced dissonance in participants by denying them their expected credit for participation. Most participants chose to proceed with the experiment in spite of this inequity and, thus, presumably experienced dissonance between the lack of expected compensation and their continued participation. Compared with a low-dissonance group for which there was no denial of experimental credit, these participants showed enhanced performance for well-learned responses and reduced performance for less familiar responses on a subsequent, unrelated task. The dissonance manipulation in this study could be interpreted as a manipulation of distributive justice (see Adams, 1965); thus, the results are consistent with just-world theory’s proposition that injustice can produce a state of motivational arousal, at least in the victims of injustice (for a similar point, see Pallack & Pittman, 1972).<sup>2</sup>

Future studies on arousal should address whether emotional involvement and threat-related arousal are required for responses to be guided by a need to believe in a just world (for a parallel discussion in the dissonance literature, see Olson & Stone, in press). This question is perhaps more complicated than it first seems. As already mentioned, there are a few post-1980 experiments in which participants are presented with stimuli that are presumably ambiguous with respect to fairness. Certain responses to the stimuli are hypothesized to reflect the assumptions people make on the basis of their belief in a just world (e.g., K. L. Dion & Dion, 1987; Ferrari, 1990; Stephan & Holahan, 1982). For example, Stephan and Holahan (1982) manipulated, among other things, the success of an individual looking for a job. They predicted that a belief in a just world would lead participants to assume that the successful individual deserved his or her fate and was more competent than the individual who failed in his or her search, even though participants were given little factual information to this effect. Their hypothesis was supported for the measure

<sup>2</sup> We thank James M. Olson for drawing our attention to the link between the cognitive dissonance literature and our questions regarding the role of arousal in just-world phenomena.

of perceived competence. This kind of general paradigm for testing elements of just-world theory, therefore, does not present participants with an injustice, but presents them with positive or negative outcomes, characteristics, or behaviors, and reasons that people will make assumptions about the situation or individuals involved consistent with a belief that the world is a just place. The role of justice-related arousal in this type of experiment is unclear. If responses reflect a motivated attempt to ward off potential injustice, then some arousal related to the threat of potential injustice may be present (see *What Constitutes a Threat to the Need to Believe in a Just World?*). Alternatively, if participants are engaging in a relatively cold application of a just-world schema, then arousal may not play a role; however, if a belief in a just-world schema develops in the first place from a need to believe in a just world, then responses, at some level, are still guided by processes proposed in just-world theory even in the absence of threat and arousal (see K. L. Dion & Dion, 1987). A similar argument may apply to experiments in which participants are presented with low-impact (e.g., unrealistic or very minor) injustices. Arousal play no role in reactions to these scenarios, yet responses may sometimes be driven by the application of a belief in a just-world schema that was formed as a result of a basic need to possess and maintain such a belief (see Lerner, 2003). To complicate matters more, as discussed earlier, people may develop more specific belief systems that help them to cope with threats to the need to believe in a just world (e.g., a belief in immanent justice, a belief in ultimate justice, or certain religious beliefs). Though initially developed in response to emotionally involving events, once the beliefs are fully entrenched, they may guide people's responses in the absence of an emotionally arousing threat to the need to believe in a just world (see *What Is the Temporal Relation of Responses to Just-World Threats?*). Therefore, one could claim that the need to believe in a just world indirectly guided responses, even though there may be little justice-related emotional involvement and arousal with respect to these situations (cf. Lerner, 2003).

To summarize, although there are a few post-1980 studies that are indirectly relevant to the emotional assumptions of just-world theory, none of these investigations was designed primarily to test, refine, or modify these assumptions. Thus, clear and more direct evidence of the emotional propositions of just-world theory has yet to be demonstrated. We await future research to investigate these propositions and the related issues raised in this subsection.

So far we have suggested that research addressing just-world theory will have to address several key questions if work in this area is to advance in the future. The ambiguity surrounding the issues we raised may have contributed to some of the problems with post-1980 experimental just-world research we reviewed in the second major section of this article, in addition to the tendency to overlook key parts of just-world theory. Not only will various aspects of just-world theory need further specification, but researchers will also have to pay more attention to building links between this theory and other areas of research (see *Other Phenomena Explained by Just-World Theory*), especially social justice research. Such an exercise will be helpful in clarifying, modifying, and expanding both just-world and other theories, with the broader goal of integrating various perspectives. In the last subsection of our article, we address some of the ways in which just-world theory is similar to and different from other social psychological

approaches to social justice and the broader questions raised by these comparisons.

### *Just-World Theory and Other Approaches to Social Justice*

In thinking about how just-world theory overlaps with and diverges from other social psychological approaches to social justice, we identified three broad areas of comparison, each of which can be expressed as a general question about how and why the concept of justice influences human behavior. Therefore, we have divided this last subsection into three parts, each corresponding to these broader issues: the reducibility of justice to other motives, the centrality of deservingness in people's concept of justice, and, finally, the role of emotion-driven, defensive and implicit processes in justice-related behavior. In each part, we describe the comparison giving rise to the broader question. We also discuss the implications of these aspects of just-world theory for other research on social justice as well as the implications of future research for further development of just-world theory and, more generally, for the integration of ideas from different perspectives.

*Is the desire for justice reducible to other motives?* According to just-world theory (e.g., Dalbert, 2001; Lerner, 1977; Lerner et al., 1976), the justice motive arises from intrinsic forces in human development, such as the development of the personal contract and the necessity of believing in a just world for maintaining the commitment to deserving embodied in this contract. As Lerner (2003) and others (e.g., Montada, 1998) have pointed out, therefore, just-world theory views the drive for justice as a basic human motive that is not reducible to other motives. This perspective is in contrast with most other social psychological views of the concern with justice. For example, popular formulations of equity theory (see Walster, Walster, & Berscheid, 1978), as well as Thibaut and Walker's (1975, 1978) theory of procedural justice, reduce the desire for justice to people's concern with maximizing their outcomes—self-interest—at least over the long run. Alternatively, the group value and relational models of procedural justice (see Lind & Tyler, 1988; Tyler & Lind, 1992) propose that procedural justice is important because it fulfills the need to be a positively valued member of one's social group and to have positive collective and self-esteem. Van den Bos and Lind (2002) proposed that justice is important because it reduces uncertainty, whereas Skitka (2002) has related justice concerns to the need to affirm one's personal identity. Each of these views of the justice motive, including that of just-world theory, has claims of empirical support (cf. Brosnan & de Waal, 2003; Holmes et al., 2002; Leventhal & Anderson, 1970; Skitka & Mullen, 2002; Tyler, DeGoey, & Smith, 1996; van den Bos, 2001; Walker, LaTour, Lind, & Thibaut, 1974).

The existence and identification of motives underlying a concern with justice will remain a challenge for social justice research in the near future. Just-world theory's characterization of the justice motive as fundamental has several implications for this exercise. For example, are studies in which another motive figures prominently really investigating people's concern with justice, as the researchers purport? The *Stimulus impact* section (see also Lerner, 2003) suggests that even some researchers claiming to address threat to the need to believe in a just world may not, in fact, be tapping into a justice motive. In contrast, perhaps research-

ers sometimes mistake the justice motive for another concern. After all, as noted at various points in this review, even some apparently opposing behaviors (e.g., compassion for vs. derogation of an innocent victim), apparently self-interested actions (see Holmes et al., 2002), and seemingly unfair behavior (see Hafer & Olson, 2003; Stroessner & Heuer, 1996), may mask a desire for justice.

An analysis of work by van den Bos (2001; van den Bos & Miedema, 2000) helps illustrate our point that a concern with justice may account for some results attributed to another underlying motive. Van den Bos (2001) placed participants in an experimental situation in which they actually believed or were asked to imagine that they were potential recipients of some resource that would be distributed by an authority. Van den Bos manipulated whether aspects of procedural fairness or unfairness were present (e.g., participants were or were not able to voice their opinion regarding the allocation they should receive). Participants (either within or previous to the allocation situation) were also asked to write about the experience of uncertainty or about a control topic that did not invoke thoughts and feelings associated with uncertainty. The manipulation of procedural justice-relevant information had more influence on participants' self-reported affect when they had been primed to think about uncertainty. These and similar results (e.g., van den Bos & Miedema, 2000) led van den Bos and Lind (2002) to conclude that "fairness matters to people because fairness judgments give them an opportunity to manage their uncertainty about important life events or issues" (pp. 19–20). However, there is another interpretation of these data that does not require the reduction of a concern with justice to the general desire to reduce uncertainty. Perhaps in the allocation situation, participants who had been primed with feelings and thoughts of uncertainty were merely less certain about the potential fairness of the allocation than were participants in the control conditions. This justice-specific uncertainty then led to the greater influence of fairness diagnostic information (embodied in the procedural manipulation). In other words, fairness per se may not have become more important for the uncertainty-primed participants. Rather, fairness-relevant aspects of the allocation situation became more influential or more salient because of participants' increased uncertainty that fairness would, in fact, occur within that relationship. From this alternative perspective, if uncertainty-primed participants had been in a situation for which justice was not relevant, they may not have been as affected by the procedural information manipulation.

Interestingly, van den Bos and Miedema (2000) manipulated mortality salience instead of uncertainty salience and found similar effects, such that participants primed to think of their own death were more affected by a manipulation of procedural justice-relevant information. Van den Bos's (2001; van den Bos & Lind, 2002) interpretation of these data was again that feelings and thoughts of uncertainty—in this case, uncertainty related to one's own mortality—increased the importance of fairness, and therefore the extent to which information about fairness influenced participants' reactions to the allocation situation. However, we once more propose that there may be other ways to explain these results, without concluding that justice is important because it fulfills the human need for certainty. One possibility is that the death prime, as van den Bos claims, primarily raises the spectre of uncertainty. As we argued previously, however, this uncertainty prime may

merely increase the extent to which people are unsure about whatever is most relevant in the experimental situation. If a highly relevant concept is justice, as it would likely be in a situation in which participants are a potential recipient in an allocation made by an authority figure (see van den Bos, Lind, & Wilke, 2001), then participants would be more likely to be affected by information that is diagnostic of the fairness of the situation.

An alternative interpretation of van den Bos and Miedema's (2000) data, and one that we favor, is that the mortality salience manipulation is a more direct manipulation of uncertainty about justice. Hafer (2002a) has recently proposed that thoughts of our own death may be threatening, in part, because most people do not believe they deserve to die or to experience the process of death and, therefore, see their own death as essentially unfair (see Wortman & Dunkel-Schetter, 1979). Furthermore, for some individuals, the thought of their own mortality might be a subtle reminder that they cannot continually deal with injustice by referring to the long-term context of ultimate justice (unless ultimate justice is assumed to occur after death); in other words, the thought of death may be a cue that time is finite and one's existence may not, on balance, be fair in the long run. This reasoning suggests that the fulfillment of justice is the underlying concern in van den Bos's results, not a presumably more basic concern with uncertainty. Again, the mortality-salient condition, according to this view, may have led to more specific doubts, within the experimental situation, that justice would prevail; therefore, people may have been more attuned to and more affected by information relevant to justice because they were less sure that justice would occur than were participants in the control conditions. In the control conditions, participants may have been more likely to assume that fairness would prevail.

In summary, these studies may not show that justice is important because it helps reduce uncertainty, but, rather, that when people are made to feel uncertain about whether justice will occur in a specific situation, they will be more affected by justice-diagnostic information. Although the arguments presented here remain speculative, they illustrate our point that researchers may sometimes misinterpret the operation of a justice motive as another underlying drive.

Our reinterpretation of the effects of van den Bos and Miedema's (2000) results also suggests how a justice motive may be incorporated into terror management theory (cf. Lerner, 1997; Pyszczynski, Greenberg, & Solomon, 1997), which is often tested by examining the effects of a mortality-salience manipulation (see Greenberg, Solomon, & Pyszczynski, 1997). Perhaps some of the effects in terror management experiments are due to the threat to one's need to believe in a just world that confronting death provokes (Hafer, 2002a) rather than a belief in a just world acting as a buffer to the more basic threat of death (cf. Lerner, 1997; Pyszczynski et al., 1997). Thus, for example, the increase in worldview defense as a result of mortality salience may reflect people's increased attempt to make sure that individuals get what they deserve (e.g., that the "bad guys" are punished, and the "good guys" are rewarded; see Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989), and/or to make sure that the justice norms of their group are upheld (e.g., that American society is fair, see Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994, Studies 1–3). Furthermore, these behaviors may be in direct reaction to the threat of injustice posed by thoughts of death. Ben-Ari, Florian and

Mikulincer's (1999) counterintuitive finding that some people engaged in more risky, life-threatening behavior when they were made to think of their own death may reflect these individuals' attempt to maintain some semblance of a belief in a just world by proving their invulnerability to the ultimate injustice of death through the increase of personally meaningful, risky behavior. Or, at some unconscious level, these individuals may have been trying to restore justice by at least ensuring that their own death would be deserved (in the sense that they would be responsible for the death). Our comments here, of course, are exploratory, but they serve as another illustration of how a justice motive, especially a concern with justice derived from a need to believe in a just world where people get what they deserve, may underlie effects attributed primarily to another motive (as well as adding to our previous discussion on the application of just-world theory to other phenomena in the social sciences).

Future research on the relation of other motives to the justice motive should not only consider, of course, the possibility that researchers may not be studying what they claim but also should test different conceptualizations of the justice motive other than one that is fundamental, as suggested by just-world theory, or a justice motive that is based on another more basic need. For example, Skitka (2003) recently suggested that different motives may underlie the concern with justice, depending on what aspect of the self is relevant in a particular social situation. Should we also consider a justice motive that is at times subservient to one or more other motives and at other times more fundamental? Both just-world theory and other theories of social justice may have to be modified to deal with the answers gleaned from future research on these issues.

*Is what is just the same as what is deserved?* Just-world theory equates justice with deservingness. "A just world is one in which people 'get what they deserve'" (Lerner, 1980, p. 11). Just-world theory is similar in this regard to equity theory (e.g., Adams, 1965), and some formulations of relative deprivation theory (e.g., Crosby, 1982). However, by no means do all social justice researchers so closely link justice with the principle of deserving (cf. Crosby, Muehrer, & Loewenstein, 1986; Janoff-Bulman & Morgan, 1994; Kay & Jost, 2003; Major, 1994; Mikula, 1993; Montada, 1994).

An important task for future social justice research is to examine the similarities and differences between the concepts of justice and deserving as well as other justice-related constructs such as fairness, entitlement, equity, and the like (for recent theoretical and empirical work in this direction, see Feather, 2003; Feather & Johnstone, 2001; Hareli, 1999). This task will have major implications for just-world theory, and vice versa. For example, the reduction of justice to deservingness suggests a basis for the possible integration of certain justice concepts. Recent work by Heuer and his colleagues (Heuer et al., 1999; Sunshine & Heuer, 2002) speaks to this point and is discussed next.

There has long been a marked distinction in the social justice literature between distributive justice (i.e., the fairness of an allocation of resources) and procedural justice (i.e., the fairness of the process by which the final allocation decision is made and implemented as well as the interpersonal treatment given and received by actors in the relationship). Heuer (Heuer et al., 1999; Sunshine & Heuer, 2002), however, has shown evidence that respectful treatment, commonly seen as one element of procedural justice

(e.g., Bies & Moag, 1986; Tyler, 1994), is deemed fair in part to the extent that it is perceived as deserved. Other elements of procedural justice may be viewed in a similar manner. For example, having a voice (i.e., the opportunity to have a say in the decision process) may be seen as fair to the extent that people are perceived as deserving the chance to have input (see Brockner et al., 1998). This view diverges from most of the procedural justice literature in which particular elements of procedures, including respectful treatment and voice, seem to be viewed as the defining features of (procedural) justice, with little consideration of whether these elements are perceived as deserved. Perhaps certain elements of procedures seem more absolute than outcomes because a large proportion of people believe that they (as well as others) deserve these considerations (see Sunshine & Heuer, 2002); thus, the reduction of these principles to deservingness is merely taken for granted.

In any case, Heuer's work implies that there may be less difference between procedural and distributive justice than is presently thought (see also van den Bos et al., 2001). The scope of just-world theory is broader if the need to believe that people get what they deserve extends to the perceived deservingness of both the treatment people receive and the procedural rules they are subjected to as well as to the outcomes they eventually obtain. Indeed, just-world researchers seem to have implicitly accepted this view; for example, they do little to differentiate between violations of "procedural" and "distributive" justice principles, presumably because all these violations are assumed to reflect undeservingness on the part of the target, whether the target is the self or another individual or group (see Table 1 for examples in the post-1980 literature of just-world experiments in which participants are confronted with what may be called *procedural* injustices). Of course, even if concerns about procedural and distributive justice both reflect a concern with deservingness, they may still be distinguishable in other ways, such as in the function they fulfill or the information they impart to recipients (though for research that suggests this distinction may also be blurred, see Heuer, Penrod, Hafer, & Cohn, 2002; van den Bos, Lind, Vermunt, & Wilke, 1997; van den Bos, Vermunt, & Wilke, 1997).

In this part of our Future Challenges section, we focused on some implications of the close link between justice and deservingness proposed by just-world theory (and some other theories of social justice). Future research, however, may bring to light very clear distinctions between these two concepts. One implication of the nonequivalence between justice and deservingness is that there are boundaries between the phenomena explained by deservingness-based (such as just-world theory) and other theories of justice; a challenge will be to clarify those boundaries.

*What is the role of defensive processes in justice-related phenomena?* Another difference between just-world theory and many other theories of social justice is its focus on defensive processes. The theory proposes that people have a need to believe in a just world and will defend such a belief in a myriad of ways. Both theory and research tend to focus on defensive responses that involve psychological rationalizations and the creation of world-views (though more prosocial responses such as compensation of victims of injustice are also part of just-world theory). In contrast, emotion-based, defensive processes have been virtually ignored in much of present justice theorizing in favor of approaches that focus on colder cognitive information processing, less defensive

motivations (e.g., Brockner et al., 2003; Folger & Cropanzano, 2001; Tyler, 1994; van den Bos et al., 2001), or both. Indeed, the role of emotion more generally in people's justice-related thoughts and behavior has been relatively overlooked in recent years (for another early emotion-based perspective, other than just-world theory, see equity theory; e.g., Adams, 1965). An exception to this trend is recent work by Darley and his colleagues (for a review, see Darley, 2002) on the punishment of perpetrators (for some other exceptions, see Feather & Sherman, 2002; Goldberg, Lerner, & Tetlock, 1999; Mikula, Scherer, & Athenstaedt, 1998).

Darley, Carlsmith, and their colleagues (e.g., Carlsmith, Darley, & Robinson, 2002; Darley, Carlsmith, & Robinson, 2000) found evidence that the primary goal among laypeople in punishing offenders is a desire to ensure the transgressor gets his or her just desserts; sometimes called a desire for *retribution*. Furthermore, Darley and Pittman (2003) recently argued that the desire to punish for just desserts may be related to the strong emotions experienced as moral outrage. This perspective on how laypeople think and feel with regard to the punishment of offenders runs counter to the less emotion-based view of punishment decisions as driven by utilitarian considerations, such as deterrence (Darley & Pittman, 2003; see also Boeckmann & Tyler, 1997). Does the emotion behind the need for retribution derive from a fundamental need to believe in a just world where people get what they deserve? Future research is needed to integrate aspects of just-world theory with the drive for retribution. In any case, the work we have just discussed could contribute to just-world research by highlighting the relevance of reactions to perpetrators to just-world theory. As mentioned in the Important Developments section, a few experiments have investigated perpetrator punishment as a just-world restoration strategy, but, otherwise, punishment of transgressors has been relatively overlooked in just-world theory and in the experimental research.

Just-world theory's proposition that people are profoundly motivated to defend their sense of fairness can add greatly to the less defensive and emotional approaches to social justice reasoning and behavior. First, a motivation to defend a belief in a just world could help explain certain justice-related phenomena. For example, we have already described Hagedoorn et al.'s (2002) proposal that a need to believe in a just world may lead individuals to seize opportunities for seeing fairness in a situation, thus leading them to respond relatively positively as long as some element of the situation is fair (see also Hafer & Olson, 1989). They received some limited support for the notion that a motivated focus on fair aspects of a situation may help account for the oft-noted ability of fair procedures to offset negative reactions to unfair or unfavorable outcomes (whereas people express relatively positive responses in the presence of favorable or fair outcomes, regardless of the procedure).

The need to believe in a just world and the defensive strategies for maintaining such a belief may also help account for the tendency of some targets of discrimination to seemingly downplay the experience of injustice (e.g., Crosby, 1984; Martin, 1986; D. M. Taylor, Wright, Moghaddam, & Lalonde, 1990). Several explanations have been proposed, some of which are based on cognitive mechanisms (for reviews, see Major, Quinton, & McCoy, 2002; Olson & Hafer, 1996). The need to believe in a just world is one possible motivational antecedent of this phenomenon (see Olson & Hafer, 2001).

Similarly, just-world theory could complement theories that seek to explain the rationalization of social systems as legitimate (see Jost & Major, 2001). Although the belief in a just world as an ideological individual-difference variable has been examined in studies of legitimacy (e.g., Major et al., 2002), it is also possible that a fundamental need to believe in a just world, as described in original formulations of just-world theory, is one motivational precursor to the legitimization of social systems, along with cognitive precursors (e.g., Robinson & Kray, 2001; Yzerbyt & Rogier, 2001) and other motivational contributors suggested in the literature (e.g., Jost & Hunyday, 2002; Jost, Fitzsimons, & Kay, 2004). As suggested by Jost et al. (2004), future research may attempt to delineate the forms of system legitimization that derive from different motives—motives that vary in their defensiveness—as well as investigating the multiple psychological sources of various legitimating ideologies and acute reactions to events. In the context of this exercise, it may be useful to distinguish more clearly between *just* and *legitimate*, terms that are often used as if they were synonymous. Presumably, rationalizing a social system as just is only one way that a system may be psychologically legitimated. Recognizing this possibility may help to uncover differing precursors to, as well as various forms and consequences of, legitimization.

Aside from injecting present theories of justice with defensive and more emotionally laden processes, just-world theory also suggests that social justice researchers should consider the possibility that some of the motives and beliefs they propose may be relatively implicit. If so, the challenge will be to find ways to measure their concepts other than explicit self-report instruments (see Hafer, 2000a, and the *Conceptual issues: Implicit beliefs and motives* section of this article). The theory and methods of people's implicit psychology, although presently popular in other areas of personality and social psychology (e.g., Brauer et al., 2000; Koole, Dijksterhuis, & van Knippenberg, 2001; Woike, Lavezzary, & Barsky, 2001), have not been influential in social justice research outside of some recent work in just-world theory discussed earlier in this article (for a few exceptions, see Jost, Banaji, & Nosek, in press; Jost, Pelham, & Carvalho, 2002).

In summary, other areas of social justice research may benefit from just-world theory's emphasis on emotion-driven, defensive processes that arise from a potentially implicit motive. Of course, findings with respect to colder cognitive processes and explicit psychological constructs will also contribute to our understanding of the social psychology of justice. People can be driven by defensive, emotionally based desires, but they also possess the power for reason and rational reflection. As in any domain of social psychology, the challenge is in specifying how these various themes relate to one another and in delineating the boundaries of what they do and do not tell us about human behavior in a given domain (cf. Haidt, 2003; Pizarro & Bloom, 2003).

### Summary

The need to believe in a just world has sparked much research since Lerner and Simmons (1966) proposed the notion almost 40 years ago. Early work was summarized in Lerner and Miller (1978) and Lerner (1980). The first purpose of the present article was to review and critique post-1980 experiments that test hypotheses based on just-world theory; these experiments attempt to

apply, refine, extend, or, at times, refute various aspects of just-world theory. The second purpose was to outline important post-1980 developments in just-world research as well as to suggest directions and challenges for the future.

In the first section of this article, we introduced the notion of a fundamental need to believe in a just world that is necessary for people to organize their lives around principles of deservingness and that leads people to behave, even in the face of contradictory evidence, as if they believed that individuals get what they deserve. We then outlined the major experimental paradigms in just-world research and summarized general trends and characteristics of the experimental research.

In the second section of this article, we discussed several problems with post-1980 experiments testing just-world-based hypotheses. The goal of many of these studies is not to advance our understanding of just-world theory but rather to apply various just-world concepts, often along with concepts from other theories and research, to particular social issues. Although there is evidence of the intuitive appeal of just-world theory, this trend has meant that the experimental research has developed in an unsystematic manner and is often based on rather superficial notions of just-world theory. We also noted that just-world theory is sometimes misconstrued in the post-1980 experiments or the methodology is questionable. All of these characteristics often make results ambiguous and cross-study comparison difficult. Future research will have to begin with a more solid foundation in original just-world theory and research within studies that are directly designed to advance our knowledge in this area.

In the third section, we noted that, despite the frequent problems in the literature, a number of investigations do represent significant developments in just-world research. Researchers have made advances in testing basic aspects of just-world theory, in refining and extending its propositions, and in using just-world theory to account for social phenomena that were not previously linked to a need to believe in a just world. Many of these developments highlight the broad scope of just-world theory by showing its potential relevance to situations other than third-party blame and derogation of innocent victims.

In the last section of this article, we looked at several future challenges that, in our opinion, will have to be addressed if just-world theory is to continue to evolve and contribute to our understanding of social justice. We outlined ambiguities in the theory that should be examined, raised some overlooked issues, and compared the theory with other approaches in the social psychology of justice. This comparison led to some thoughts on how we may build links between just-world theory and other perspectives in the future.

We began this article with several actual events; some of which reached the world stage and have since taken on an almost mythical quality, others that had their moment in a more local spotlight, then faded from the memories of all but those most personally touched by them. Though differing in the scope of their impact, these events have in common the theme of justice. Just-world theory helps us to understand how this theme likely played out in the minds and behaviors of both the people more directly involved as well as those of us who experienced these events from afar. As we have tried to argue in this article, with further development, just-world theory has the potential to shed light on a much wider field of justice-related issues. Advances will only occur, however,

to the extent that researchers have a solid understanding of the original work in this area, pay attention to important post-1980 developments, and have the courage to meet the challenges of refining and modifying the theory and integrating it with other approaches. We hope that this article will serve as one resource to those future efforts.

## References

- Adams, S. J. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267–299). New York: Academic Press.
- Altemeyer, B. (1988). *Enemies of freedom: Understanding right-wing authoritarianism*. San Francisco: Jossey-Bass.
- Anderson, V. N. (1992). For whom is this world just? Sexual orientation and AIDS. *Journal of Applied Social Psychology*, 22, 248–259.
- Atkinson, J. W. (Ed.). (1958). *Motives in fantasy, action, and society: A method of assessment and study*. Oxford, England: Van Nostrand.
- Ball, G. A., Trevino, L. K., & Sims, H. P., Jr. (1994). Just and unjust punishment: Influences on subordinate performance and citizenship. *Academy of Management Journal*, 37, 299–322.
- Bègue, L., & Bastounis, M. (2003). Two spheres of belief in justice: Extensive support for the bidimensional model of belief in a just world. *Journal of Personality*, 71, 435–463.
- Ben-Ari, O. T., Florian, V., & Mikulincer, M. (1999). The impact of mortality salience on reckless driving: A test of terror management mechanisms. *Journal of Personality and Social Psychology*, 76, 35–45.
- Berger, J., Cohen, B. P., & Zelditch, M., Jr. (1972). Status characteristics and social interaction. *American Sociological Review*, 37, 241–255.
- Bierhoff, H. W. (2002). Just world, social responsibility, and helping behavior. In M. Ross & D. T. Miller (Eds.), *The justice motive in everyday life* (pp. 189–203). New York: Cambridge University Press.
- Bierhoff, H. W., Klein, R., & Kramp, P. (1991). Evidence for the altruistic personality from data on accident research. *Journal of Personality*, 59, 263–280.
- Biernat, M. (1989). Motives and values to achieve: Different constructs with different effects. *Journal of Personality*, 57, 69–95.
- Bies, R. J., & Moag, J. S. (1986). Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research on negotiations in organizations* (pp. 43–55). Greenwich, CT: JAI Press.
- Blascovich, J., & Kelsey, R. M. (1990). Using electrodermal and cardiovascular measures of arousal in social psychological research. In C. Hendrick & M. S. Clark (Eds.), *Review of personality and social psychology* (Vol. II, pp. 45–73). Newbury Park, CA: Sage.
- Blascovich, J., & Tomaka, J. (1996). The biopsychosocial model of arousal regulation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 28, pp. 1–51). New York: Academic Press.
- Boden, J. M., & Baumeister, R. F. (1997). Repressive coping: Distraction using pleasant thoughts and memories. *Journal of Personality and Social Psychology*, 73, 45–62.
- Boeckmann, R. J., & Tyler, T. R. (1997). Commonsense justice and inclusion within the moral community: When do people receive procedural protections from others? *Psychology, Public Policy, and Law*, 3, 362–380.
- Bonanno, G. A., Wortman, C. B., Lehman, D. R., Tweed, R. G., Haring, M., Sonnega, J., et al. (2002). Resilience to loss and chronic grief: A prospective study from preloss to 18-months postloss. *Journal of Personality and Social Psychology*, 83, 1150–1164.
- Braband, J., & Lerner, M. J. (1974). "A little time and effort" . . . Who deserves what from whom? *Personality and Social Psychology Bulletin*, 1, 177–179.
- Braman, A. C., & Lambert, A. J. (2001). Punishing individuals for their infirmities: Effects of personal responsibility, just-world beliefs, and

- in-group/out-group status. *Journal of Applied Social Psychology*, 31, 1096–1109.
- Brauer, M., Wasel, W., & Niedenthal, P. (2000). Implicit and explicit components of prejudice. *Review of General Psychology*, 4, 79–101.
- Brems, C., & Wagner, P. (1994). Blame of victim and perpetrator in rape versus theft. *Journal of Social Psychology*, 134, 363–374.
- Brockner, J., Heuer, L., Magner, N., Folger, R., Umphress, E., van den Bos, K., et al. (2003). High procedural fairness heightens the effect of outcome favorability on self-evaluations: An attributional analysis. *Organizational Behavior and Human Decision Processes*, 91, 51–68.
- Brockner, J., Heuer, L., Siegel, P. A., Wiesenfeld, B., Martin, C., Grover, S., et al. (1998). The moderating effect of self-esteem in reaction to voice: Converging evidence from five studies. *Journal of Personality and Social Psychology*, 75, 394–407.
- Brockner, J., & Wiesenfeld, B. M. (1996). An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures. *Psychological Bulletin*, 120, 189–208.
- Brosnan, S. F., & de Waal, F. B. M. (2003, September 18). Monkeys reject unequal pay. *Nature*, 425, 297–299.
- Burrows, D. J. (2000, January 13). Port dispute [Letter to the editor]. *The Press (Christchurch)*, p. 4.
- Carlsmith, K. M., Darley, J. M., & Robinson, P. H. (2002). Why do we punish?: Deterrence and just deserts as motives for punishment. *Journal of Personality and Social Psychology*, 83, 284–299.
- Carr, S. C., & MacLachlan, M. (1998). Actors, observers, and attributions for third world poverty: Contrasting perspectives from Malawi and Australia. *Journal of Social Psychology*, 138, 189–202.
- Carroll, J. S., Perkowitz, W. T., Lurigio, A. J., & Weaver, F. M. (1987). Sentencing goals, causal attributions, ideology, and personality. *Journal of Personality and Social Psychology*, 52, 107–118.
- Chaiken, S., & Trope, T. (Eds.). (1999). *Dual-process theories in social psychology*. New York: Guilford Press.
- Chen, E. S., & Tyler, T. R. (2001). Cloaking power: Legitimizing myths and the psychology of the advantaged. In A. Y. Lee-Chai & J. A. Bargh (Eds.), *The use and abuse of power: Multiple perspectives on the causes of corruption* (pp. 241–261). Philadelphia: Psychology Press.
- Comby, L., Devos, T., & Deschamps, J. C. (1995). Croyance en un monde juste: Responsabilités comportementales et morales attribuées aux personnes séropositives [Belief in a just world: Behavioral responsibility and moral attributions of seropositive people]. *Revue Internationale de Psychologie Sociale*, 2, 83–106.
- Connors, J., & Heaven, P. C. L. (1987). Authoritarianism and just world beliefs. *Journal of Social Psychology*, 127, 345–346.
- Copleman, M. (1994, October 23). [Letter to the editor]. *The New York Times Magazine*, p. 14.
- Correia, I., & Vala, J. (2003). When will a victim be secondarily victimized? The effect of observer's belief in a just world, victim's innocence and persistence of suffering. *Social Justice Research*, 16, 379–400.
- Correia, I., Vala, J., & Aguiar, P. (2001). The effects of belief in a just world and victim's innocence on secondary victimization, judgements of justice and deservingness. *Social Justice Research*, 14, 327–342.
- Cottrell, N. B., & Wack, D. L. (1967). Energizing effects of cognitive dissonance upon dominant and subordinate responses. *Journal of Personality and Social Psychology*, 6, 132–138.
- Couch, J. V. (1998). Another psychometric evaluation of the Just World Scale. *Psychological Reports*, 82, 1283–1286.
- Covati, C. J., Foley, L. A., & Coffman, K. A. (2001). Surviving spouse's demeanor and role theory in a wrongful death civil trial. *American Journal of Forensic Psychology*, 19, 41–56.
- Cozzarelli, C., Wilkinson, A. V., & Tagler, M. J. (2001). Attitudes toward the poor and attributions for poverty. *Journal of Social Issues*, 57, 207–227.
- Crandall, C. S., & Martinez, R. (1996). Culture, ideology, and anti-fat attitudes. *Personality and Social Psychology Bulletin*, 22, 1165–1176.
- Crosby, F. (1976). A model of egoistical relative deprivation. *Psychological Review*, 83, 85–113.
- Crosby, F. (1982). *Relative deprivation and working women*. New York: Oxford University Press.
- Crosby, F. (1984). The denial of personal discrimination. *American Behavioral Scientist*, 27, 371–386.
- Crosby, F. J., Muehrer, P., & Loewenstein, G. (1986). Relative deprivation and explanation: Models and concepts. In J. M. Olson, C. P. Herman, & M. P. Zanna (Eds.), *Relative deprivation and social comparison: Vol. 4. The Ontario Symposium* (pp. 17–32). Hillsdale, NJ: Erlbaum.
- Dalbert, C. (1993). Gefährdung des Wohlbefindens durch Arbeitsplatzunsicherheit: Eine Analyse der Einflußfaktoren Selbstwert und Gerechthe-Welt-Glaube [Endangering subjective well-being through job insecurity: An analysis of the impact of self-esteem and belief in a just world]. *Zeitschrift für Gesundheitspsychologie*, 1, 294–310.
- Dalbert, C. (1997). Coping with an unjust fate: The case of structural unemployment. *Social Justice Research*, 10, 175–189.
- Dalbert, C. (1998). Belief in a just world, well-being, and coping with an unjust fate. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 87–105). New York: Plenum Press.
- Dalbert, C. (1999). The world is more just for me than generally: About the personal belief in a just world scale's validity. *Social Justice Research*, 12, 79–98.
- Dalbert, C. (2001). *The justice motive as a personal resource: Dealing with challenges and critical life events*. New York: Kluwer Academic/Plenum.
- Dalbert, C. (2002). Beliefs in a just world as a buffer against anger. *Social Justice Research*, 15, 123–145.
- Dalbert, C., Lipkus, I., Sallay, H., & Goch, I. (2001). A just and an unjust world: Structure and validity of different world beliefs. *Personality and Individual Differences*, 30, 561–577.
- Dalbert, C., & Maes, J. (2002). Belief in a just world as a personal resource in school. In M. Ross & D. T. Miller (Eds.), *The justice motive in everyday life* (pp. 365–381). New York: Cambridge University Press.
- Dalbert, C., Montada, L., & Schmitt, M. (1987). Glaube an eine gerechte Welt als Motiv: Validierungskorrelate zweier Skalen [Belief in a just world: Validation correlates of two scales]. *Psychologische Beiträge*, 29, 596–615.
- Darley, J. M. (1992). Social organization for the production of evil. *Psychological Inquiry*, 3, 199–218.
- Darley, J. M. (2002). Just punishments: Research on retributive justice. In M. Ross & D. T. Miller (Eds.), *The justice motive in everyday life* (pp. 314–333). New York: Cambridge University Press.
- Darley, J. M., Carlsmith, K. M., & Robinson, P. H. (2000). Incapacitation and just deserts as motives for punishment. *Law and Human Behavior*, 24, 659–683.
- Darley, J. M., & Pittman, T. S. (2003). The psychology of compensatory and retributive justice. *Personality and Social Psychology Review*, 7, 324–336.
- De Judicibus, M., & McCabe, M. P. (2001). Blaming the target of sexual harassment: Impact of gender role, sexist attitudes, and work role. *Sex Roles*, 44, 401–417.
- DePalma, M. T., Madey, S. F., Tillman, T. C., & Wheeler, J. (1999). Perceived patient responsibility and belief in a just world affect helping. *Basic and Applied Social Psychology*, 21, 131–137.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, 56, 5–18.
- Dion, K. K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology*, 24, 285–290.
- Dion, K. L., & Dion, K. K. (1987). Belief in a just world and physical attractiveness stereotyping. *Journal of Personality and Social Psychology*, 52, 775–780.

- Dovidio, J. F., Kawakami, K., & Beach, K. R. (2001). Implicit and explicit attitudes: Examination of the relationship between measures of intergroup bias. In R. Brown & S. L. Gaertner (Eds.), *Blackwell handbook of social psychology: Intergroup processes* (pp. 175–197). Malden, MA: Blackwell.
- Drout, C. E., & Gaertner, S. L. (1994). Gender differences in reactions to female victims. *Social Behavior and Personality, 22*, 267–278.
- Ellard, J. H., & Bates, D. D. (1990). Evidence for the role of the justice motive in status generalization processes. *Social Justice Research, 4*, 115–134.
- Ellard, J. H., Lydon, J., & Celnar, C. (1998, June). *Development of the Justice Orientation Scale*. Presented at the annual meeting of the Canadian Psychological Association, Edmonton, Alberta, Canada.
- Ellard, J. H., Miller, C. D., Baumle, T., & Olson, J. M. (2002). Just world processes in demonizing. In M. Ross & D. T. Miller (Eds.), *The justice motive in everyday life* (pp. 350–362). New York: Cambridge University Press.
- Epstein, S. (1990). Cognitive-experiential self-theory. In L. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 165–192). New York: Guilford Press.
- Epstein, S., Lipson, A., Holstein, C., & Huh, E. (1992). Irrational reactions to negative outcomes: Evidence for two conceptual systems. *Journal of Personality and Social Psychology, 62*, 328–339.
- Esses, V. M., & Beaufoy, S. L. (1994). Determinants of attitudes toward people with disabilities. *Journal of Social Behavior and Personality, 9*, 43–64.
- Fazio, R. H., & Olson, M. A. (2003). Implicit measures in social cognition research: Their meaning and use. *Annual Review of Psychology, 54*, 297–327.
- Feather, N. T. (1992). An attributional and value analysis of deservingness in success and failure situations. *British Journal of Social Psychology, 31*, 125–145.
- Feather, N. T. (1999). *Values, achievement, and deservingness*. New York: Kluwer Academic/Plenum.
- Feather, N. T. (2003). Distinguishing between deservingness and entitlement: Earned outcomes versus lawful outcomes. *European Journal of Social Psychology, 33*, 367–385.
- Feather, N. T., & Johnstone, C. (2001). Social norms, entitlement, and deservingness: Differential reactions to aggressive behavior of schizophrenic and personality disorder patients. *Personality and Social Psychology Bulletin, 27*, 755–767.
- Feather, N. T., & Sherman, R. (2002). Envy, resentment, Schadenfreude, and sympathy: Reactions to deserved and undeserved achievement and subsequent failure. *Personality and Social Psychology Bulletin, 28*, 953–961.
- Feinberg, R. A., Powell, A., & Miller, F. G. (1982). Control and belief in the just world: What's good also can be bad. *Social Behavior and Personality, 10*, 57–61.
- Ferrari, J. (1990). Choosing to suffer after failure: Effects of frequent failure on self-administered shock. *Journal of Social Behavior & Personality, 5*, 163–174.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Finamore, F., & Carlson, J. M. (1987). Religiosity, belief in a just world and crime control attitudes. *Psychological Reports, 61*, 135–138.
- Folger, R., & Cropanzano, R. (2001). Fairness theory: Justice as accountability. In J. Greenberg & R. Cropanzano (Eds.), *Advances in organization justice* (pp. 1–55). Palo Alto, CA: Stanford University Press.
- Furnham, A. (1985). Just world beliefs in an unjust society: A cross cultural comparison. *European Journal of Social Psychology, 15*, 363–366.
- Furnham, A. (1995). The just world, charitable giving and attitudes to disability. *Personality and Individual Differences, 19*, 577–583.
- Furnham, A. (1998). Measuring the beliefs in a just world. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 141–162). New York: Plenum Press.
- Furnham, A. (2003). Belief in a just world: Research progress over the past decade. *Personality and Individual Differences, 34*, 795–817.
- Furnham, A. F., & Karani, R. (1985). A cross-cultural study of attitudes to women, just world, and locus of control beliefs. *Psychologia: An International Journal of Psychology in the Orient, 28*, 11–20.
- Furnham, A., & Procter, E. (1989). Belief in a just world: Review and critique of the individual difference literature. *British Journal of Social Psychology, 28*, 365–384.
- Furnham, A., & Procter, E. (1992). Sphere-specific just world beliefs and attitudes to AIDS. *Human Relations, 45*, 265–280.
- Furnham, A., & Rajamanickam, R. (1992). The Protestant work ethic and just world beliefs in Great Britain and India. *International Journal of Psychology, 27*, 401–416.
- Gerbasi, K. C., Zuckerman, M., & Reis, H. T. (1977). Justice needs a new blindfold: A review of mock jury research. *Psychological Bulletin, 84*, 323–345.
- Gilbert, D. T., Pelham, B. W., & Krull, D. S. (1988). On cognitive busyness: When person perceivers meet persons perceived. *Journal of Personality and Social Psychology, 54*, 733–740.
- Gilmartin-Zena, P. (1983). Attribution theory and rape victim responsibility. *Deviant Behavior, 4*, 357–374.
- Goldberg, J. H., Lerner, J. S., & Tetlock, P. E. (1999). Rage and reason: The psychology of the intuitive prosecutor. *European Journal of Social Psychology, 29*, 781–795.
- Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. (1994). Role of consciousness and accessibility of death-related thoughts in mortality salience effects. *Journal of Personality and Social Psychology, 67*, 627–637.
- Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 61–139). San Diego, CA: Academic Press.
- Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102*, 4–27.
- Gruman, J. C., & Sloan, R. P. (1983). Disease as justice: Perceptions of the victims of physical illness. *Basic and Applied Social Psychology, 4*, 39–46.
- Guzewicz, T. D., & Takooshian, H. (1992). Development of a short-form scale of public attitudes toward homelessness. *Journal of Social Distress & the Homeless, 1*, 67–79.
- Hafer, C. L. (2000a). Do innocent victims threaten the belief in a just world?: Evidence from a modified Stroop task. *Journal of Personality and Social Psychology, 79*, 165–173.
- Hafer, C. L. (2000b). Investment in long-term goals and commitment to just means drive the need to believe in a just world. *Personality and Social Psychology Bulletin, 26*, 1059–1073.
- Hafer, C. L. (2002a, June). *Life, death, and the justice motive*. Paper presented at the Biennial Conference of the International Society for Justice Research, Skövde, Sweden.
- Hafer, C. L. (2002b, December). *Responses to victims of injustice: What can we learn from repressors?* Paper given at the Justice Motive Symposium, Boca Raton, Florida.
- Hafer, C. L. (2002c). Why we reject innocent victims. In M. Ross & D. T. Miller (Eds.), *The justice motive in everyday life* (pp. 109–126). New York: Cambridge University Press.
- Hafer, C. L., & Olson, J. M. (1989). Beliefs in a just world and reactions to personal deprivation. *Journal of Personality, 57*, 799–823.
- Hafer, C. L., & Olson, J. M. (1993). Beliefs in a just world, discontent, and assertive actions by working women. *Personality and Social Psychology Bulletin, 19*, 30–38.

- Hafer, C. L., & Olson, J. M. (1998). Individual differences in the belief in a just world and responses to personal misfortune. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 65–86). New York: Plenum Press.
- Hafer, C. L., & Olson, J. M. (2003). An analysis of empirical research on the scope of justice. *Personality and Social Psychology Review*, 7, 311–323.
- Hagedoorn, M., Buunk, B. P., & Van de Vliert, E. (2002). Do just world believers process unfair authoritative decisions differently? *Applied Psychology: An International Review*, 51, 126–145.
- Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*, 108, 814–834.
- Haidt, J. (2003). The emotional dog does learn new tricks: A reply to Pizarro and Bloom (2003). *Psychological Review*, 110, 197–198.
- Hammock, G. S., & Richardson, D. (1993). Blaming drunk victims: Is it just world or sex role violation? *Journal of Applied Social Psychology*, 23, 1574–1586.
- Hareli, S. (1999). Justice and deservingness judgments—Refuting the interchangeability assumption. *New Ideas in Psychology*, 17, 183–193.
- Heaven, P. C., & Connors, J. (1988). Personality, gender, and “just world” beliefs. *Australian Journal of Psychology*, 40, 261–266.
- Hergovich, A., Ratky, E., & Stollreiter, M. (2003). Attitudes toward HIV-positives in dependence on their sexual orientation. *Swiss Journal of Psychology*, 62, 37–44.
- Heuer, L., Blumenthal, E., Douglas, A., & Weinblatt, T. (1999). A deservingness approach to respect as a relationally based fairness judgment. *Personality and Social Psychology Bulletin*, 25, 1279–1292.
- Heuer, L., Penrod, S., Hafer, C. L., & Cohn, I. (2002). The role of resource and relational concerns for procedural justice. *Personality and Social Psychology Bulletin*, 28, 1468–1482.
- Higgins, E. T., Rhodewalt, F., & Zanna, M. P. (1979). Dissonance motivation: Its nature, persistence, and reinstatement. *Journal of Experimental Social Psychology*, 15, 16–34.
- Holmes, J. G., Miller, D. T., & Lerner, M. J. (2002). Committing altruism under the cloak of self-interest: The exchange fiction. *Journal of Experimental Social Psychology*, 38, 144–151.
- Janoff-Bulman, R. (1982). Esteem and control bases of blame: “Adaptative” strategies for victims versus observers. *Journal of Personality*, 50, 180–192.
- Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York: Free Press.
- Janoff-Bulman, R., & Morgan, H. J. (1994). Victims’ responses to traumatic life events: An unjust world or an uncaring world? *Social Justice Research*, 7, 4–68.
- Jones, C., & Aronson, E. (1973). Attribution of fault to a rape victim as a function of respectability of the victim. *Journal of Personality and Social Psychology*, 26, 415–419.
- Jones, H. B. (1997). The Protestant ethic: Weber’s model and the empirical literature. *Human Relations*, 50, 757–778.
- Jost, J. T. (1995). Negative illusions: Conceptual clarification and psychological evidence concerning false consciousness. *Political Psychology*, 16, 397–424.
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, 33, 1–27.
- Jost, J. T., Banaji, M. R., & Nosek, B. A. (in press). A decade of system justification theory: Accumulated evidence of conscious and unconscious bolstering of the status quo. *Political Psychology*.
- Jost, J. T., & Burgess, D. (2000). Attitudinal ambivalence and the conflict between group and system justification motives in low status groups. *Personality and Social Psychology Bulletin*, 26, 293–305.
- Jost, J. T., Burgess, D., & Mosso, C. O. (2001). Conflicts of legitimation among self, group, and system: The integrative potential of system justification theory. In J. T. Jost & B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 363–388). New York: Cambridge University Press.
- Jost, J. T., Fitzsimons, G., & Kay, A. C. (2004). The ideological animal: A system justification view. In J. Greenberg, S. L. Koole, & T. Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. 263–283). New York: Guilford Press.
- Jost, J. T., & Hunyady, O. (2002). The psychology of system justification and the palliative function of ideology. *European Review of Social Psychology*, 13, 111–153.
- Jost, J. T., & Major, B. (Eds.). (2001). *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations*. New York: Cambridge University Press.
- Jost, J. T., Pelham, B. W., & Carvallo, M. R. (2002). Non-conscious forms of system justification: Implicit and behavioral preference for higher status groups. *Journal of Experimental Social Psychology*, 38, 586–602.
- Karuz, J., Jr., & Carey, T. O. (1984). Relative preference and adaptiveness of behavioral blame for observers of rape victims. *Journal of Personality*, 52, 249–260.
- Kassin, S. M., & Wrightsman, L. S. (1983). The construction and validation of a juror bias scale. *Journal of Research in Personality*, 17, 423–442.
- Kay, A. C., & Jost, J. T. (2003). Complementary justice: Effects of “poor but happy” and “poor but honest” stereotype exemplars on system justification and implicit activation of the justice motive. *Journal of Personality and Social Psychology*, 85, 823–837.
- Kay, A. C., Jost, J. T., & Young, S. (in press). Victim-derogation and victim-enhancement as alternate routes to system justification. *Psychological Science*.
- Kerr, N. L., Bull, R. H. C., MacCoun, R. J., & Rathborn, H. (1985). Effects of victim attractiveness, care and disfigurement on the judgments of American and British mock jurors. *British Journal of Social Psychology*, 24, 47–58.
- Kleinke, C. L., & Meyer, C. (1990). Evaluation of rape victim by men and women with high and low belief in a just world. *Psychology of Women Quarterly*, 14, 343–353.
- Koehler, J. J., & Gershoff, A. D. (2003). Betrayal aversion: When agents of protection become agents of harm. *Organizational Behavior and Human Decision Processes*, 90, 244–261.
- Koole, S. L., Dijksterhuis, A., & van Knippenberg, A. (2001). What’s in a name: Implicit self-esteem and the automatic self. *Journal of Personality and Social Psychology*, 80, 669–685.
- Kray, L. J., & Lind, E. A. (2002). The injustices of others: Social reports and the integration of others’ experiences in organizational justice judgments. *Organizational Behavior and Human Decision Processes*, 89, 906–924.
- Kristiansen, C. M., & Giulietti, R. (1990). Perceptions of wife abuse: Effects of gender, attitudes toward women, and just-world beliefs among college students. *Psychology of Women Quarterly*, 14, 177–189.
- Lacayo, R. (1997, September 15). Who shares the blame? *Time*, 150, 38–41.
- Lambert, A. J., & Raichle, K. (2000). The role of political ideology in mediating judgments of blame in rape victims and their assailants: A test of the just world, personal responsibility, and legitimization hypotheses. *Personality and Social Psychology Bulletin*, 26, 853–863.
- Lea, J. A., & Hunsberger, B. E. (1990). Christian orthodoxy and victim derogation: The impact of the salience of religion. *Journal for the Scientific Study of Religion*, 29, 512–518.
- Lerner, M. J. (1965). Evaluation of performance as a function of performer’s reward and attractiveness. *Journal of Personality and Social Psychology*, 1, 355–360.
- Lerner, M. J. (1971). Justice, guilt, and veridical perception. *Journal of Personality and Social Psychology*, 20, 127–135.
- Lerner, M. J. (1977). The justice motive: Some hypotheses as to its origins and forms. *Journal of Personality*, 45, 1–52.

- Lerner, M. J. (1978). "Belief in a just world" versus the "authoritarianism" syndrome. . . but nobody liked the Indians. *Ethnicity*, 5, 229–237.
- Lerner, M. J. (1980). *The belief in a just world: A fundamental delusion*. New York: Plenum Press.
- Lerner, M. J. (1997). What does the belief in a just world protect us from: The dread of death or the fear of undeserved suffering? *Psychological Inquiry*, 8, 29–32.
- Lerner, M. J. (1998). The two forms of belief in a just world. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 247–269). New York: Plenum Press.
- Lerner, M. J. (2003). The justice motive: Where psychologists found it, how they lost it, and why they may not find it again. *Personality and Social Psychology Review*, 7, 388–399.
- Lerner, M. J., & Agar, E. (1972). The consequences of perceived similarity: Attraction and rejection, approach and avoidance. *Journal of Experimental Research in Personality*, 6, 69–75.
- Lerner, M. J., & Goldberg, J. H. (1999). When do decent people blame victims? The differing effects of the explicit-rational and implicit-experiential cognitive systems. In S. Chaiken & T. Trope (Eds.), *Dual process theories in social psychology* (pp. 627–640). New York: Guilford Press.
- Lerner, M. J., & Miller, D. T. (1978). Just world research and the attribution process: Looking back and ahead. *Psychological Bulletin*, 85, 1030–1051.
- Lerner, M. J., Miller, D. T., & Holmes, J. G. (1976). Deserving and the emergence of forms of justice. In L. Berkowitz & E. Walster (Eds.), *Advances in experimental social psychology* (Vol. 9, pp. 133–162). New York: Academic Press.
- Lerner, M. J., & Simmons, C. H. (1966). Observer's reaction to the "innocent victim": Compassion or rejection? *Journal of Personality and Social Psychology*, 4, 203–210.
- Leventhal, G. S., & Anderson, D. (1970). Self-interest and the maintenance of equity. *Journal of Personality and Social Psychology*, 15, 57–62.
- Lipkus, I. (1991). The construction and preliminary validation of a global belief in a just world scale and the exploratory analysis of the multidimensional belief in a just world scale. *Personality and Individual Differences*, 12, 1171–1178.
- Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York: Plenum Press.
- Lodewijkx, H. F. M., Wildschut, T., Nijstad, B. A., Savenije, W., & Smit, M. (2001). In a violent world a just world makes sense: The case of "senseless violence" in The Netherlands. *Social Justice Research*, 14, 79–94.
- Long, G. T., & Lerner, M. J. (1974). Deserving, the "personal contract" and altruistic behavior by children. *Journal of Personality and Social Psychology*, 29, 551–556.
- Loo, R. (2002). A psychometric and cross-national examination of a belief in a just world scale. *Journal of Applied Social Psychology*, 32, 1396–1406.
- Luginbuhl, J., & Mullin, C. (1981). Rape and responsibility: How and how much is the victim blamed? *Sex Roles*, 7, 547–559.
- Lundh, L., & Dzyzykow-Czarnocka, S. (2001). Priming of the emotional Stroop effect by a schema questionnaire: An experimental study of test order. *Cognitive Therapy and Research*, 25, 281–289.
- Lundh, L., Wikström, J., Westerlund, J., & Öst, L. (1999). Preattentive bias for emotional information in panic disorder with agoraphobia. *Journal of Abnormal Psychology*, 108, 222–232.
- Lupfer, M. B., Doan, K., & Houston, D. A. (1998). Explaining unfair and fair outcomes: The therapeutic value of attributional analysis. *British Journal of Social Psychology*, 37, 495–511.
- MacLeod, C., & Rutherford, E. M. (1992). Anxiety and the selective processing of emotional information: Mediating roles of awareness, trait and state variables, and personal relevance of stimulus materials. *Behaviour Research and Therapy*, 30, 479–491.
- Maes, J. (1994). Blaming the victim: Belief in control or belief in justice? *Social Justice Research*, 7, 69–90.
- Maes, J. (1998a). Eight stages in the development of research on the construct of the belief in a just world. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 163–185). New York: Plenum Press.
- Maes, J. (1998b). Geht es in der Schule gerecht zu?—Überzeugungen der Schülerinnen und Schüler und deren Folgen [Is school life just?—Pupils' convictions and their consequences]. In A. Kaiser & R. Kaiser (Eds.), *Entwicklung und Erprobung von Modellen der Begabtenförderung am Gymnasium mit Verkürzung der Schulzeit. Abschlussuntersuchung in der Gymnasialen Oberstufe (MSS) [=Schulversuche und Bildungsforschung, 80/11]* (pp. 60–66). Mainz, Germany: Hase & Koehler.
- Maes, J. (1998c). Immanent justice and ultimate justice: Two ways of believing in justice. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 9–40). New York: Plenum Press.
- Maes, J., & Kals, E. (2002). Justice beliefs in school: Distinguishing ultimate and immanent justice. *Social Justice Research*, 15, 227–244.
- Maes, J., & Schmitt, M. (1999). More on ultimate and immanent justice: Results from the research project "Justice as a problem within reunified Germany." *Social Justice Research*, 12, 65–78.
- Major, B. (1994). From social inequality to personal entitlement: The role of social comparisons, legitimacy appraisals, and group membership. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 26, pp. 293–355). San Diego: Academic Press.
- Major, B., Quinton, W. J., & McCoy, S. K. (2002). Antecedents and consequences of attributions to discrimination: Theoretical and empirical advances. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 251–330). San Diego, CA: Academic Press.
- Markovsky, B. (1988). Injustice and arousal. *Social Justice Research*, 2, 223–233.
- Martin, J. (1986). The tolerance of injustice. In J. M. Olson, C. P. Herman, & M. P. Zanna (Eds.), *Relative deprivation and social comparison: Vol. 4. The Ontario Symposium* (pp. 217–242). Hillsdale, NJ: Erlbaum.
- McBride, C. (1998). The discounting principle and attitudes toward victims of HIV infection. *Journal of Applied Social Psychology*, 28, 595–608.
- McCaul, K. D., Veltum, L. G., Boyechko, V., & Crawford, J. J. (1990). Understanding attributions of victim blame for rape: Sex, violence, and foreseeability. *Journal of Applied Social Psychology*, 20, 1–26.
- McClelland, D. C., Koestner, R., & Weinberger, J. (1989). How do self-attributed and implicit motives differ? *Psychological Review*, 96, 690–702.
- McDonald, A. P. (1972). More on the Protestant ethic. *Journal of Consulting and Clinical Psychology*, 39, 116–122.
- McGraw, S. L., & Foley, L. A. (2000). Perceptions of insanity based on occupation of defendant and seriousness of crime. *Psychological Reports*, 86, 163–174.
- Mendolia, M., Moore, J., & Tesser, A. (1996). Dispositional and situational determinants of repression. *Journal of Personality and Social Psychology*, 70, 856–867.
- Metz, J. (1994, October 23). [Letter to the editor]. *The New York Times Magazine*, p. 14.
- Meyerowitz, B. E., Williams, J. G., & Gessner, J. (1987). Perceptions of controllability and attitudes toward cancer and cancer patients. *Journal of Applied Social Psychology*, 17, 471–492.
- Mikula, G. (1993). On the experience of injustice. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 4, pp. 232–244). Chichester, England: Wiley.
- Mikula, G., Scherer, K. R., & Athenstaedt, U. (1998). The role of injustice in the elicitation of differential emotional reactions. *Personality and Social Psychology Bulletin*, 24, 769–783.

- Miller, D. T. (1977). Altruism and threat to a belief in a just world. *Journal of Experimental Social Psychology, 13*, 113–124.
- Mogg, K., Bradley, B. P., Williams, R., & Mathews, A. (1993). Subliminal processing of emotional information in anxiety and depression. *Journal of Abnormal Psychology, 102*, 304–311.
- Mogg, K., Mathews, A. M., Bird, C., & MacGregor-Morris, R. (1990). Effects of stress and anxiety on the processing of threat stimuli. *Journal of Personality and Social Psychology, 59*, 1230–1237.
- Mohr, P. B., & Luscri, G. (1995a). Blame and punishment: Attitudes to juvenile and criminal offending. *Psychological Reports, 77*, 1091–1096.
- Mohr, P. B., & Luscri, G. (1995b). Social work orientation and just world beliefs. *Journal of Social Psychology, 135*, 101–103.
- Montada, L. (1994). Injustice in harm and loss. *Social Justice Research, 7*, 5–28.
- Montada, L. (1998). Justice: Just a rational choice? *Social Justice Research, 11*, 81–101.
- Montada, L., & Schneider, A. (1989). Justice and emotional reactions to the disadvantaged. *Social Justice Research, 3*, 313–344.
- Moran, G., & Comfort, J. C. (1982). Scientific juror selection: Sex as a moderator of demographic and personality predictors of impaneled felony juror behavior. *Journal of Personality and Social Psychology, 43*, 1052–1063.
- Moroi, K. (1983a). An experimental study of causal attributions for an unjust outcome. I: An examination of Lerner's just world hypothesis. *Japanese Journal of Psychology, 22*, 109–122.
- Moroi, K. (1983b). An experimental study of causal attributions for an unjust outcome. II: An examination of Lerner's just world hypothesis. *Japanese Journal of Psychology, 23*, 61–73.
- Morrison, C. (1997, September 13). Princess Diana, Dodi Fayed responsible for accident [Letter to the editor]. *The Toronto Star*, p. B3.
- Muller, R. T., Caldwell, R. A., & Hunter, J. E. (1994). Factors predicting the blaming of victims of physical child abuse or rape. *Canadian Journal of Behavioral Science, 26*, 259–279.
- Murder on the picket line. (n.d.). Retrieved May 26, 2003, from <http://www.susannassoapbox.com/nmurder.html>
- Murphy-Berman, V., & Berman, J. J. (1990). The effects of respondents' just world beliefs and target person's social worth and awareness-of-risk on perceptions of a person with AIDS. *Social Justice Research, 4*, 215–228.
- Murphy-Berman, V., Sullivan, M., & Berman, J. J. (1993). Effects of handicap severity, responsibility, and race on impressions of substance-abusing mothers and their children. *Journal of Applied Social Psychology, 23*, 1357–1375.
- Murray, C. B., & Stahly, G. B. (1987). Some victims are derogated more than others. *Western Journal of Black Studies, 11*, 177–180.
- Neiss, R. (1988). Reconceptualizing arousal: Psychobiological states in motor performance. *Psychological Bulletin, 103*, 345–366.
- Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review, 84*, 231–259.
- Novak, D. W., & Lerner, M. J. (1968). Rejection as a consequence of perceived similarity. *Journal of Personality and Social Psychology, 9*, 147–152.
- Olson, J. M., & Hafer, C. L. (1996). Affect, motivation, and cognition in relative deprivation research. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition* (Vol. 3, pp. 85–117). New York: Guilford Press.
- Olson, J. M., & Hafer, C. L. (2001). Tolerance of personal deprivation. In J. T. Jost & B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 157–175). New York: Cambridge University Press.
- Olson, J. M., Hafer, C. L., Couzens, A., & Kramins, I. (2000). You're OK, I'm OK: The self-presentation of affective reactions to deprivation. *Social Justice Research, 13*, 361–374.
- Olson, J. M., Hafer, C. L., & Taylor, L. (2001). I'm mad as hell and I'm not going to take it anymore: Reports of negative emotions as a self-presentation tactic. *Journal of Applied Social Psychology, 31*, 981–999.
- Olson, J. M., & Ross, M. (1984). Perceived qualifications, resource abundance, and resentment about deprivation. *Journal of Experimental Social Psychology, 20*, 425–444.
- Olson, J. M., & Stone, J. (in press). The influence of behavior on attitudes. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *Handbook of attitudes and attitude change*. Mahwah, NJ: Erlbaum.
- Opatow, S. (1990). Moral exclusion and injustice: An introduction. *Journal of Social Issues, 46*(1), 1–20.
- Opatow, S. (1995). Drawing the line: Social categorization, moral exclusion, and the scope of justice. In B. B. Bunker & J. Z. Rubin (Eds.), *Conflict, cooperation, and justice* (pp. 347–369). San Francisco: Jossey-Bass.
- O'Quin, K., & Vogler, C. C. (1989). Effects of just world beliefs on perceptions of crime perpetrators and victims. *Social Justice Research, 3*, 47–56.
- Pallak, M. S., & Pittman, T. S. (1972). General motivational effects of dissonance arousal. *Journal of Personality and Social Psychology, 21*, 349–358.
- Pancer, S. M. (1988). Salience of appeal and avoidance of helping situations. *Canadian Journal of Behavioural Science, 20*, 133–139.
- Pargament, K. I., & Hahn, J. (1986). God and the just world: Causal and coping attributions to God in health situations. *Journal for the Scientific Study of Religion, 25*, 193–207.
- Pepitone, A., & L'Armand, K. (1997). Justice in cross-cultural context: A social-psychological perspective. *Cross-Cultural Research, 31*, 83–100.
- Perrott, S. B., Miller, Y. M., & Delaney, M. E. (1997). Attitudes towards the mandatory arrest response to domestic battering: Gender and institutional differences from a traditional and a women's university. *Legal and Criminological Psychology, 2*, 35–49.
- Pizarro, D. A., & Bloom, P. (2003). The intelligence of the moral intuitions: A comment on Haidt (2001). *Psychological Review, 110*, 193–196.
- Porges, S. W. (1995). Cardiac vagal tone: A physiological index of stress. *Neuroscience and Biobehavioral Reviews, 19*, 225–233.
- Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why do we need what we need? A terror management perspective on the roots of human social motivation. *Psychological Inquiry, 8*, 1–20.
- Privacy law gets French, celebrity backing. (1997, September 2). *The Toronto Star*, p. A22.
- Raine, N. V. (1994, October 2). Returns of the day. *New York Times Magazine*, p. 34.
- Raine, N. V. (1998). *After silence*. New York: Crown Publishers.
- Reichle, B., Schneider, A., & Montada, L. (1998). How do observers of victimization preserve their belief in a just world cognitively or actionally? Findings from a longitudinal study. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 55–64). New York: Plenum Press.
- Reney, P. (1997, September 3). Diana might have paid price of reduced security. *The Review (Niagara Falls)*, p. A3.
- Robinson, R. J., & Kray, L. (2001). Status versus quo: Naive realism and the search for social change and perceived legitimacy. In J. T. Jost & B. Major (Eds.), *The psychology of legitimacy* (pp. 135–154). New York: Cambridge University Press.
- Rokeach, M. (1968). *Beliefs, attitudes, and values*. San Francisco: Jossey-Bass.
- Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for terror management theory: I. The effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology, 57*, 681–690.
- Rubin, Z., & Peplau, A. (1973). Belief in a just world and reactions to another's lot: A study of participants in the national draft lottery. *Journal of Social Issues, 29*, 73–93.

- Rubin, Z., & Peplau, L. A. (1975). Who believes in a just world? *Journal of Social Issues, 31*, 65–89.
- Schmitt, M. (1991). Ungerechtes Schicksal und Personbewertung [Unjust fate and evaluation of persons]. *Zeitschrift für Sozialpsychologie, 22*, 208–210.
- Schmitt, M. J. (1998). Methodological strategies in research to validate measures of belief in a just world. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 187–215). New York: Plenum Press.
- Schmitt, M., Kilders, M., Möhle, A., Müller, L., Pfrengle, A., Rabenberg, H., et al. (1991). Gerechte-Welt-Glaube, Gewinn und Verlust: Rechtfertigung oder ausgleichende Gerechtigkeit? [Belief in a just world, gain and loss: Justification or compensatory justice?] *Zeitschrift für Sozialpsychologie, 22*, 37–45.
- Schmitt, M., Neumann, R., & Montada, L. (1995). Dispositional sensitivity to befallen injustice. *Social Justice Research, 8*, 385–407.
- Schuller, R. A., Smith, V. L., & Olson, J. M. (1994). Juror's decisions in trials of battered women who kill: The role of prior beliefs and expert testimony. *Journal of Applied Social Psychology, 24*, 316–337.
- Sentence for Lyttleton picket line tragedy too light—Union. (2001, June 16). *The New Zealand Herald*, p. 8.
- Shaffer, D. R., Plummer, D., & Hammock, G. (1986). Hath he suffered enough? Effects of jury dogmatism, defendant similarity, and defendant's pretrial suffering on juristic decisions. *Journal of Personality and Social Psychology, 50*, 1059–1067.
- Shaver, K. G. (1970). Defensive attribution: Effects of severity and relevance on the responsibility assigned for an accident. *Journal of Personality and Social Psychology, 14*, 101–113.
- Shaw, J. I., & McMartin, J. A. (1977). Personal and situational determinants of attribution of responsibility for an accident. *Human Relations, 30*, 95–107.
- Sheridan, L., Gillett, R., Davies, G. M., Blaauw, E., & Patel, D. (2003). "There's no smoke without fire": Are male ex-partners perceived as more "entitled" to stalk than acquaintance or stranger stalkers? *British Journal of Psychology, 94*, 87–98.
- Sherman, M. F., Smith, R. J., & Cooper, R. (1982–1983). Reactions toward the dying: The effects of a patient's illness and respondents' beliefs in a just world. *Omega: Journal of Death and Dying, 13*, 173–189.
- Sherwood, A., Allen, M. T., Fahrenberg, J., Kelsey, R. M., Lovallo, W. R., & Van Doornen, L. J. P. (1990). Methodological guidelines for impedance cardiography. *Psychophysiology, 27*, 1–23.
- Simmons, C. H., & Mitch, J. R. (1985). Labeling public aggression: When is it terrorism? *Journal of Social Psychology, 125*, 245–251.
- Simons, C. W., & Piliavin, J. A. (1972). Effect of deception on reactions to a victim. *Journal of Personality and Social Psychology, 21*, 56–60.
- Skarlicki, D. P., Ellard, J. H., & Kelln, B. R. C. (1998). Third-party perceptions of a layoff: Procedural, derogation, and retributive aspects of justice. *Journal of Applied Psychology, 83*, 119–127.
- Skitka, L. J. (1999). Ideological and attributional boundaries on public compassion: Reactions to individuals and communities affected by a natural disaster. *Personality and Social Psychology Bulletin, 25*, 793–808.
- Skitka, L. J. (2002). Do the means always justify the ends, or do the ends sometimes justify the means? A value model of justice reasoning. *Personality and Social Psychology Bulletin, 28*, 588–597.
- Skitka, L. J. (2003). Of different minds: An accessible identity model of justice reasoning. *Personality and Social Psychology Review, 7*, 286–297.
- Skitka, L. J., & Mullen, E. (2002). Understanding judgments of fairness in a real-world political context: A test of the Value Protection Model of Justice Reasoning. *Personality and Social Psychology Bulletin, 28*, 1419–1429.
- Skitka, L. J., Mullen, E., Griffin, T., Hutchinson, S., & Chamberlin, B. (2002). Dispositions, scripts, or motivated corrections? Understanding ideological differences in explanations for social problems. *Journal of Personality and Social Psychology, 83*, 470–487.
- Skitka, L. J., & Tetlock, P. E. (1992). Allocating scarce resources: A contingency model of distributive justice. *Journal of Experimental Social Psychology, 28*, 491–522.
- Sloan, R. P., & Gruman, J. C. (1983). Beliefs about cancer, heart disease, and their victims. *Psychological Reports, 52*, 415–424.
- Smith, K. B. (1985). Seeing justice in poverty: The belief in a just world and ideas about inequalities. *Sociological Spectrum, 5*, 17–29.
- Son Hing, L. S., Li, W., & Zanna, M. P. (2002). Inducing hypocrisy to reduce prejudicial responses among aversive racists. *Journal of Experimental Social Psychology, 38*, 71–78.
- Sorrentino, R. M. (1981). Derogation of an innocently suffering victim: So who's the "good guy"? In J. P. Rushton & R. M. Sorrentino (Eds.), *Altruism and helping behavior* (pp. 267–283). Hillsdale, NJ: Erlbaum.
- Sorrentino, R. (1996). The role of conscious thought in a theory of motivation and cognition: The uncertainty orientation paradigm. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action* (pp. 619–644). New York: Guilford Press.
- Sorrentino, R. M., Roney, C. J. R., & Hanna, S. E. (1992). Uncertainty orientation. In C. P. Smith & J. W. Atkinson (Eds.), *Motivation and personality: Handbook of thematic content analysis* (pp. 419–427). New York: Cambridge University Press.
- Stephan, C. W., & Holahan, C. K. (1982). The influence of status and sex-typing on assessments of occupational outcome. *Sex Roles, 8*, 823–833.
- Stroessner, S. J., & Heuer, L. B. (1996). Cognitive bias in procedural justice: Formation and implications of illusory correlations in perceived intergroup fairness. *Journal of Personality and Social Psychology, 71*, 717–728.
- Sunshine, J., & Heuer, L. (2002). Deservingness and perceptions of procedural justice in citizen encounters with the police. In M. Ross & D. T. Miller (Eds.), *The justice motive in everyday life* (pp. 397–415). New York: Cambridge University Press.
- Taylor, C., & Kleinke, C. L. (1992). Effects of severity of accident, history of drunk driving, intent, and remorse on judgments of a drunk driver. *Journal of Applied Social Psychology, 22*, 1641–1655.
- Taylor, D. M., Wright, S. C., Moghaddam, F. M., & Lalonde, R. N. (1990). The personal/group discrimination discrepancy: Perceiving my group, but not myself, to be a target for discrimination. *Personality and Social Psychology Bulletin, 16*, 254–262.
- Taylor, S. E. (1983). Adjustment to threatening events: A theory of cognitive adaptation. *American Psychologist, 38*, 1161–1173.
- Taylor, S. E., & Brown, G. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193–210.
- Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.
- Thibaut, J., & Walker, L. (1978). A theory of procedure. *California Law Review, 66*, 541–566.
- Thornton, B. (1984). Defensive attribution of responsibility: Evidence for an arousal-based motivational bias. *Journal of Personality and Social Psychology, 46*, 721–734.
- Tomaka, J., & Blascovich, J. (1994). Effects of justice beliefs on cognitive appraisal of and subjective, physiological, and behavioral responses to potential stress. *Journal of Personality and Social Psychology, 67*, 732–740.
- Tomaka, J., Blascovich, J., Kibler, J., & Ernst, J. M. (1997). Cognitive and physiological antecedents of threat and challenge appraisal. *Journal of Personality and Social Psychology, 73*, 73–79.
- Triplet, R. G. (1992). Discriminatory biases in the perception of illness: The application of availability and representativeness heuristics to the AIDS crisis. *Basic and Applied Social Psychology, 13*, 303–322.
- Triplet, R. G., & Sugarman, D. B. (1987). Reactions to AIDS victims:

- Ambiguity breeds contempt. *Personality and Social Psychology Bulletin*, 13, 265–274.
- Tyler, T. R. (1994). Psychological models of the justice motive: Antecedents of distributive and procedural justice. *Journal of Personality and Social Psychology*, 67, 850–863.
- Tyler, T. R., Boeckmann, R. J., Smith, H. J., & Huo, Y. J. (1997). *Social justice research in a diverse society*. Boulder, CO: Westview Press.
- Tyler, T. R., DeGoeij, P., & Smith, H. (1996). Understanding why the justice of group procedures matters: A test of the psychological dynamics of the group-value model. *Journal of Personality and Social Psychology*, 70, 913–930.
- Tyler, T. R., & Lind, E. A. (1992). A relational model of authority in groups. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 115–191). San Diego, CA: Academic Press.
- van den Bos, K. (2001). Uncertainty management: The influence of uncertainty salience on reactions to perceived procedural fairness. *Journal of Personality and Social Psychology*, 80, 931–941.
- van den Bos, K., & Lind, E. A. (2002). Uncertainty management by means of fairness judgments. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 1–60). San Diego, CA: Academic Press.
- van den Bos, K., Lind, E. A., Vermunt, R., & Wilke, H. A. M. (1997). How do I judge my outcome when I do not know the outcome of others? The psychology of the fair process effect. *Journal of Personality and Social Psychology*, 72, 1034–1046.
- van den Bos, K., Lind, E. A., & Wilke, H. A. M. (2001). The psychology of procedural and distributive justice viewed from the perspective of fairness heuristic theory. In R. Cropanzano (Ed.), *Justice in the workplace: From theory to practice*. Vol. 2. *Series in applied psychology* (pp. 49–66). Mahwah, NJ: Erlbaum.
- van den Bos, K., & Miedema, J. (2000). Toward understanding why fairness matters: The influence of mortality salience on reactions to procedural fairness. *Journal of Personality and Social Psychology*, 79, 355–366.
- van den Bos, K., Vermunt, R., & Wilke, H. A. M. (1997). Procedural and distributive justice: What is fair depends more on what comes first than on what comes next. *Journal of Personality and Social Psychology*, 72, 95–104.
- Villemur, N. K., & Hyde, J. S. (1983). Effects of sex of defense attorney, sex of juror, and age and attractiveness of the victim on mock juror decision making in a rape case. *Sex Roles*, 9, 879–889.
- Wagstaff, G. F. (1983). Correlates of the just world in Britain. *Journal of Social Psychology*, 121, 145–146.
- Walker, L., LaTour, S., Lind, E. A., & Thibaut, J. (1974). Reactions of participants and observers to modes of adjudication. *Journal of Applied Social Psychology*, 4, 295–310.
- Walster, E., Walster, G. W., & Berscheid, E. (1978). *Equity: Theory and research*. Boston: Allyn & Bacon.
- Waterman, C. K. (1969). The facilitating and interfering effects of cognitive dissonance on simple and complex paired associates learning tasks. *Journal of Experimental Social Psychology*, 5, 31–42.
- Watts, F. N., McKenna, F. P., Sharrock, R., & Trezise, L. (1986). Colour-naming of phobia-related words. *British Journal of Psychology*, 77, 97–108.
- Weinberger, D. A., Schwartz, G. E., & Davidson, R. J. (1979). Low-anxious, high-anxious, and repressive coping styles: Psychometric patterns and behavioral and physiological responses to stress. *Journal of Abnormal Psychology*, 88, 369–380.
- Whately, M. A., & Riggio, R. E. (1993). Gender differences in attributions of blame for male rape victims. *Journal of Interpersonal Violence*, 8, 502–511.
- Williams, J. M. G., Mathews, A., & MacLeod, C. (1996). The emotional Stroop task and psychopathology. *Psychological Bulletin*, 120, 3–24.
- Williams, S. (1984). Left-right ideological differences in blaming victims. *Political Psychology*, 5, 573–581.
- Woike, B. A. (1995). Most-memorable experiences: Evidence for a link between implicit and explicit motives and social cognitive processes in everyday life. *Journal of Personality and Social Psychology*, 68, 1081–1091.
- Woike, B., Lavezzary, E., & Barsky, J. (2001). The influence of implicit motives on memory processes. *Journal of Personality and Social Psychology*, 81, 935–945.
- Wortman, C. B., & Dunkel-Schetter, C. (1979). Interpersonal relationships and cancer: A theoretical analysis. *Journal of Social Issues*, 35(1), 120–155.
- Wyer, R. S., Jr., Bodenhausen, G. V., & Gorman, T. F. (1985). Cognitive mediators of reactions to rape. *Journal of Personality and Social Psychology*, 48, 324–338.
- Yzerbyt, V., & Rogier, A. (2001). Blame it on the group: Entitativity, subjective essentialism, and social attribution. In J. T. Jost & B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 103–134). New York: Cambridge University Press.
- 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.
- Zoglin, R. (1997, September 15). Hey, wanna buy some pix? *Time*, 150, 42–43.

Received August 11, 2003

Revision received August 16, 2004

Accepted August 30, 2004 ■

## E-Mail Notification of Your Latest Issue Online!

Would you like to know when the next issue of your favorite APA journal will be available online? This service is now available to you. Sign up at <http://watson.apa.org/notify/> and you will be notified by e-mail when issues of interest to you become available!