

Choice Making and Difference Making
in the Perception of
Control, Responsibility, and Blame

by

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presented to the University of Manitoba
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**Choice Making and Difference Making in the Perception
of Control, Responsibility, and Blame**

BY

Deborah M. Gural

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
of Manitoba in partial fulfillment of the requirements of the degree
of
Doctor of Philosophy**

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Abstract

To assess the effects of choice-making and difference-making in relation to a negative event, 291 university students were randomly assigned to one of four conditions: (a) Free-Choice/Outcome-Difference, (b) Free-Choice/No-Outcome-Difference, (c) Restricted-Choice/Outcome-Difference, and (d) Restricted-Choice/No-Outcome-Difference. Participants in all conditions were asked to imagine themselves as the “actor” in a scenario describing the unfolding of a negative event. Participants in Choice conditions were told that the actor had a choice between two possible actions, whereas those in No-Choice conditions were told that the actor was restricted in practice to one of two possible actions. Participants in Outcome-Difference conditions were told that the actor’s action made a difference to the occurrence of the negative event, whereas those in No-Outcome-Difference conditions were told that the actor’s action was unrelated to the occurrence of the negative event. As predicted, participants in Outcome-Difference conditions gave higher ratings of control than those in No-Outcome-Difference conditions, but the choice manipulation did not affect the dependent variables. Findings support Nickels’ (1980) reconceptualization of control, which suggests that making a difference in consequences is a primary factor related to perceptions of control. Findings also support the argument that measures of control, responsibility, and blame should distinguish between perceptions of an event and perceptions of the consequences of an event. The theoretical and methodological implications of the results are discussed.

Choice Making and Difference Making in the Perception of Control, Responsibility, and Blame

There is disagreement among researchers regarding the nature, severity, and persistence of psychological and physical disorders following stressful events (e.g., Selye, 1976; Taylor, 1986). Nevertheless, research does suggest that exposure to stressors results in cognitive deficits (Bremner, 1999; Glass & Singer, 1972; Nelson & Carver, 1998; Zajonc, 1965), social deficits (Cohen, 1980; Cohen & Spacapan, 1978), emotional deficits (Kessler, 1997; Maier & Seligman, 1976; Taylor, 1986), and even illness (Cohen & Herbert, 1996; Cohen, Tyrell, & Smith, 1993) and sudden death (Cottingham, Matthews, Talbott, & Kuller, 1980; Engel, 1971). Significantly, not all individuals exposed to the same stressor experience the same degree of negative outcome (e.g., Baum, Cohen, & Hall, 1993; Speisman, Lazarus, Mordkoff, & Davidson, 1964). In part, this variation in outcomes has been attributed to mediating factors including: (a) the nature of the stressor, (b) one's psychological appraisal of the event, and (c) coping responses made by the individual (Valentiner, Holahan, & Moos, 1994).

The Nature of the Stressor

Some events are more likely to produce stress and negative outcomes than are others. For example, negative events increase psychological distress and physical symptoms (e.g., Fitzpatrick, 1998; Sarason, Johnson, & Seigel, 1978; McFarlane, Norman, Streiner, Roy, & Scott, 1980). Research also consistently demonstrates that uncontrollable events result in more stress-related negative outcomes than controllable events. Specifically, the emotional, physiological, cognitive, and motivational deficits that result when an organism is exposed to uncontrollable aversive stimuli have been

studied extensively by numerous researchers (see Glass & Singer, 1973; Maier & Seligman, 1976, Perlmutter & Eads, 1998, for reviews). Much of this research has focused on the control of aversive and stressful stimuli, with control generally defined as the dependence of an outcome on a response (contingency). This research suggests that both humans (Klein & Kunda, 1994; Miller, 1979) and animals (Seligman, 1975) generally prefer controllable events to uncontrollable events.

Accordingly, the debilitating consequences of exposure to uncontrollable stimuli have been observed across various species and experimental situations. For example, Sklar and Anisman (1981) found that tumours grow more quickly in mice given inescapable (uncontrollable) shock than in mice given escapable (controllable) or no shock. Similarly, rats exposed to uncontrollable shock were only half as likely to reject a tumour and twice as likely to die than rats exposed to uncontrollable or no shock (Visintainer, Volpicelli, & Seligman, 1982). The researchers conclude that these results imply that “lack of control over stressors reduces tumour rejection and decreases survival” (p. 437). This increase in susceptibility to tumour growth and death has been explained as resulting from a suppression of the organisms’ immune system that has been found to follow exposure to uncontrollable aversive events (Greenberg, Dyck, & Sandler, 1984; Laudenslager, Ryan, Drugan, Hyson, & Maier, 1983; Stein, Keller & Schleifer, 1985). Previous studies with human participants also demonstrate the adverse effects of exposure to uncontrollable events. For example, exposure to uncontrollable stimuli has been observed to result in behavioral symptoms of depression (Gatchel, Paulus, & Maples, 1975).

From the reverse perspective, definite benefits resulting from controllability (i.e., Hiroto, 1974; Miller & Seligman, 1975) have been observed. Perceptions of control over a stimulus appear to be important in reducing the aversiveness of unpleasant situations (e.g., Glass & Singer, 1972), reducing participants' ratings of pain for aversive stimuli (Miller, 1979), facilitating recovery from illness (Moser & Dracup, 1995), and assisting in adjustment to both short term stressors (Averill, 1973; Thompson, 1981) and long term stressors (Scharloo, & Kaptein, 1997; Taylor, Lickman, & Wood, 1984). The conclusions resulting from this research attest to the importance of control for permitting mediating responses to stressful events in a variety of situations (Averill, 1973; Seligman, 1975).

Appraisals of the Event: Perceptions of Control

On the basis of the above discussion, uncontrollable events produce more stress than controllable events. It is recognized, however, that both objective characteristics and subjective appraisal are important dimensions of a stress event (Monroe & Kelley, 1995). In fact, various stress and coping models suggest that the perception of the event is more influential in the stress process than are the objective characteristics of the event. According to this view, one's perception of the event and subsequent responses are paramount in determining whether or not the individual will experience negative or positive outcomes (Pearlin, Lieberman, Menaghan, & Mullan, 1981; Taylor, 1986). Thus, one's experience of stress and related symptoms are not simply a function of external conditions but are related to (a) one's awareness of the stressor; (b) one's subjective appraisal of the stressor; and (c) one's confidence that subsequent responses can reduce the undesirable aftermath of the stressor.

Within this framework, a distinction is made between primary and secondary appraisal processes. Primary appraisal refers to the perception of threat in relation to an event and secondary appraisal refers to perceptions of personal and situational resources (Lazarus & Folkman, 1984). The crucial component in this transactional model is the subjective appraisal of the particular situation, rather than the objective qualities of the stressful event (Folkman & Lazarus, 1985). Perceptions of control are an important element in this model of stress and coping (Folkman, 1984) and are often considered as a secondary appraisal process (Folkman, Lazarus, Gruen, & DeLongis, 1986).

Although perceived control is not completely independent of objective factors, it has been argued that it is one's perception of control in a situation that will affect one's reaction and subsequent response to an event rather than merely the objective control that is present. For example, Thompson (1981) defines personal control as "the belief that one has at one's disposal a response that can influence the aversiveness of an event" (p. 89). This definition implies that control is subjective and need not be real or exercised in order to be effective in altering one's appraisal of a situation (Lazarus & Folkman, 1984). Consistent with this view, researchers have made the distinction between perceptions of control and actual control (e.g., Abramson, Seligman, & Teasdale, 1978; Skinner, 1996). Langer and Brown (1992), for example, examined the distinction between objective (actual) and perceived control. These researchers note that previous studies have considered and defined control largely from the experimenter's perspective. From this perspective, control is present when one has a real impact on an event. However, Langer and Brown (1992) suggest that it may be more appropriate to consider the actor's perspective when defining control. In accordance with this view, research suggests that it

is the perception of control that is important in producing controllability benefits (Langer & Brown, 1992). Accordingly, it is the perception of control that is important in the appraisal of potential stressful events.

Research confirms that appraising an event as controllable is associated with increased adjustment to stressful events. Taylor et al. (1984) interviewed breast cancer patients, and found that those who believed they could exert control over the course of their cancer were significantly better adjusted than those who lacked such perceptions of control. Similarly, Michela (1986) interviewed patients who had suffered a myocardial infarction and recorded their current feelings and behaviors and those they remembered having shortly after the attack. Perceptions of lack of control were correlated with depression and the greater the initial feeling of loss of control, the greater current distress they reported (Michela, 1986). Other researchers observed that perceptions of diminished control in arthritis patients were associated with greater anxiety and depression, perceptions of poor clinical status, and greater impairments in daily living (Nicassio, Wallston, Callahan, Herbert, & Pincus, 1985). Consistent with these findings, Davidson, Baum, and Collins (1982) observed increased stress-associated symptomatology for disaster subjects who reported decreased perceptions of control. Similar findings have been observed for patients with heart disease (Helgeson, 1992) and AIDS (Reed, Taylor, & Kemeny, 1993). More recently, Griffin and Rabkin (1998) found that perceptions of control over the course of illness for individuals with late-stage AIDS were associated with fewer symptoms of depression and decreased anxiety about death. In addition, Reynolds (1997) found that perceptions of control were associated with less distress during episodes of menopausal hot flushes.

Research also shows that appraising an event as controllable can improve adjustment to stressful events. For example, college students who were given control over some aspects of their introductory psychology course performed significantly better on a class exam compared to those with no control (Liem, 1975). In a more recent study by DasGupta (1992), students in an introductory psychology class were asked to submit questions for an upcoming test. Students who were told that their questions would be used to set the test questions (controllable condition) reported significantly higher ratings of control and fewer stress symptoms than those students who were told that their questions would be used as a review summary (DasGupta, 1992). In a study by Houtstra and Smyth (1995), individuals with epilepsy completed the "Taking Control of Your Epilepsy" treatment program that included teaching toward an understanding of stress, coping strategies, drug treatments, social support, and identifying seizure auras and triggers. The program was effective in reducing seizure frequency in the majority of participants and also appeared to contribute to increased perceptions of control (Houtstra & Smyth, 1995).

This research suggests that appraisals of event-controllability, that is, concluding that one's actions make a difference in outcomes, are important in adjusting to stressful events. In accordance with this view, it is now generally accepted that one's experience of stress cannot be adequately predicted solely from the intensity of its sources (Pearlin et al., 1981). Instead, various perceptions and behaviors mediate the impact of stressful occurrences; collectively, these are referred to as mediators (Pearlin et al., 1981). One explanation for variability in outcome following exposure to a stressor, then, is related to the different perceptions and psychological reactions made in response to the event.

Specifically, these perceptions and reactions mediate between the external event (potential stressor) and its impact on the individual (outcome) via responses that are made following the event (coping).

Coping Responses

Coping has been defined and conceptualized in numerous ways, often used interchangeably with concepts such as mastery, defense, and adaptation (White, 1974). Coping is generally viewed as a stabilizing factor that can help one maintain psychosocial adaptation during stressful periods (Lazarus & Folkman, 1984; Moos & Schaefer, 1993). More specifically, coping refers to problem-solving efforts for responding to a threatening situation that is highly relevant to the individual's well-being or welfare (Lazarus, Averill, & Opton, 1974; Lazarus, 1993). Pearlin and Schooler (1978) define coping as "any response to external life-strains that serves to prevent, avoid, or control emotional distress" (p. 3). Responses to stressful events may include physiological, emotional, cognitive, and behavioral changes (Taylor, 1986) made in attempt to deal with the stressful event. Each of these conceptualizations view coping as a variable that can mediate the impact of stressful events (Pearlin et al., 1981).

The full range of responses that one can employ in an attempt to cope with a stressful event is impossible to summarize; literally hundreds of coping strategies can be used in response to a stressful event. Rather than identify all possible coping responses, researchers have attempted to identify broad dimensions of coping. Several classification systems have been proposed on theoretical grounds (Moos & Schaefer, 1993). Most approaches distinguish between strategies oriented toward the approach and confrontation of the problem and those oriented toward the avoidance of dealing directly

with the problem (Roth & Cohen, 1986). For these approaches, the distinguishing factor used to categorize various coping responses is the function of the coping response. For example, Lazarus and colleagues (Folkman, 1984; Lazarus & Folkman, 1984) distinguish between two forms of coping efforts, each serving a particular function. Specifically, problem-focused efforts refer to cognitive or behavioral attempts to change or manage the stressful conditions, while emotion-focused efforts involve cognitive or behavioral efforts to regulate the emotional consequences of the stressful event (Pearlin & Schooler, 1978; Folkman, 1984). Latack (1986) proposed similar dimensions of coping, in which control oriented efforts involve proactive behavioral or cognitive strategies, while escape oriented efforts involve strategies focused on avoiding or escaping the situation.

Recent models of adaptation to stressful events are consistent with these earlier conceptualizations. For example, Brandtstaedter and Renner (1990) distinguish between assimilative and accommodative strategies of adjustment. Assimilative strategies refer to adjusting life circumstances to personal preferences, and accommodative strategies refer to adjusting personal preferences to situation constraints (Brandtstaedter & Renner, 1990). Similarly, Roese and Olson (1995) support a functional model of counterfactual cognitions following stressful events, in which cognitions serve either a preparative (focusing on making future improvement) or affective (focusing on feeling better) function following an outcome. According to this conceptualization of coping, cognitive responses to coping involve either problem-focused coping (if the cognitions are directed toward altering the situation that is causing distress) or emotion-focused coping (if the cognitions are directed toward regulating emotional distress).

Other researchers identify three major types of coping (Billings & Moos, 1983; Moos & Schaefer, 1986; Pearlin & Schooler, 1978). Problem-focused coping seeks to confront the reality of a crisis and its effects by attempting to alter actual external conditions, emotion-focused coping aims to manage the emotional consequences resulting from a stressful event so as to place them within manageable bounds, and appraisal-focused coping involves attempts to understand and redefine the meaning of the stress-producing experience so as to downgrade its significance. Therefore, coping efforts can be directed toward behavioral responses (problem-focused coping), affective responses (emotion-focused coping), or cognitions (appraisal-focused coping). It should be emphasized that distinctions between broad categories of coping are theoretically derived. Although empirical findings generally support the distinction among general ways of coping (e.g., problem-focused coping versus emotion-focused coping), there has been debate regarding the basic dimensions of coping (e.g., Carver, Scheier, & Weintraub, 1989).

Coping Effectiveness

Based on classification systems that allow one to categorize coping strategies according to theoretically derived dimensions, researchers have attempted to determine if the coping strategies subsumed under one of these broad categories is more effective than those under other categories. Generally, research in this area has categorized coping strategies according to the problem-focused versus emotion-focused distinction, as conceptualized by Lazarus and Launier (1978) and Lazarus and Folkman (1984). Findings suggest that approach-coping is associated with better psychological outcomes, whereas avoidance-coping is associated with poorer outcomes (Conway & Terry, 1992;

Holahan & Moos, 1990; Vitaliano, Maiuro, & Russo, 1987). Other findings suggest that problem-focused strategies have positive associations with measures of psychological well-being (e.g., Folkman et al., 1986), whereas reliance on emotion-focused strategies tend to be associated with poor mental health (e.g., Aldwin & Revenson, 1987).

Other findings, however, suggest that problem-focused coping is not always more adaptive than emotion-focused coping and may depend on the specific situation and the outcomes of interest (Carver & Scheier, 1994; Lazarus, 1993; Terry, 1994). Research suggests that the adaptive significance of approach versus avoidant coping strategies may depend on the controllability of the stressors that are confronted (Folkman, 1984; Roth & Cohen, 1986). Accordingly, problem-focused strategies will be most effective if the event has some potential for control, whereas emotion-focused responses will be most effective for low control events (Forsythe & Compas, 1987). Therefore, the role of coping in the stress process seems to vary as a function of event controllability.

Valentiner et al. (1994) investigated both mediating (type of coping strategy) and moderating (appraisals of event controllability) mechanisms in the coping process in an integrative predictive framework. For participants who reported a controllable stressor, the percentage of approach coping was significantly related to changes in psychological adjustment; conversely, for participants who reported an uncontrollable stressor, the percentage of approach coping did not significantly predict changes in psychological adjustment (Valentiner, et al., 1994). Thus, coping efforts had different consequences for those who reported being exposed to a controllable versus uncontrollable event. These findings seem to integrate previous research on controllability and coping choices (Folkman et al., 1986; Scheier, Weintraub, & Carver, 1986) with previous research

supporting a relative effectiveness theory of coping (Forsythe & Compas, 1987; Vitaliano, DeWolfe, Maiuro, Russo, & Katon, 1990). This theory states that control may be a moderator variable that can affect coping, and thus have an impact on the experience of stress and subsequent adaptation. Specifically, perceptions of control may affect one's choice of response strategy and the effectiveness of the chosen strategy.

The appropriateness of a coping response, given a particular appraisal, has been termed the goodness of fit (Vitaliano et al., 1990). According to this model, people who match their coping efforts with their appraisal of controllability will be less distressed than those who mismatch such thoughts and behaviors (Vitaliano et al., 1990). Evaluations of the goodness of fit between the appraisal of a stressor (as changeable versus not changeable) and subsequent coping and distress have yielded some support for the model. For example, Compas, Malcarne, and Fondacaro (1988) found that distress-related behavioral problems in 120 children and adolescents were greatest when their appraisal of the controllability of a situation and the coping with that situation were mismatched. Specifically, individuals who had low-appraisals of control together with high problem-focused coping and those who had high appraisals of control together with low problem-focused coping had the highest levels of behavior problems. Similarly, Forsythe and Compas (1987) investigated relationships between appraisals of control, coping, and distress using a sample of undergraduate students. Examining the goodness of fit between appraised control, problem-focused coping, and symptoms of distress, these researchers found a significant interaction between appraisal and coping. Specifically, lower symptom scores were associated with more problem-focused coping for events perceived as controllable; conversely, lower symptom scores were associated

with more emotion-focused coping for events perceived as less controllable (Forsythe & Compas, 1987). This interaction effect was observed for major life events (e.g., death of a family member) but not for daily events or hassles (e.g., “doing poorly on an exam or paper”). Thus, the necessity of goodness of fit was supported, but only for major life stressors. These findings support the goodness of fit hypothesis and also demonstrate the importance of considering the specific outcome (event) that is being measured in relation to perceived control.

The goodness of fit hypothesis claims that “an individual’s coping style needs to fit the situation” (Moos & Schaefer, 1993, p. 251). This is consistent with Amirkhan’s (1998) recommendation that greater attention be devoted to proximal variables (e.g., perceived controllability of stressful events) in the search for determinants of stress responses. According to traditional models of stress and coping, both person variables (e.g., personality characteristics) and situational variables (e.g., perceptions of event controllability) influence the coping effort that is selected in response to a particular event (Folkman, 1984; Lazarus & Folkman, 1984). Amirkhan (1998) notes, however, that although person variables (e.g., personality characteristics) have been emphasized in the search for determinants of stress and coping responses, they have had limited success as predictors of coping (Costa, Somerfield, & McCrae, 1994; Shewchuk, Elliott, MacNair-Semands, & Harkins, 1999).

In two field studies, Amirkhan (1998) investigated the importance of situational variables (i.e., controllability attributions) in predicting coping, distress, and stress-related pathology. Participants briefly described a recent stressor in their lives, identified the cause of this event and provided information regarding its locus (internal or external),

stability, and controllability. Participants then described their coping responses to the event and completed questionnaires assessing their attributions for coping failures, levels of distress and stress-related symptoms. Results verified the importance of controllability attributions, with controllability ratings adding significantly to the prediction of distress and coping (Amirkhan, 1998, Studies 1 and 2). Results also showed that attributions (particularly those for coping failures) affected both the choice of coping strategies and the experience of distress and illness (Amirkhan, 1998). The finding that attributions influence choice of coping strategies is consistent with the temporal relationship in some models of stress and coping (i.e., Lazarus, 1980), in which appraisals of event controllability are seen to mediate the role of coping in the stress process by shaping the choice of coping strategies. This finding is also consistent with other studies demonstrating that the perceived controllability of a stressful event predicts coping (e.g., Terry, 1994). However, "direct associations between attributions and indices of adjustment came somewhat as a surprise" (Amirkhan, 1998, p. 1017). Considering the apparent importance of controllability attributions in the coping process, identification of the objective factors that influence appraisals of controllability in a given situation might allow for greater predictability of behaviors relevant to adjustment to stressful events.

It should be noted, however, that consistent support for the goodness of fit model is lacking. Some studies (e.g., Conway & Terry, 1992; Fisher, 1996; Vitaliano, et al., 1990) have failed to confirm the goodness of fit hypothesis. Others have found only limited support for the model. For example, Osowiecki and Compas (1999) assessed coping behavior, perceptions of control, and symptoms of anxiety and depression in 70 women with breast cancer on three separate occasions (shortly after their diagnosis, 3

months, and 6 months later). The interaction of perceived control and problem-focused coping was associated with fewer symptoms of anxiety and depression only near the time of diagnosis, thus, yielding limited support for the goodness of fit model (Osowiecki & Compas, 1999). Conway and Terry (1992) argue that one explanation for such inconsistencies may be related to limitations in assessment of situational control, in which single items are commonly used to measure this variable. For example, in a longitudinal study, Wanberg (1997) examined three predictors (self-esteem, perceived control, and optimism) and outcomes (short-term mental health, reemployment, and long-term mental health) of coping behavior among unemployed individuals. Perceived control over specific situations (situational control) was assessed with a single item, "What are the chances that you will obtain another job if you look?" (Wanberg, 1997). Results indicated that situational control moderated the relationship between coping and mental health. The author recommended that future research incorporate this variable and concluded that the construct would benefit from a more expanded assessment than a single item (Wanberg, 1997). "Instead of simply focusing on the bare-bones assessment of whether individuals perceive they will be able to obtain another job, future studies might assess whether individuals feel they will be able to find a job they would be really happy with" (Wanberg, 1997, p. 742). Consistent with this recommendation, it is possible that inconsistency in the conceptualization and operationalization of control has yielded a limited view of the role perceived control plays in the coping process.

Defining Control

The concept of control has been used in many disciplines and has been conceptualized and measured in a variety of ways (e.g., Cramer, Nickels, & Gural, 1997;

Nickels, Cramer, & Gural, 1992; Seligman, 1975; Taylor, 1986). Typically, control requires that someone restrain, regulate, or direct the occurrence of an event. Thus, control usually refers to someone exerting an influence over an event with the majority of the literature defining control in relation to the amount of influence individuals believe they have over different desired outcomes (Wallhagen & Brod, 1997; Wallston, Wallston, Smith, & Dobbins, 1987).

Although it has been suggested that it is the perception of control rather than actual control that is important in producing controllability benefits (e.g., Langer & Brown, 1992), situational factors are also related to perceptions of control. In regard to situational factors, however, the objective antecedent conditions that result in perceptions of control are not yet clear. In a comprehensive review of control-related research, Skinner (1996) identifies several objective conditions that may influence perceptions of control including information, predictability, and choice. However, Skinner (1996) acknowledges that previous research has not consistently demonstrated that increases in these factors lead to increased perceptions of control and concludes that “it is an empirical question whether and under what conditions information, choice, or predictability is likely to change subjective control” (Skinner, 1996, p. 555). Accordingly, research identifying the role of these factors in the development of perceptions of control is needed. This is consistent with the recent argument that social behavior be related to objectively defined criteria (Kipnus, 1998). Kipnus recommends that “instead of beginning with the perceptions of events, we begin with objective measurement of these events” (p. 1080) and then relate these to the constructions of reality that follow.

As previously mentioned, the objective cues that result in perceptions of control are not agreed upon. The way in which control is conceptualized, however, has direct implications for research findings (Peacock & Wong, 1990). Abramson, Garber, and Seligman (1980), for example, conceptualize control as an objective response-outcome contingency. Accordingly, a loss of control results from noncontingent outcomes. Researchers adopting this view of control focus on the information that participants receive about their performance following engagement in a behavior and its relationship to subsequent perceptions of control (Abramson et al., 1980). Specifically, those who receive information (feedback) that outcomes are contingent on their performance should have higher ratings of perceived control as compared to those who receive information (feedback) that outcomes are unrelated to their performance (Abramson et al., 1980). According to this view, one has control when the probability of success associated with one response is greater than the probability of success associated with any other response.

This view of control is different from other perspectives that conceptualize control in terms of choice of options rather than probability of outcomes. Some researchers adopting this view of control (e.g., Liem, 1975; Feehan & Enzle, 1991) focus on the relationship between participation in choice behaviors (or decision-making) and the subsequent outcomes contingent on those choices. Specifically, those individuals permitted to make a choice about some aspect of an event are viewed as having control, and others not permitted to make a choice are viewed as having no control (e.g., Veitch & Gifford, 1996). Research has demonstrated that choice results in improved learning (Monty & Perlmutter, 1987), increased task performance (Williams & Luthans, 1992), reductions in threat and anxiety in coping contexts (Kukde & Neufeld, 1994), and

increased feelings of control, which have been associated with health and well-being (e.g., Peterson & Stunkard, 1989; Rodin, 1986). Mills and Krantz (1979) found that participants giving blood required fewer interventions to prevent fainting and rated the procedure as less uncomfortable when they were given a choice regarding the arm from which blood would be drawn.

It has been argued, however, that these traditional conceptualizations of control confound predictability with controllability (Nickels et al., 1992), which poses serious problems for all control research. Specifically, traditional conceptualizations assume that control exists when the probability of success for one response (i.e., the likelihood of obtaining a preferred outcome) exceeds the probability of success from any other response; hence, lack of control is associated with an inability to increase the likelihood of getting a preferred outcome (Alloy & Abramson, 1979). Also, Burger (1989) states “the increased predictability that comes about with increased control appears to play an important role in determining a person’s reactions to changes in perceived control” (p. 247). Similarly, Thompson (1981) suggests that one of the routes by which perceived control enhances adjustment to stressful events is through the improved prediction that control affords. Although it has been assumed that prediction and control cannot effectively be separated (e.g., Schulz, 1976; Seligman, 1975), Nickels (1980) proposed a reconceptualization of control that permits the definition of control and prediction without reference to one another. According to this view, “prediction refers to knowing which outcome will likely occur before it occurs; control refers to exerting an influence over which outcome will likely occur...control is defined as making a difference in outcomes rather than as having a predictive regulation over outcomes” (Nickels et al.,

1992, p. 160). Therefore, control (influence over outcomes) does not require prediction but does require that different responses lead to different outcomes or consequences. Thus, as distinguished from the traditional conceptualization, the reconceptualization requires neither a predictability of consequences nor a focus on desired outcomes (success).

Choice and Control

The conceptualization of control that is used by a researcher determines which objective conditions the researcher will manipulate. For example, as previously discussed, control has often been conceptualized (and operationalized) in terms of choice behaviors. This is consistent with the view that choice is a form of “active control” that provides autonomy and allows the actor to feel self-determining (Tafarodi, Milne, & Smith, 1999). Investigations using this definition of control often permit participants with control to make choices (i.e., select an alternative from among similarly attractive options), whereas participants with no control are not permitted to make choices. For example, Feehan and Enzle (1991) investigated the effects of subjective control of reward schedule on intrinsic motivation and behavioral maintenance. Participants in a subjective control condition were allowed to make choices regarding their reward schedule as compared to participants in a no-control condition who were not allowed to make choices regarding their reward schedule. Other studies operationalizing control in terms of choice behaviors have found such behaviors to be related to increases in work performance and reported satisfaction (Liem, 1975) and decreases in behavior problems (Dyer, Dunlap, & Winterling, 1990).

Although these findings may suggest that choice always involves control and brings about positive consequences, Langer (1975) argues that choice does not

necessarily involve control. Instead, under some circumstances, choice may bring about only an illusion of control, defined as “an expectancy of personal success probability inappropriately higher than the objective analysis would warrant” (p. 311). For example, participants in one study that were given choices on “chance-controlled” tasks gave higher ratings of control than participants not given choices (Langer, 1975, Experiments 2 and 3). It was concluded that the cues provided by the choice behavior were sufficient to produce “erroneous” perceptions of control (Langer, 1975). In another study, Rotton and Shats (1996) evaluated the effects of repeated exposure to humorous material in postsurgical patients. Perceived control was manipulated by allowing some patients to choose the movies they viewed, but patients also differed in the information they were given about the benefits of movie-watching. Choice interacted with benefit-expectations to affect the amount of medication patients self-administered. The greatest use of medication was among patients who had been deprived of choice and who were not informed that watching the movies would have beneficial effects (Rotton & Shats, 1996). These researchers concluded that this finding suggests limits to the generalizability of results from investigations that have portrayed choice as universally desirable (Rodin, 1986; Thompson & Spacapan, 1991). It also raises the possibility that “the beneficial effects of choice in previous investigations may have been due, at least in part, to beliefs that experimenters communicated to patients” (Rotton & Shats, 1996, p. 1788).

More recently, Williams (1998) stated that although choice and control are often linked, they are not conceptually interchangeable. Thus, the availability of a choice between options may or may not lead to the perception that a situation is controllable; in fact, under some circumstances choice may even detract from perceived control. For

example, choice has been related to decrements in subjective control when the chooser feels insufficiently informed or when decisions are required under time constraints (Paterson & Neufeld, 1995). When information or skill becomes too low, people may even choose to relinquish control and further choice altogether (Burger, 1989). Thus, the objective conditions under which the availability of a choice between options (exercised or not) results in increased perceptions of control and related benefits is an empirical question (Skinner, 1996).

Recent research conducted in accordance with the reconceptualization of control (Cramer et al., 1997; Nickels et al., 1992), suggests that when one makes a choice, it is not the choice behavior that brings about increased perceptions of control but rather any behavior that makes a difference in outcomes. In fact, according to the reconceptualization, if one's behavior makes a difference in outcomes, the behavior is influential, controlling, and non-illusory (whether perceived or not by the actor). According to this view, even a coin flip represents a controlling behavior (Nickels, 1980), because one may be out of control in terms of precise coin-flipping actions (i.e., the person cannot control the flip so as to get a desired outcome) but in control of the coin landing (i.e., the person's flipping action determines the head or tail outcome). To test this conceptualization of control, all participants in one study (Experiment 1, Nickels et al., 1992) were required to make choices in a card-selection task. Choice of card, however, made a difference in received outcome only for those participants in control conditions; participants in no control conditions made choices, but these choices made no difference in received outcome. Participants whose choices made a difference in outcome gave significantly higher ratings of control than participants whose choices made no

difference in outcome. These findings support the reconceptualization of control (Nickels et al., 1992). Specifically, it is making a difference in outcomes, rather than choice behavior alone, that most contributes to perceptions of control. Thus, the kind of choice (outcome-related versus outcome-unrelated) is an important objective condition for control.

These findings emphasize the importance of carefully evaluating the methodology of studies investigating the relationship between choice behaviors and perceptions of control. For example, if the choices provided to participants always make a difference in outcome, it is uncertain whether it is the choice behavior or the making a difference in outcome that is most related to increasing perceptions of control. In order to increase the probability of isolating those objective factors that are critical in fostering perceptions of control, it would be necessary to obtain measures that reveal if participants perceive that (a) they are making a choice and (b) this choice makes a difference in outcomes. Evaluating how these perceptions relate to perceived control would enable further distinction of their relative contributions to perceptions of controllability.

Multiple Outcomes and Focus of Control

In addition to conceptual and operational inconsistencies, the multiple targets of focus that exist in any event make the evaluation of situational appraisals of control problematic. Folkman (1984), for example, notes that even in experimental settings there is often more than one target of control (or outcome) in a stressful event. For example, “a person may believe that learning to get in and out of a bed to a wheelchair is in his control. However, he may feel that being able to walk again is only in the hands of God” (Silver & Wortman, 1980, p. 283). This example implies that assessing perceptions of

control is a complex task given the wide range of targets that may be relevant in any situation. However, review of the literature reveals that the actual measures used to assess such perceptions are often oversimplified. For example, Prince-Embury (1992) included a single item to determine Three Mile Island victims' perceptions of control; specifically, the statement "I don't believe I have control over major aspects of my life" was rated from (1) disagree strongly to (4) agree strongly. According to Folkman's (1984) proposal, the use of such simplified measures to assess perceptions of control reflects a failure to acknowledge the various outcomes in a complex event to which perceptions of control may be relevant. Thus, when evaluating perceptions of control, it seems necessary to specify all relevant outcomes over which one may possibly have control.

Wallhagen and Brod (1997) note that a wide range of targets for control have been considered by researchers. They view these targets in a hierarchical fashion, ranging from generalized global beliefs of control to situation-specific beliefs of control. Examples of targets for control considered in previous research include general control beliefs about the world and one's control of reinforcements (Rotter, 1966), perceived control over health outcomes and recovery from illness (Partridge & Johnston, 1989), specific perceptions of control related to health concerns such as cancer and diabetes (Bradley, Lewis, Jennings, & Ward, 1990; Watson, Greer, Pruyn, & VanDenBorne, 1990), and perceived control over pain and specific symptoms (Toomey, Mann, Abashian, & Thompson-Pope, 1991). According to this view, each level of this hierarchy relates to a different aspect of control; therefore, research findings will depend on the level of control being considered. Accordingly, Wallhagen and Brod (1997) measured both perceived control over symptoms and perceived control over disease progression in

a group of patients diagnosed with Parkinson's disease. Perceived control over disease progression was assessed by the question, "To what extent do you feel you can do something to slow down the progression of the disease?" Perceived control over symptoms was assessed by the question, "How much do you feel you have control over the amount of fatigue, stiffness, tremor, or other symptoms you may experience on a daily basis?" Results showed that these two items were measuring related but independent concepts. Although perceived control over disease progression was significantly correlated with perceived control over symptoms, regression analyses showed that only perceived control over symptoms was significantly associated with patient well-being and care-giver well-being; no relationship was found between perceived control over disease progression and patient well-being or care-giver well-being. These findings emphasize the importance of considering multiple outcomes (e.g., progression of disease versus symptoms) when measuring perceptions of control.

Coping Toward Perceived Control

The recognition that for any event there are multiple targets (outcomes) seems important given the emphasis on the concept of control in regard to coping goals. It is possible that for any stressful event, one's goal or focus of coping may be different depending on the specific outcome that is being considered. For example, if the goal of control is always assumed to be the modification of environmental factors in a particular context, assessing only one's perceptions of control over these factors may be misleading. Specifically, one may report a low perception of control over the external variables in the situation, but experience a high perception of control over some other relevant outcome in the situation (e.g., feelings).

This is consistent with the conclusions of Baum, Fleming, and Singer (1983) in their study investigating the relationship between methods of coping with victimization at Three Mile Island (TMI) and victims' susceptibility to negative psychological, behavioral, and physiological reactions to an uncontrollable stressor (the threat of exposure to radiation). Specifically, the effectiveness of emotion-focused (intrapsychic) and problem-focused (direct action) coping was investigated. It was observed that high use of emotion-focused coping was associated with significantly lower levels of stress while high use of problem-focused coping was associated with significantly greater psychological, behavioral, and physiological deficits. Participants serving as controls showed no variation in stress levels as a function of coping strategy.

These results seem inconsistent with those demonstrating the benefits of problem-focused coping (Conway & Terry, 1992; Folkman et al., 1986). However, Baum et al. (1983) concluded that these findings reflect control-relevant concerns. Specifically, use of emotion-focused coping in the disaster context at Three Mile Island may have enhanced victims' perceptions of control. In this context, the likelihood of regulating one's emotional response is much greater than the possibility of gaining control over the damaged power plant or related stressful events. These researchers suggest that the goal of coping may be to increase one's sense of control, so victims using emotion-focused coping gained a greater sense of control (i.e., over their emotions) and were better able to deal with stress. Thus, measuring perceptions of control as they relate to one outcome (i.e., control over environmental events) would fail to reveal perceptions of control over other relevant outcomes (i.e., feelings and reactions) that might then affect one's response to the stressful event.

These findings are consistent with the proposal that different coping efforts may have a common function in that they allow an individual to gain a sense of control over their distress or over the situation (Fleming, Baum, & Singer, 1984). Thus, both problem- and emotion-focused coping may achieve the common goal of increasing one's perceptions of control (Rothbaum, Weisz, & Snyder, 1982). According to this view, one of the major goals of coping for some individuals is to increase their perception of control. When faced with a stressor, individuals may show no simple consistency in the focus of their coping. Instead, they may switch from a problem-oriented focus to an emotion-oriented focus as the controllability of the situation changes. Consistency is revealed, however, because the goal of their behaviors is to increase their sense of control by whatever means are most appropriate. Thus, similar to the view that control can exist on several different levels (Folkman, 1984), the goal or focus of control can be directed toward many outcomes, each worthy of consideration when evaluating the effectiveness of coping responses.

Several researchers (Averill, 1973; Thompson, 1981; Taylor, 1986) identify coping strategies that serve specifically to increase one's perception of control including: (a) informational strategies, in which the individual attempts to gain control by collecting information about the stressful event; (b) cognitive strategies, in which the individual tries to change or control their thoughts and beliefs in regard to the aversive stimuli around him/her; (c) behavioral strategies, in which the individual engages in behaviors that allow a perception of increased control in regard to daily activities; and (d) decisional strategies, in which the individual attempts to gain control by making relevant decisions. During the unfolding of a stressful event, an individual may attempt to gain control using

any of these strategies in regard to a number of different outcomes. Although increased or favourable adjustment has been shown to be associated with each of these forms of control (Taylor, 1986), these effects are variable and seem to be related to the specific type of situation or stressor that is present.

It is easy to see the relationship between direct action coping (and behavioral strategies) and the concept of control because one engages in an action that alters the environment. It is more difficult, perhaps, to see the relationship between emotion focused coping (and cognitive strategies) and the concept of control. It has been suggested, however, that intrapsychic efforts are also related to the concept of control. Specifically, Rothbaum et al. (1982) distinguish between primary control and secondary control. Primary control refers to actions that directly change the situation or outcome (e.g., manipulating the environment); secondary control refers to actions that change the impact of a situation or outcome on oneself (e.g., adjusting expectations or interpretations of events to allow for understanding and acceptance). Consistent with this conceptualization of control, individuals using both problem-focused strategies (controlling the environment) and emotion-focused strategies (controlling oneself) may be exerting control. They may be engaging in different responses (and directing these toward different outcomes) that allow them to maintain a sense of control given their situation. In the study by Baum et al. (1983), this explanation is supported by the post-hoc finding that victims who assumed some blame for the problems they experienced after the event exhibited lower levels of stress as compared to those victims that did not assume some blame (Baum et al., 1983). These researchers conclude that self-blame enhances perceptions of control and thus reduces stress reactions. These results raise

questions as to the relationship between perceptions of control and self-blame in the context of coping with negative events.

Blame and Responsibility

Numerous studies have investigated the concept of blame in relation to coping with negative events. Consistent with Baum et al.'s (1983) conclusion that self-blame enhances perceptions of control and thus reduces stress reactions, self-blame for a traumatic life event has been found to be positively associated with successful coping (e.g., Abbey, 1987; Bard & Sangrey, 1979; Bulman & Wortman, 1977; Taylor et al., 1984). Conversely, blaming others has been associated with poorer adaptation (Bulman & Wortman, 1977; Tennen & Affleck, 1990; Timko & Janoff-Bulman, 1985). Several theorists have attempted to explain why individuals blame themselves for negative events that befall them (see Janoff-Bulman & Lang-Gunn, 1988, for a review). According to one view, self-blame stems from a bias for making attributions toward greater personal control (Forsterling, 1992; Montada, 1992). Consistent with this argument, Medea and Thompson (1974) provide an example illustrating why women who have been assaulted experience self-blame. "If the woman can believe that somehow she got herself into the situation, if she can feel that in some way she caused it, if she can make herself responsible for it, then she's established a sort of control over the rape" (p. 105). Thus, self-blame for a negative event is seen to reflect an attempt to increase one's perceptions of control.

Janoff-Bulman (1979) distinguishes between two types of self-blame attributions. Behavioral self-blame is associated with blaming one's behavior for an event, whereas characterological self-blame is associated with blaming one's personal characteristics for

an event. Behavioral self-blame is seen to represent an attempt to reestablish control following victimization and is therefore viewed as an adaptive response to a negative event. Conversely, characterological self-blame represents self-derogation and low self-evaluation and is seen as a maladaptive response to a negative event (Janoff-Bulman, 1979). This view has been supported by findings demonstrating a positive relationship between behavioral self-blame and high self-esteem for sexual assault victims (Janoff-Bulman, 1982) and an association between behavioral self-blame and increased perceptions of control over the recurrence of a stressor (Karuza & Carey, 1984; Tennen, Affleck, & Gershman, 1986). Others have found characterological-blame to be associated with depression and low self-esteem (e.g., Hazzard, 1993).

Some studies, however, have failed to support the idea that behavioral self-blame is associated with positive outcomes following negative events (see Downey, Silver, & Wortman, 1990, for a review; Greenberg, 1995). These studies have found both behavioral and characterological self-blame to be associated with higher levels of depressive symptoms (Anderson, Miller, Riger, Dill, & Sedikides, 1994; Frazier, 1990; Hill & Zautra, 1989), anxiety and psychological distress (Hazzard, 1993). Others have failed to find a relationship between behavioral self-blame and perceptions of future control (Frazier & Schauben, 1994). These inconsistent findings may be a result of variations in dependent measures. Karuza and Carey (1984) argue that some studies have used a single general question to measure blame (e.g., L'Armand & Pepitone, 1982). Simplistic measures of perceptions of blame are inconsistent with the proposed complexity of the concept. For example, Brickman, Rabinowitz, Karuza, Coates, Cohn, and Kidder (1982) suggest that it is important to distinguish between attribution of

responsibility for a problem (i.e., who is to blame for a past event) and attribution of responsibility for a solution (i.e., who is in control of future events). According to this perspective, Brickman et al. (1982) argue that victims of stressful events may cope most effectively if they do not blame themselves for the event, but do assume responsibility for dealing with the consequences of the event after it has occurred. Consistent with this argument, Karuza, Zevon, Gleason, Karuza, & Nash (1990) found that self-attributions for life problems and self-attributions for “creating solutions” differentially affected coping behavior. Only self-attributions for creating solutions after the stressful event were related to well-being (Karuza et al., 1990).

These results suggest that investigation of the relationship between blame and perceptions of control in the context of negative events should consider the various outcomes to which perceptions of blame and control may be relevant. Similarly, Downey et al. (1990) failed to predict parental distress with attributions for the loss of a child and suggested that attributions for the consequences of an event may be better predictors. As pointed out by Amirkhan (1998), the majority of studies investigating the relationship between attributions and stress have focused on attributions for the stressful event (e.g., Downey et al., 1990; Taylor et al., 1984) rather than the consequences of the of an event. As previously discussed, Amirkhan (1998) observed that attributions (particularly those for coping failures) affected both the choice of coping strategies and the experience of distress and illness (Amirkhan, 1998). These differential effects for attributions relating to event versus consequences of the event support the importance of assessing their relative contribution to predicting coping responses and distress.

It should be noted that the above discussion reflects the assumption made by some researchers that the concepts of blame and responsibility are interchangeable. Shaver (1985), however, distinguishes between the concepts of responsibility and blame and argues that the assignment of blame rests on a prior decision about responsibility. According to this temporal model, the assignment of blame for a negative event is “the result of a process that requires a particular prior attribution of responsibility, which in turn, rests on a particular attribution of causality” (Shaver, 1985, p. 167). Therefore, it is not until after an individual has been found to be responsible for an event that an assignment of blame for that event occurs. Accordingly, Shaver argues that any investigation of the assignment of blame must incorporate measures of cause and responsibility. For example, suppose a homeowner rewires the electrical system in the basement. When the home is subsequently destroyed by fire due to errors in the electrical wiring, the extent of the homeowner’s participation in the production of the fire (cause) and the extent of the homeowner’s awareness of the consequences of any preceding actions (responsibility) must be established or considered before one can evaluate the degree of voluntariness of the preceding action in light of knowledge of the consequences (blame). According to Shaver, although overlap between the concepts of cause, responsibility, and blame exists, each of these must be considered individually for any event.

Perceptions of responsibility following negative events have been the focus of many studies. It has been argued that perceptions of responsibility for negative events may result in feelings of guilt or self-blame that can interfere with adjustment (Brownell, 1991; Ziff & Conrad, 1995). For example, Meyer and Taylor (1986) found that

perceptions of responsibility were related to poor adjustment following a rape. Although these findings support the relationship between perceived responsibility and subsequent deficits, other studies have found perceived responsibility to be associated with positive adaptation in accident victims (Bulman & Wortman, 1977), rape victims (Janoff-Bulman, 1979), and with increased happiness and activity levels (Langer & Rodin, 1976).

Rothman, Salovey, Turvey, & Fishkin (1993) found that emphasizing personal responsibility led to increases in preventative health behaviors (i.e., mammogram usage) in women who did not previously adhere to recommended preventative guidelines.

Aldwin (1991) found that individuals who held themselves less responsible for a stressful event were more likely to use maladaptive coping strategies (e.g., escapism) and less likely to use adaptive coping strategies (e.g., problem-focused efforts). Explanations for these positive consequences of perceived responsibility typically include the concept of control. Specifically, it has been argued that accepting responsibility for an aversive event is a reflection of one's attempt to reassert control, thereby increasing the probability of avoiding similar events in the future (Thompson, Cheek, & Graham, 1988). Similarly, it has been argued that accepting responsibility (e.g., making more personal decisions) increases perceptions of control that result in well-being and stress reduction (Landy, 1992; Langer & Rodin, 1976).

It is not surprising that "past research has generally viewed perceptions of responsibility and control as either interchangeable constructs or corollaries" (Ziff & Conrad, 1995, p. 129). Accordingly, little attention has been focused on the differential effects of control and responsibility on behaviors and adjustment. Ziff and Conrad (1995), however, examined the relationship between perceptions of personal control and

perceptions of personal responsibility, and their respective effects on health and health-related behaviors. Participants completed a questionnaire about perceived control and responsibility, health, and health-related behaviors. Results showed that perceptions of control and perceptions of responsibility were unrelated, although both were associated with increased self-ratings of health. Only perceived control contributed significantly to the explanation of variance in health and health-related behaviors (Ziff & Conrad, 1995), and no effects were observed for the interaction of responsibility and control.

The authors conclude that these findings demonstrate the importance of perceived control in relation to health and health-related behaviors and support the idea that control and responsibility be considered independent constructs (Ziff & Conrad, 1995). However, the researchers also acknowledge the limitations of their control and responsibility measures. Control beliefs were assessed by a single item asking the degree to which the individual felt control over his or her health; responsibility beliefs were assessed by a single item asking the degree to which the individual felt responsible for his or her own well-being. Ziff and Conrad (1995) note that “future studies designed to assess perceptions of responsibility for health should include questions specific to health” (p. 142), recognizing that “health” and “well-being” might be viewed as different outcomes. In addition, the authors note that perceived control was related to some health behaviors and not to others. These findings support the view that researchers should recognize the multiple outcomes that exist in any situation (Folkman, 1984; Wallhagen & Brod, 1997) when selecting measures for control and responsibility. In addition, the results emphasize the importance of considering perceptions of control separate from perceptions of responsibility.

Present Study

Considering the demonstrated relationship between perceived control, coping, and adjustment, it is not surprising that hundreds of studies have focused on perceptions of control following exposure to negative events. In contrast with the majority of these investigations that assess only perceptions of control, the present study attempts to relate perceptions of control to objective conditions (Kipnus, 1998). In accordance with Skinner's (1996) recommendation that the objective conditions related to perceptions of control be clearly identified, the effects of two factors on perceptions of control were investigated. Specifically, the present study examined the degree to which (a) the availability of a choice between options and (b) making a difference in outcomes results in increased perceptions of control. Thus, the present study manipulates both choice and outcome difference in order to separate their effects.

As previously discussed, the theoretical associations between perceptions of control and personal responsibility and blame have been noted by many researchers. Consistent with Shaver's (1985) recommendation that responsibility and blame be considered individually in any situation, measures for each (including measures for control) were included in the present study in order to investigate their relationships and how they may be differentially affected by choice and outcome difference. Furthermore, the present study recognizes that multiple targets may exist in any event (Amirkhan, 1998; Wallhagen & Brod, 1997). Therefore, consistent with Brickman et al.'s (1982) distinction between attribution of responsibility for a problem (i.e., past event) and attribution of responsibility for a solution (i.e., future events), the present study assessed

perceptions of control, responsibility, and blame for both (a) a past event and (b) coping with the future consequences of the event.

The present study distinguished between characterological-blame, behavioral-blame, and other-blame. Previous research has considered these three types of blame (e.g., Bulman & Wortman, 1977; Tennen & Affleck, 1990), but few studies include measures for each. In contrast, the present study includes measures for (a) characterological-blame, (b) behavioral-blame, and (c) other-blame in order to investigate the differential effects of choice and outcome difference on each form of blame. Considering the close theoretical association between responsibility and blame, perceptions of both self-responsibility and other-responsibility were assessed in order to be consistent with the distinction between self and other in regard to the measures for blame.

Hypotheses

The six hypotheses in the present study are discussed in relation to the dependent variables of control, responsibility, and blame. As previously discussed, research investigating perceptions following exposure to negative events has focused on attributions for the stressful event (e.g., Downey et al., 1990; Taylor et al., 1984) rather than the consequences of the event (Amirkhan, 1998). Accordingly, the hypotheses for the present investigation relate only to perceptions of the event (outcome), not to the future consequences of the event. In addition, the hypotheses are restricted to participants' perceptions of the manipulated situations rather than to the objective situations themselves.

Control. The present study manipulated (a) whether or not an actor has a choice of actions (options) and (b) whether these actions (chosen or choiceless) lead to different consequences (outcomes). Nickels' (1980) reconceptualization of control argues that when one makes a choice between two options that have the same consequences, little if any control will be attributed to the situation. Research has supported this view when choice is held constant (Cramer et al., 1997; Nickels et al., 1992), demonstrating that making a difference is sufficient to increase perceptions of control. Therefore, Hypothesis 1 states that participant ratings of control over an aversive event will be higher when the actor's actions (chosen or choiceless) bring about different consequences than when they do not. However, other research suggests that choice is sufficient to increase perceptions of control (Langer, 1975; Tatarodi, et al. 1999), even if this may represent "illusory control." Therefore, Hypothesis 2 states that participant ratings of control over an aversive event will be higher when the actor makes a free choice between two actions (regardless of consequence-differences) than when the actor makes an externally restricted (constrained or nullified) choice.

Responsibility. Consistent with previous research (e.g., Graham, Weiner, Benesh-Weiner, 1995; Landy, 1992; Rothbaum, 1981; Wortman, 1975), it was expected that higher ratings of perceived responsibility for an aversive event would be associated with higher perceptions of control. Therefore, on the basis of Hypotheses 1 and 2, two additional hypotheses were tested. Hypothesis 3 states that participant ratings of self-responsibility (but not other-responsibility) for an aversive event will be higher when the actor's actions (chosen or choiceless) bring about different consequences than when they do not. Hypothesis 4 states that participant ratings of self-responsibility (but not other-

responsibility) for an aversive event will be higher when the actor makes a free choice between two actions (regardless of consequence-differences) than when the actor makes an externally restricted (constrained or nullified) choice.

Blame. As previously discussed, it has been argued that self-blame for a negative event stems from a bias for making attributions toward greater personal control (Forsterling, 1992; Montada, 1992); thus, perceptions of self-blame may reflect an attempt to maintain perceptions of control for victimized individuals (Baum et al., 1983). However, Nickels' (1980) reconceptualization of control predicts that higher ratings of perceived blame for an aversive event would be associated with higher perceptions of control. Although ratings for both behavioral self-blame and characterological self-blame were assessed because of their inclusion in previous research (Janoff-Bulman, 1979), no specific hypotheses were made regarding differences between these two forms of blame. On the basis of Hypotheses 1 and 2, two additional hypotheses were tested. Hypothesis 5 states that participant ratings of behavioral self-blame and characterological self-blame (but not other-blame) for an aversive event will be higher when the actor's actions (chosen or choiceless) bring about different consequences than when they do not. Hypothesis 6 states that participant ratings of behavioral self-blame and characterological self-blame (but not other-blame) for an aversive event will be higher when the actor makes a free choice between two actions (regardless of consequence-differences) than when the actor makes an externally restricted (constrained or nullified) choice.

Method

Participants

Participants were students from two Introductory Psychology sections at the University of Manitoba ($n = 139$ for Section 1; $n = 152$ for Section 2). One participant was excluded (from Section 2) for supplying only partial data, resulting in a final N of 290. All participants received experimental credit that contributed toward their final grade in the course. English was the first language for 90.1% of the participants ($n = 263$) and 59.1% of the sample was female ($n = 172$).

Experimental Design and Independent Variables

In a 2 x 2 factorial with Choice and Outcome-Difference as between-groups variables, each participant was randomly assigned to one of four situational conditions: (a) Free-Choice/Outcome-Difference ($n = 75$), (b) Free-Choice/No-Outcome-Difference ($n = 70$), (c) Restricted-Choice/Outcome-Difference ($n = 72$), and (d) Restricted-Choice/No-Outcome-Difference ($n = 73$).

Participants were told that they were to imagine themselves as the “actor” in a scenario in which a problem faces the actor. Participants in Free-Choice conditions (Free-Choice/Outcome-Difference and Free-Choice/No-Outcome-Difference) were told that the actor could have chosen which of two possible actions to engage in. Specifically, participants in Free-Choice conditions were told that the actor could have engaged in either of two presented actions and later chose one of these actions. For example, noticing that a large oak tree next to the garage is leaning slightly, the actor considered whether to reinforce the tree that day or the following day. Because the actor wanted to run some errands that day, the actor chose to reinforce the tree the following day.

Participants in the Restricted-Choice conditions (Restricted-Choice/Outcome-Difference and Restricted-Choice/No-Outcome-Difference) were told that the actor was restricted in practice to only one of the two presented actions and engaged in this action. Specifically, participants were told that the actor was restricted to one possible action because of some factor external to the actor. Using the previous example, the actor considered whether to reinforce the tree that day or the following day. Because the actor was required by law to appear in court for jury duty that day, the actor went to reinforce the tree the following day.

Participants in the Outcome-Difference conditions (Free-Choice/Outcome-Difference and Restricted-Choice/Outcome-Difference) were told that the actor's action (whether freely chosen or not) made a difference to the occurrence of the aversive event. Specifically, participants were told that one of the two possible actions could have prevented the aversive outcome. Again using the previous example, when the actor went to reinforce the tree the following day, it was observed that heavy winds earlier that morning had blown the tree onto the garage damaging the structure beyond repair. Thus, if the actor had gone to reinforce the tree the day before, the garage would not have been lost.

Participants in the No-Outcome-Difference conditions were told that the actor's action (whether freely chosen or not) was unrelated to the occurrence of the aversive event. In these conditions, participants were told that neither action would have prevented the aversive outcome. In this case, when the actor went to reinforce the tree the following day, it was observed that heavy winds earlier that morning had blown some of the larger tree branches (not the tree) onto the garage damaging the structure beyond repair. Thus,

even if the actor had gone to reinforce the tree the day before, the garage would have been lost.

Questionnaire Format, Manipulation Checks, and Dependent Variables

Each participant received a common set of instructions (see Appendix A) that was followed by one of 12 forms of an original questionnaire (see Appendices B-M). Each form presented a single scenario (out of 3 possible scenarios) in a single version (out of 4 possible versions). Thus, each participant was presented with only one scenario and only one version of the questionnaire.

Scenarios differed in terms of the calamity befalling the actor. Scenario 1 involved loss of FUNDS (see Appendices B-E), Scenario 2 involved loss of opportunity to enrol in a COURSE needed for graduation (see Appendices F-I), and Scenario 3 involved loss of a garage due to a fallen TREE (see Appendices J-M). Participants were distributed across all three scenarios (Scenario 1, $n = 96$; Scenario 2, $n = 99$; Scenario 3, $n = 95$). Versions differed in terms of the four experimental conditions. Version 1 was used for participants in the Free-Choice/Outcome-Difference group (see Appendices B, F, J), Version 2 for participants in the Free-Choice/No-Outcome-Difference group (see Appendices C, G, K), Version 3 for those in the Restricted-Choice/Outcome-Difference group (see Appendices D, H, L), and Version 4 for those in the Restricted-Choice/No-Outcome-Difference group (see Appendices E, I, M).

Each questionnaire was divided into three sections that corresponded to three time periods. Each section described what had occurred in that stage and asked questions relevant to that stage. The ACTION STAGE presented the problem, the theoretically possible actions, and the action of the actor. The OUTCOME STAGE presented the

consequence (undesirable event). The RECOVERY STAGE permitted participants to consider the possible consequences of the undesirable event. Similar imaginal situations have been used in previous research (e.g., Tversky & Kahneman, 1974; Paterson & Neufeld, 1995) and allow for increased control over manipulated characteristics than would be afforded in vivo.

Respondents reported their first language and gender. In order to increase the probability of isolating those objective factors that are critical in fostering perceptions of control, measures assessed whether or not participants perceived that (a) the actor was making a choice and (b) this choice makes a difference in outcomes. Thus, two manipulation checks were included in the questionnaire. Specifically, a manipulation check for Choice (options) was used in the ACTION STAGE (Question #1) to evaluate whether participants correctly perceived whether the actor in the scenario has a choice between two actions. A manipulation check for Outcome-Difference was used in the OUTCOME STAGE (Question #2) to evaluate whether participants recognized whether the two actions had different or the same consequences. The effects of the manipulation of the independent variables were assessed using 6 dependent measures in the OUTCOME STAGE (Questions #3 - #8) and 6 dependent measures in the RECOVERY STAGE (Questions #9 - #14). Participants provided ratings of Control (Questions #3 and #9), Self-Responsibility (Questions #4 and #10), Other-Responsibility (Questions #5 and #11), Characterological-Blame (Questions #6 and #12), Behavioral-Blame (Questions #7 and #13), and Other-Blame (Questions #8 and #14). All ratings were made on a 7-point Likert scale.

Procedure

Participants were administered one of the 12 forms of the experimental questionnaire on a random basis and completed the study in an intact class within a 30-minute period. All participants completed the questionnaire independently and were then debriefed about the general purpose of the study.

Results

Manipulation Checks

Because the level of Choice (Free-Choice and Restricted-Choice) was manipulated by altering details in the scenarios, a manipulation check for accurate perception of this choice during the ACTION STAGE was introduced by comparing participants' estimates of how much choice the actor had in the scenario (Question 1). The results of a one-way analysis of variance with Choice as the independent variable showed a significant main effect for Choice, $F(1, 288) = 193.27, p < .0001$ (see Table 1). The manipulation check on Choice was confirmed in that the results showed participants with Free-Choice gave higher ratings of Choice (mean = 5.18) than participants with Restricted-Choice (mean = 2.51).

Because the level of Outcome-Difference (Outcome-difference and No-Outcome-Difference) was manipulated by altering details in the scenarios, a manipulation check for accurate perception of this Outcome-Difference during the OUTCOME STAGE was introduced by comparing participants' estimates of the degree to which the two actions in a scenario had different or the same consequences (Question 2). The results of a one-way

analysis of variance with Outcome-Difference as the independent variable showed a significant main effect for Outcome-Difference, $F(1, 288) = 320.77, p < .0001$ (see Table 2). The manipulation check on Outcome-Difference was confirmed in that the results showed participants with Outcome-Difference scenarios gave higher ratings of Outcome-Difference (mean = 5.14) than participants with No-Outcome-Difference scenarios (mean = 1.56). Confirmation of the manipulation checks implies that the experimental manipulations were effective and thus, subsequent analyses are warranted.

Table 1

Analysis of Variance of Manipulation Check for Choice

Source of variance	Sum of Squares	df	F	p	η^2
Between	516.44	1	192.2745	<.0001	.40
Within	769.57	288			
Total	1286.01	289			

Table 2

Analysis of Variance of Manipulation Check for Outcome Difference

Source of variance	Sum of Squares	df	F	p	η^2
Between	927.26	1	320.1273	<.0001	.53
Within	832.52	288			
Total	1759.78	289			

Scenario Comparability

A one-way MANOVA was performed on the ratings across questions 3 to 8 (OUTCOME STAGE) and 9 to 14 (RECOVERY STAGE) to determine if the ratings were differentially effected by scenario (Funds, Course, Tree). Results of the MANOVA showed a significant effect for scenario, $F(24, 552) = 1.70, p = .02$, and thus Scenario was included as an independent variable in all subsequent analyses.

Sample Determination

Three separate 2 x 3 MANOVAs were performed on the ratings across questions 3 to 14. The results of the first MANOVA with Course Section (Section 1 and Section 2) and Scenario (Funds, Course, Tree) as the independent variables showed a significant main effect for Scenario, $F(24, 546) = 1.64, p < .05$, but no significant main effect for Course Section or the interaction between Course Section and Scenario (both p 's $> .05$, see Table 3). Therefore, Course Section was excluded as a variable in further analyses. The results of the second MANOVA with Language (English and Other) and Scenario (Funds, Course, Tree) as the independent variables showed no significant main effects for Scenario, Language, or the interaction between Language and Scenario (all p 's $> .05$; see Table 4), although the Scenario main effect approached significance ($p = .077$). Therefore, Language was also excluded as a variable in further analyses. The results of the third MANOVA with Gender (Male and Female) and Scenario (Funds, Course, Tree) as the independent variables showed a significant main effect for Scenario, $F(24, 546) = 1.60, p < .05$, but no significant main effect for Gender or the interaction between Gender and Scenario (both p 's $> .05$; see Table 5). Therefore, Gender was also excluded as a variable in further analyses.

Table 3

Multivariate Analysis of Variance of All Dependent Variables for Course Section and Scenario

Source of variance	Wilks' Lambda	df	F	p	partial η^2
Course Section (CS)	.9498	12, 273	1.2022	0.2812	.05
Scenario (S)	.8698	24, 546	1.6430	0.0284	.07
CS x S	.9370	24, 546	0.7524	0.7972	.03

Table 4

Multivariate Analysis of Variance of All Dependent Variables for Language and Scenario

Source of variance	Wilks' Lambda	df	F	p	partial η^2
Language (L)	.9428	12, 273	1.3780	0.1759	.06
Scenario (S)	.8837	24, 546	1.4511	0.0772	.06
L x S	.9293	24, 546	0.8491	0.6734	.04

Table 5

Multivariate Analysis of Variance of All Dependent Variables for Gender and Scenario

Source of variance	Wilks' Lambda	df	F	p	partial η^2
Gender (G)	.9480	12, 273	1.2467	0.2509	.05
Scenario (S)	.8726	24, 546	1.6041	0.0351	.07
G x S	.8973	24, 546	1.2669	0.1788	.05

Relationships Among Dependent Variables

The correlation matrix for all dependent measures (Questions 3 to 14) is reported in Table 6. Most of the correlations (80.3%) are below .30. The correlations range from .01 to .62 and the average correlation is .21. Given that only moderate correlations were observed among the outcome variables, multivariate analysis of variance (MANOVA) was used to test for significant group differences with follow-up univariate analyses of variance (ANOVAs) for any significant MANOVA effects (see Tabachnick & Fidell, 1996).

Outcome Stage Tests

The experimental hypotheses were tested at the .05 significance level through two MANOVAs using Wilks' lambda. A 2 x 2 x 3 between-subjects MANOVA was performed on the six OUTCOME STAGE dependent variables of Control, Self-Responsibility, Other-Responsibility, Characterological-Blame, Behavioral-Blame, and Other-Blame with Choice (Free and Restricted), Outcome-Difference (Outcome-Difference and No-Outcome-Difference), and Scenario (Funds, Tree, Course) as the independent variables. The results of the MANOVA showed a significant main effect for Outcome-Difference, $F(6, 273) = 14.34, p < .0001$, and for Scenario, $F(12, 546) = 2.42, p < .01$, but no significant main effect for Choice, $F(6, 273) = 1.03, p = .404$ or for any of the interactions (each $p > .05$, see Table 7). (OUTCOME STAGE means and standard deviations are presented for Scenario 1, Scenario 2, and Scenario 3 in Tables 8, 9, and 10, respectively.)

Table 6

Correlation Matrix for All Dependent Variables

Question #	3	4	5	6	7	8	9	10	11	12	13
<u>Outcome Stage (n = 290)</u>											
3	---										
4	.62	---									
5	-.28	-.32	---								
6	.41	.46	-.18	---							
7	.55	.58	-.23	.62	---						
8	-.25	-.34	.61	-.17	-.16	---					
<u>Recovery Stage (n = 290)</u>											
9	-.04	-.12	.10	-.06	-.05	.15	---				
10	-.13	-.09	.11	-.10	-.07	.15	.43	---			
11	.16	.04	.04	.17	.08	.09	-.10	-.18	---		
12	.15	.25	-.04	.21	.26	.05	.10	.22	.03	---	
13	.20	.26	-.12	.32	.32	-.06	.09	.13	.08	.50	---
14	.09	.01	.16	.23	.15	.20	-.12	-.15	.59	.08	.17

Note. * $r > 0.11$ is significant at .05; $r > 0.14$ is significant at .01.

Table 7

Multivariate Analysis of Variance of Outcome Stage Dependent Variables

Source of variance	Wilks' Lambda	df	F	p	partial η^2
Choice (CH)	.9778	6, 273	1.0321	0.4046	.02
Outcome-Difference (D)	.7603	6, 273	14.3423	<.0001	.24
Scenario (S)	.9015	12, 546	2.4206	0.0046	.05
CH x D	.9637	6, 273	1.7142	0.1177	.04
CH x S	.9400	12, 546	1.4290	0.1482	.03
D x S	.9362	12, 546	1.5240	0.1111	.03
CH x D x S	.9726	12, 546	0.6361	0.8119	.01

Table 8

Means (Standard Deviations) of Outcome Stage Variables for Scenario 1

Dependent Measure	Free-Choice		Restricted-Choice	
	Outcome-Difference	No-Outcome-Difference	Outcome-Difference	No-Outcome-Difference
Control	2.24 (2.07)	0.77 (1.23)	2.40 (1.63)	1.79 (2.11)
Self-Responsibility	2.72 (1.86)	1.50 (1.79)	2.04 (1.70)	2.79 (2.17)
Other-Responsibility	4.16 (1.60)	3.91 (1.48)	3.72 (1.74)	3.50 (1.87)
Character-Blame	2.28 (1.81)	1.86 (1.64)	2.00 (1.87)	1.71 (1.68)
Behavioral-Blame	2.96 (1.88)	2.05 (1.59)	2.80 (1.89)	2.46 (1.72)
Other-Blame	3.96 (1.54)	3.91 (1.69)	3.92 (1.61)	3.25 (1.75)

Table 9

Means (Standard Deviations) of Outcome Stage Variables for Scenario 2

Dependent Measure	Free-Choice		Restricted-Choice	
	Outcome-Difference	No-Outcome-Difference	Outcome-Difference	No-Outcome-Difference
Control	4.44 (0.96)	1.56 (2.02)	3.04 (1.60)	1.28 (1.59)
Self-Responsibility	4.52 (0.96)	2.32 (1.99)	2.92 (1.61)	1.60 (1.89)
Other-Responsibility	3.24 (1.33)	4.00 (1.50)	3.63 (1.84)	3.56 (2.26)
Character-Blame	3.52 (1.45)	2.28 (1.81)	2.83 (1.86)	1.76 (1.90)
Behavioral-Blame	4.32 (0.99)	2.28 (1.84)	3.79 (1.72)	1.96 (1.74)
Other-Blame	2.96 (1.46)	4.00 (1.47)	3.63 (1.50)	3.56 (1.94)

Followup ANOVAs for significant MANOVA Outcome-Difference effects showed that participants with Outcome-Difference (as compared to those with No-Outcome-Difference) gave higher ratings of Control, $F(1, 288) = 70.06, p < .0001$; higher ratings of Self-Responsibility, $F(1, 288) = 25.15, p < .0001$; higher ratings of Characterological-Blame, $F(1, 288) = 19.77, p < .0001$; and higher ratings of Behavioral-Blame, $F(1, 288) = 32.87, p < .0001$. No other significant Outcome-Difference effects were observed (each $p > .05$).

Followup ANOVAs for significant MANOVA Scenario effects showed a difference for the three different scenarios for ratings of Control, $F(2, 287) = 4.18, p = .0162$, Other-Responsibility, $F(2, 287) = 5.20, p = .006$, Characterological-Blame,

Table 10

Means (Standard Deviations) of Outcome Stage Variables for Scenario 3

Dependent Measure	Free-Choice		Restricted-Choice	
	Outcome-Difference	No-Outcome-Difference	Outcome-Difference	No-Outcome-Difference
Control	3.60 (1.12)	1.57 (1.44)	2.91 (1.81)	1.54 (1.59)
Self-Responsibility	3.64 (1.52)	2.26 (1.91)	3.43 (1.97)	2.17 (1.76)
Other-Responsibility	2.84 (1.52)	2.83 (2.15)	3.09 (1.81)	3.42 (1.50)
Character-Blame	3.00 (1.47)	2.13 (2.01)	3.13 (1.79)	1.50 (1.38)
Behavioral-Blame	3.44 (1.36)	2.52 (1.88)	3.30 (1.96)	2.38 (1.74)
Other-Blame	2.88 (1.56)	2.91 (2.02)	2.57 (2.00)	3.00 (1.62)

$F(2, 287) = 3.22, p < .05$, and Other-Blame, $F(2, 287) = 7.71, p < .001$. No significant differences were found for ratings of Self-Responsibility or Behavioral-Blame (both p 's $> .05$). Post-hoc pairwise comparisons of significant ANOVA effects using the Tukey test showed that participants reading Scenario 1 (as compared to those reading Scenario 2) gave lower ratings of Control (mean = 1.83 versus 2.58, respectively) and lower ratings of Characterological-Blame (mean = 1.97 versus 2.60, respectively). Additionally, participants reading Scenario 1 (as compared to those reading Scenario 3) gave higher ratings of Other-Responsibility (mean = 3.82 versus 3.04, respectively) and higher ratings of Other-Blame (mean = 3.76 versus 2.84, respectively). Participants reading

Scenario 2 (as compared to those reading Scenario 3) gave higher ratings of Other-Blame (mean = 3.55 versus 2.84, respectively).

Recovery Stage Tests

A second 2 x 2 x 3 between-subjects MANOVA was performed on the six RECOVERY STAGE dependent variables of Control, Self-Responsibility, Other-Responsibility, Characterological-Blame, Behavioral-Blame, and Other-Blame with Choice (Restricted and Free), Outcome-Difference (Outcome-Difference and No-Outcome-Difference), and Scenario (Funds, Tree, Course) as the independent variables. The results of the MANOVA showed no significant main effects for Choice, Outcome-Difference, Scenario, or any interactions (each $p > .05$; see Table 11). Therefore, no further analyses were performed for the RECOVERY STAGE variables. (RECOVERY STAGE means and standard deviations for Scenario 1, Scenario 2, and Scenario 3 are presented in Tables 12, 13, and 14, respectively.)

Table 11

Multivariate Analysis of Variance of Recovery Stage Dependent Variables

Source of variance	Wilks' Lambda	df	F	p	partial η^2
Choice (CH)	.9720	6, 273	1.3129	0.2514	.03
Outcome-Difference (D)	.9827	6, 273	0.7996	0.5709	.02
Scenario (S)	.9443	12, 546	1.3229	0.2010	.03
CH X D	.9619	6, 273	1.8011	0.0989	.04
CH X S	.9546	12, 546	1.0705	0.3828	.02
D X S	.9541	12, 546	1.0816	0.3731	.02
CH X D X S	.9737	12, 546	0.6111	0.8336	.01

Table 12

Means (Standard Deviations) of Recovery Stage Variables for Scenario 1

Dependent Measure	Free-Choice		Restricted-Choice	
	Outcome-Difference	No-Outcome-Difference	Outcome-Difference	No-Outcome-Difference
Control	4.44 (1.21)	4.45 (1.50)	4.68 (1.60)	4.17 (1.31)
Self-Responsibility	4.92 (1.08)	5.05 (1.29)	5.08 (1.38)	5.00 (1.18)
Other-Responsibility	2.48 (1.78)	1.95 (1.17)	2.56 (1.73)	3.13 (1.73)
Character-Blame	3.32 (1.46)	3.23 (1.34)	3.84 (1.65)	4.33 (1.58)
Behavioral-Blame	3.04 (1.70)	3.77 (1.41)	3.60 (1.44)	3.79 (1.86)
Other-Blame	2.56 (1.71)	2.59 (1.36)	2.52 (1.58)	2.42 (1.86)

Table 13

Means (Standard Deviations) of Recovery Stage Variables for Scenario 2

Dependent Measure	<u>Free-Choice</u>		<u>Restricted-Choice</u>	
	Outcome-Difference	No-Outcome-Difference	Outcome-Difference	No-Outcome-Difference
Control	4.48 (1.08)	4.52 (1.96)	4.63 (1.06)	4.60 (1.47)
Self-Responsibility	4.84 (1.07)	4.64 (1.35)	4.79 (1.10)	4.96 (1.14)
Other-Responsibility	2.24 (1.56)	2.32 (1.65)	2.58 (1.32)	2.60 (1.78)
Character-Blame	4.40 (1.12)	3.92 (1.63)	4.00 (1.56)	3.72 (1.99)
Behavioral-Blame	4.12 (1.13)	3.72 (1.51)	3.83 (1.37)	4.00 (1.65)
Other-Blame	2.40 (1.53)	2.48 (1.61)	3.08 (1.14)	2.20 (1.68)

Table 14

Means (Standard Deviations) of Recovery Stage Variables for Scenario 3

Dependent Measure	<u>Free-Choice</u>		<u>Restricted-Choice</u>	
	<u>Outcome-Difference</u>	<u>No-Outcome-Difference</u>	<u>Outcome-Difference</u>	<u>No-Outcome-Difference</u>
Control	4.72 (1.46)	4.87 (1.58)	4.87 (1.36)	4.54 (1.35)
Self-Responsibility	5.24 (0.93)	5.22 (1.09)	5.13 (0.69)	4.71 (1.27)
Other-Responsibility	2.16 (1.75)	1.74 (1.68)	2.26 (1.68)	2.17 (1.66)
Character-Blame	3.96 (1.67)	3.48 (2.11)	4.22 (1.65)	3.13 (1.73)
Behavioral-Blame	3.84 (1.31)	3.00 (2.02)	4.26 (1.29)	3.21 (1.77)
Other-Blame	2.08 (1.35)	2.09 (2.02)	2.35 (1.82)	1.75 (1.42)

Discussion

In accordance with Skinner's (1996) recommendation that the objective conditions related to perceptions of control should be clearly identified, the present study examined the effects of (a) choice of action and (b) outcome difference on participant ratings of control, responsibility, and blame. The present study also differentiated between perceptions associated with an aversive event (outcome) and perceptions associated with coping following the event (recovery).

Control

Nickels' (1980) reconceptualization of control predicts that participants with higher levels of outcome difference will give higher ratings of control over an event, regardless of choice. The results support this view and thus Hypothesis 1 in that a statistically significant main effect for the outcome difference manipulation was observed with no significant interactions with other variables. Participants gave higher ratings of control over the aversive event described in the scenarios when the actor's action made a difference (rather than no difference) in outcomes, regardless of whether the actor made a choice or no-choice. This finding is consistent with previous results (Cramer et al., 1997; Nickels et al., 1992) that found increased perceptions of control to be associated with choices that make a difference in consequences. In these studies, however, all participants made choices, but only those participants whose choices made a difference in consequences gave increased ratings of control over the event. The present study extends these findings by including conditions in which actors made no choice in options but were still exposed to differential consequences as a result of their actions. Outcome difference did not interact with choice, suggesting that choice and outcome difference function independently, and that choice cues are not required in order for one to perceive control.

Previous investigations suggest that providing choice to participants is associated with increased ratings of control (e.g., Feehan & Enzle, 1991; Langer, 1975; Peterson & Stunkard, 1989). Contrary to Hypothesis 2, the choice manipulation had no effect on ratings of control. This finding supports the argument that although choice and control are often linked, they are not conceptually interchangeable (Williams, 1998). Moreover,

these findings shed light on the relationship between choice cues and perceptions of control. Although some studies have observed an increase in control ratings for participants given choice cues (Langer, 1975; Rodin, 1986), others have failed to observe a significant effect for choice (e.g., Paterson & Neufeld, 1995). One possible explanation for this failure is offered by Tafarodi et al. (1998). Specifically, failure to observe an effect of choice behavior on perceptions of control may be due to the absence of “effective-choice.” Tafarodi et al. (1998) asked participants to read and understand a short story. Participants who made choices about the names to be used in the story gave higher ratings of control over the form of the task than those participants not permitted to make choices or those participants who made choices that did not affect the names used in the story. It was concluded that even “superficial” choices could be associated with increased perceptions of control, but only if they make a practical and known difference in consequences. “In conceiving of choice as perceived control, our findings suggest that the perceived effect of choice on the form of a task is critical to this functional equation” (Tafarodi et al., 1998, p. 1414).

Tafarodi et al.’s (1998) conclusion that only choices perceived to make a difference in consequences are related to perceptions of control is consistent with the findings of the present study. It is possible that previous studies reporting significant effects for choice have confounded choice-making (“choosiness”) with difference-making (effectiveness). That is, in some studies, making a choice may make a difference in outcomes whereas in other studies making a choice may be completely irrelevant to outcomes. For example, in the study by Dyer et al. (1990), the impact of “choice-making” on serious problem behaviors was examined. Specifically, participants were given

opportunities to make choices among instructional tasks and reinforcers for these tasks. It was observed that providing choice-making opportunities was associated with decreases in problem behaviors, and the authors concluded that choice-making options might provide a useful strategy for reducing behavior problems. However, when participants in this study engaged in choice behavior, they also made a difference in received consequences (i.e., tasks and reinforcers). Thus, it is unclear as to whether the observed benefits are associated with choice-behavior or with making a difference in received consequences.

As previously discussed, traditional conceptualizations of control have tended to confound predictability with controllability (Nickels et al., 1992). Accordingly, blind (predictionless) choices that result in increased perceptions of control are typically explained as resulting from an “illusion of control” (Langer, 1975) related to the introduction of choice cues that normally predict (are associated with) control over an outcome. Consistent with this view, participants (who in the present study were provided with predictionless choices) would be expected to fall subject to illusions of control and thus give higher ratings of control. It is possible that the objective conditions under which choice cues alone are associated with perceptions of control are limited to those situations in which actors have predictive information regarding the known effects of their choice behavior. This explanation is supported by findings that demonstrate the interaction of choice with expectations. For example, Rotton and Shats (1996) suggest that the beneficial effects of choice in previous investigations may be partially a result of the useful information that experimenters communicated to participants (thereby providing a degree of prediction to participants). Similarly, Paterson and Neufeld (1995) found that

choice between options did not necessarily lead to increased ratings of control. Instead, choice behavior led to increases in perceived control only when participants were given information upon which they could make an effective choice. It was concluded that without prediction (i.e., information about consequence-differences), the provision of choice did not significantly affect control ratings (Paterson & Neufeld, 1995).

Consequently, the benefits of choice may be limited to situations in which prediction cues are also provided. Failure to observe a significant effect for choice in the present study (in which prediction cues were absent) is consistent with this argument.

In contrast to the traditional view, Nickels' (1980) reconceptualization of control does not predict that choice alone increases ratings of control. According to the reconceptualization, it is the perception that one's actions make a difference in consequences (regardless of choice) that leads to higher ratings of control. The results of the present study support this view, with participants giving higher ratings of control only when actions made a difference in consequences, whether chosen or choiceless. The important variable in the present study was effective action (Nickels, 1980) rather than effective choices (Tafarodi et al., 1998). "Illusions of control" observed in previous studies (e.g., Langer, 1975) might be the result of participant perceptions of "making a difference" rather than participant perceptions of choice. Choice may be neither necessary nor sufficient for increasing perceptions of control.

In the present study, even in the absence of prediction cues, a significant finding was observed for outcome difference on perceptions of control. This suggests that providing participants with blind choices that make a difference in outcomes is associated with increased perceptions of control over events. As in other studies (Nickels et al.,

1992, Cramer et al., 1996), and contrary to the traditional viewpoint, people recognize blind difference-making (predictionless control) to be genuine control (rather than an illusion) and will rate it higher on control than non-difference-making (blind or otherwise).

Consistent with recommendations that researchers recognize that in most situations multiple targets of concern or focus exist (Amirkhan, 1998; Wallhagen & Brod, 1997), the present study found differential effects of outcome difference for the aversive event as compared to recovery from this event. Specifically, although the manipulation of outcome difference had a significant effect on ratings of control for the aversive event (outcome), no significant effects were observed for ratings of control for coping with the consequences or aftermath of the event (recovery). This finding supports Brickman et al.'s (1982) distinction between attributions for a problem and attributions for solutions. It also supports the argument that results of studies examining perceptions of control will vary depending on the outcome specified in the measure (Wallhagen & Brod, 1997). For example, the measure of perceived control used in the study by Paterson and Neufeld (1995) asked participants to rate the degree of control they perceived "in the situation." This requires participants to consider perceptions of control regarding a more general outcome than would a measure asking participants to rate the degree of control they perceived over the "presentation of an electric shock." Accordingly, although the present study asked participants to provide ratings of control in relation to multiple outcomes (i.e., an aversive event and consequences of the event), the observed significant effect of outcome difference was limited to perceptions of control for the aversive event only. Apparently, perceiving that one's actions have made a difference to the occurrence of a

negative event does not affect the perception that one can make a difference to the subsequent adjustment to that event.

Responsibility

Previous research suggests that perceptions of responsibility are associated with perceptions of control (e.g., Graham et al., 1995; Landy, 1992). Thus, it was stated under Hypothesis 3 that participant ratings of self-responsibility (but not other-responsibility) for an aversive event will be higher when the actor's actions (chosen or choiceless) bring about different consequences than when they do not. The results support this hypothesis. A significant main effect for the outcome difference manipulation was observed. Participants gave higher ratings of self-responsibility for the aversive event when the actor's action made a difference (rather than no difference) in outcomes, regardless of whether the actor made a choice or no-choice. This finding is consistent with previous results (e.g., Graham et al., 1995) that have demonstrated increased perceptions of responsibility for controllable (compared to uncontrollable) events. Additionally, a significant positive relationship between ratings of control and ratings of responsibility for the event was observed in the present study. This is consistent with previous results (e.g., Landy, 1992) that show increased perceptions of personal responsibility to be associated with increased perceptions of control. However, the present study extends these findings by examining the relationship between the manipulation of objective factors (i.e., choice and outcome difference) of an event and subsequent attributions of responsibility. Thus, the present study supports the hypothesis that making a difference in consequences is an important factor related to perceptions of responsibility. In addition, these significant effects of outcome difference were observed, regardless of choice

behavior, suggesting that choice and outcome difference function independently and that choice cues are not required in order for one to perceive responsibility for an event.

As expected, significant effects for outcome difference were observed for self-responsibility but not for other-responsibility. These results imply that these constructs are not merely opposites along a continuum. An important implication relates to the measurement of these two constructs. Specifically, studies that draw conclusions about responsibility patterns based on limited methodologies that vary or measure only self-responsibility or other-responsibility to the exclusion of the other may be inappropriately limiting participants' responses to expert conceptions of the construct. For example, Duval and Mulilis (1999) examined perceptions of responsibility for earthquake preparedness. Level of personal responsibility was calculated by subtracting each participant's rating of other-responsibility from his or her rating of self-responsibility. Findings of the present study suggest that self-responsibility and other-responsibility are not affected by outcome difference to the same degree, and as such may not be mutually exclusive as implied by some measures.

As noted by Davis and Lehman (1996), "a puzzling phenomenon in the victimization literature is that people who have experienced a traumatic life event often seem to assume personal responsibility for the event" (p.557). Similarly, Bard and Sangrey (1979) note that in situations where individuals have been victimized by theft, robbery, and assault "the victim seems almost eager to take responsibility" (p. 55). As these statements imply, and as noted by Davis and Lehman (1996), an assumption made in this literature is that distortions in causal attributions underly attributions of self-

responsibility for negative events. As previously mentioned, subjective interpretations of stressors and events have been increasingly viewed as being more important than are the stressors' objective characteristics (e.g., Langer & Brown, 1992). This is consistent with Shaver's (1985) view that "a responsibility attribution must be just that—a construction in a perceiver's mind" (p. 137). However, according to the findings of the present study, these constructions are not completely independent of event characteristics. The results imply that to the extent one's actions are perceived to have made a difference in received consequences (freely chosen or not freely chosen), the individual will perceive responsibility for that event.

Contrary to Hypothesis 4, the choice manipulation had no effect on ratings of responsibility. Similar to findings discussed previously for control ratings, only the outcome difference manipulation had an effect on ratings of responsibility. These results support the view that perceptions of control and responsibility are closely related (Landy, 1992; Langer & Rodin, 1976). The statistically significant positive correlation between ratings of control and responsibility for the outcome further supports this view but is inconsistent with findings by Ziff and Conrad (1995), who failed to find a statistically significant correlation between perceived control and perceived responsibility (r was only 0.08). This failure might have been due to assessing these perceptions in relation to different outcomes. Specifically, control beliefs over health were measured, whereas perceptions of responsibility were related to the outcome of well-being. In contrast, the present study assessed self-responsibility for the same events and found high correlations between self-responsibility and control ($r = 0.62$ for the OUTCOME STAGE and $r = 0.43$ for the RECOVERY STAGE).

Together with Ziff and Conrad's (1995) findings, the importance of recognizing that changing the target of concern or focus may result in different findings is clearly demonstrated in the present investigation. Moreover, the present study found differential effects of outcome difference for the outcome as compared to aftermath of the outcome. Specifically, although the manipulation of outcome difference had a significant effect on ratings of responsibility for the outcome, no significant effects were observed for ratings of responsibility for coping with the aftermath of the event. In addition, no significant relationship was observed between ratings of responsibility for the outcome and ratings of responsibility for coping with the aftermath of the event.

Intercorrelations for the dependent variables further support this concern about outcome specificity. Although both control and responsibility in the OUTCOME STAGE were negatively correlated with other-responsibility, a different pattern emerges in relation to the RECOVERY STAGE. Although these correlations in the RECOVERY STAGE are in the same direction, they are consistently smaller. In addition, control ratings for the outcome were negatively related to ratings of self-responsibility for coping with the aftermath, and ratings of self-responsibility for the outcome were negatively associated with ratings of control for coping with the aftermath.

One explanation for these results might be related to the concept of defensive attributions (Shaver, 1970). According to this view, attributions can be ego-defensive by allowing an individual to avoid responsibility for negative outcomes, thereby protecting one's self-esteem. Accordingly, people seeking to avoid responsibility for future events may use chance or other external sources of responsibility in explaining or anticipating these events (Chaiken & Darley, 1973; Shaver, 1970). Findings from a series of studies

(Burger, Brown & Allen, 1983; Rodin, Rennert & Solomon, 1980) suggest that under some conditions, when choice (control) leads to increased feelings of responsibility, the result is a lower level of self-esteem. For example, Rodin et al. (1980) found that participants given choices (i.e., over which personality test to take or questions to be used in an interview) reported decreased self-esteem as compared to participants with no-choice. Similarly, Burger et al. (1983) found that participants allowed to choose which of three tasks to perform scored lower on measures of self-esteem than those who were assigned tasks by the experimenter. Consistent with these findings, participants perceiving a high degree of self-responsibility in the present study might have experienced feelings of low competence resulting from the actor's action being associated with the occurrence of a negative event. Correspondingly, these participants might have decreased expectations for their ability to deal effectively with the consequences of the situation. In an attempt to protect their self-esteem, these participants might have made lower attributions of control for coping with the aftermath of the event. Conversely, perceiving low levels of self-responsibility for the outcome may leave perceptions of situational competence unaffected, and result in correspondingly higher levels of control for dealing with the consequences of the event. These findings might explain the observation of some researchers (e.g., Meyer & Taylor, 1986) that increased perceptions of responsibility for negative outcomes are related to poor adjustment.

These findings support Brickman et al.'s (1982) distinction between attributions for a problem and attributions for solutions. They also support Ziff and Conrad's (1995) conclusion that perceptions of control and responsibility need to be assessed for similar outcomes. Recent research further corroborates this distinction between attributions for

problems versus events. Specifically, Wall and Hayes (2000) examined the attributions of responsibility made by depressed and nondepressed clients for both causes of problems and solutions for their problems. Although differences between depressed and nondepressed clients were observed for attributions for events, all participants made similar attributions of responsibility for problem solution. Thus, findings of the present study are consistent with these results and support the recommendation that researchers recognize the multiple outcomes or foci that exist for any event which extends over time (Amirkhan, 1998; Wallhagen & Brod, 1997).

Blame

Consistent with Nickels' (1980) reconceptualization of control, it was expected under Hypothesis 5 that participant ratings of behavioral-blame and characterological-blame for an aversive event will be higher when the actor's actions (chosen or choiceless) bring about different consequences than when they do not. This hypothesis was supported in that a significant main effect for the outcome difference manipulation was observed. Participants gave higher ratings of both characterological-blame and behavioral-blame for the aversive event when the actor's action made a difference (rather than no difference) in outcomes, regardless of whether the actor made a choice or no-choice. As expected, significant effects for outcome difference were observed for self-blame but not for other-blame. These results are similar to those found for responsibility and imply that self-blame and other-blame are not merely opposites along a continuum. In addition, perceptions of control for the event were positively associated with both characterological and behavioral self-blame for the event and consequences of the event. These findings support the view that perceptions of blame are related to the effects of

making a difference in consequences (Nickels, 1980). Conversely, the findings seem less consistent with the argument that self-blame for a negative event reflects an attempt to increase one's perceptions of control (e.g., Medea & Thompson, 1974; Montada, 1992).

An implicit assumption in earlier literature was that distortions in causal attributions accounted for the phenomenon of self-blame observed among those exposed to negative life events (Davis & Lehman, 1996). In these studies, participants typically reported their attributions for negative events that were then related to subsequent coping and adjustment. Accordingly, relatively few studies examined the characteristics of the event that contributed to perceptions of self and other blame. Under these circumstances, it was typically assumed that the negative event was uncontrollable. For example, Peterson and Seligman (1983), highlighting the parallels between learned helplessness and maladaptive responses to victimization, noted that "both are preceded by uncontrollable aversive events" (p. 107). As noted by Winkel and Vrij (1992), "the idea that the victim's behavior might be an element in the causal chain ultimately leading to the event faces severe criticism" (p. 66), particularly in the case of rape victimization. Accordingly, it appeared to be ethically questionable to consider the role of one's own actions in regard to negative events. However, findings of the present study suggest that one will assume both characterological-blame and behavioral-blame for the event to the extent that one perceives differences in received consequences as a result of their own actions (freely chosen or not freely chosen). Thus, the present study extends previous findings by considering objective characteristics in regard to the development of perceptions of self-blame and demonstrates the effects of making a difference on perceptions of self-blame for a negative event. In addition, these significant effects of

outcome difference occurred regardless of choice behavior, suggesting that choice cues are not required in order for one to perceive behavioral or characterological self-blame.

Contrary to Hypothesis 6, the choice manipulation had no effect on ratings of blame. This finding is consistent with the previous results for control and responsibility and are also consistent with Shaver's (1985) temporal model in which the assignment of blame for an event rests on a prior decision about responsibility, which in turn, rests on a prior decision about causality. Additionally, similar to the findings for both control and responsibility, the effects of outcome difference on ratings of self-blame were limited to the OUTCOME STAGE, again supporting Brickman et al.'s (1982) distinction between attributions for a problem and attributions for solutions. Thus, the importance of distinguishing between attributions for outcomes and attributions for recovery holds for measures of control, responsibility and blame.

Although previous research distinguishes between two types of self-blame attributions (Janoff-Bulman, 1979), similar findings were observed for both of these types of self-blame. Specifically, participants with outcome difference gave higher ratings of both characterological-blame and behavioral-blame for an event. This finding is not inconsistent with previous studies that have failed to observe differences between these two types of self-blame. For example, previous research has shown both behavioral and characterological self-blame to be associated with increased incidence of depressive symptoms (e.g., Hill & Zautra, 1989; Meyer & Taylor, 1986). Also, consistent with previous findings (e.g., Abbey, 1987; Frazier, 1990; Frazier & Schauben, 1994), a significant positive correlation between behavioral-blame and characterological-blame

($r = 0.62$ in the OUTCOME STAGE and 0.50 for the RECOVERY STAGE) was observed in the present study. Frazier and Schauben (1994) argue that such correlations between the two types of self-blame suggest that “it may be difficult to blame one’s behavior without also blaming one’s character” (p. 10), implying that individuals may not make the distinctions between behavior and character that are implied by theoretical models.

Other findings are also consistent with previous research. For example, Frazier and Schauben (1994), examining the relationship between self-blame and future control for rape, failed to find a relationship between behavioral self-blame and perceptions of future control. Similarly, although results of the present study found significant positive relationships between characterological and behavioral self-blame in the OUTCOME STAGE, neither characterological nor behavioral self-blame correlated significantly with ratings of control in the RECOVERY STAGE. These findings further emphasize the importance of distinguishing between different targets of concern or focus when measuring perceptions of blame.

Other Findings

To assess the effects of scenario on responding, data were analyzed according to type of scenario. The results showed that in some cases, attributions for control, responsibility, and blame differed across scenarios. For example, participants reading Scenario 1 (as compared to Scenario 2) gave lower ratings of control and characterological-blame for the event. One possible explanation for this finding relates to the concept of perceived avoidability. Davis and Lehman (1996) proposed a model in which attributions of self-blame for an event are associated with self-implicating

perceptions of avoidability. According to this view, the extent to which people believe that they could have avoided a negative event predicts attributions of self-blame for the event. In Scenario 1, the actor lost invested money due to a decrease in the value of invested funds associated with “an unpredictable turn of events.” Perhaps participants reading this scenario perceived a lower probability of avoiding this loss (as compared to the other two scenarios) given the relatively vague explanation for the turn of events, resulting in lower levels of control and self-blame.

It was also observed that participants reading Scenario 1 (as compared to Scenario 3) gave higher ratings of other-responsibility and other-blame; similarly, participants reading Scenario 2 (as compared to Scenario 3) gave higher ratings of other-blame. One possible explanation for these findings may relate to the concept of foreseeability. According to Shaver’s (1985) model of the process of assigning responsibility and blame, one of the criteria according to which degrees of responsibility are assigned is the extent to which the causal agent was aware of the potential consequences. Scenario 3 states “You had been aware for some time that a large oak tree next to your garage was leaning slightly.” It is possible that the negative event associated with this scenario was perceived to be more foreseeable compared to those in other scenarios, thus resulting in lower overall ratings for perceptions of other-responsibility and other-blame.

Implications for Future Research

Theoretical implications. Contrary to traditional views of control that have confounded prediction and control and questioned whether predictionless control is possible (e.g., Miller, 1981; Seligman, 1975), Nickels’ (1980) reconceptualization proposes that these two concepts be defined without reference to one another. Consistent

with previous findings (e.g., Nickels et al., 1992), results of the present study lend additional support to this reconceptualized view and show that people recognize predictionless outcome difference cues to be genuine control. In these earlier investigations, participants were provided with choices that either made a difference in consequences or no difference in consequences. Results showed that only participants with choices that made a difference in consequences gave higher ratings of control (e.g., Nickels et al., 1992). The present study more clearly separates the effects of choice making from difference making by including conditions in which actors make no choice in options. Failure to observe a significant effect for the choice manipulation in the present study supports the view that making a difference in outcomes is most associated with perceptions of control. It also contradicts the view that “a central aspect of situational control is the availability of a choice” (Paterson & Neufeld, 1995, p. 145) and supports the idea that these variables (choice and outcome difference) operate differentially with respect to perceptions of control.

Results of the present study highlight the necessity of considering the effects of choice cues independently from the effects of outcome difference cues in the interest of determining their relative contributions to perceived control. The confounding of choice-making and difference-making is common in research studies investigating the effects of choice on perceptions of control (e.g., Peck, Wacker, Berg, & Cooper, 1996; Seybert, Dunlap, & Ferro, 1996), thereby limiting the degree to which the independent effects of choice cues and difference cues can be discerned. Accordingly, benefits that have been associated with choice behavior in previous studies (e.g., Dyer et al., 1990; Kearney, Durand, & Mindell, 1995) may be more a function of making a difference in

consequences than the act of choosing. Further research investigating the separate effects of choice and outcome difference is needed.

The reconceptualization of control provides a promising alternative to traditional views of control from which to conduct future investigations. In addition to providing insights regarding the independence of choice and outcome difference in relation to perceptions of control, findings of the present study suggest that the effects of outcome difference extend to the control-associated concepts of responsibility and blame. At the same time, however, other questions remain to be explored by future investigations. In line with Kipnus' (1998) recommendation that perceptions be related to objective conditions, additional event characteristics that might contribute to perceptions of control should be considered. For example, although no effects were observed for the manipulation of choice in the present study, future research might consider the role of prediction in relation to choice effects. As noted by Paterson and Neufeld (1995), when several courses of action are available and the impact associated with each is unknown, the instrumental effects of choice would likely be eliminated. Thus, the conditions under which information about options relates to perceptions of control over outcomes is an empirical question (Skinner, 1996). Other research might consider choice as a continuous variable, rather than a dichotomous variable, as in the present study. As Paterson and Neufeld (1995) note, there is a considerable difference between having two courses of action available and having only one choice available. The present study investigated choice between two courses of action only. The effects of choosing among multiple options on perceptions of control might explain other findings that suggest choice is an important aspect of situational control.

In the present study, the relationship between action and outcome difference was clear. However, this is not always the case in real life experience. If people are unaware of how actions affect outcomes, will individuals still develop hypotheses about these relationships that will then affect perceptions of situational control? When the relationship between action and outcome difference is ambiguous, other cues such as choice and prediction may exert greater influence on perceptions of control, responsibility and blame. Similarly, in the absence of clear action-outcome difference relationships, person variables (e.g., personality characteristics, attributional styles) might be more related to situational perceptions of control. This is consistent with the view that "if reality is ambiguous enough, a person may project and impose habitual explanations" (Peterson & Seligman, 1983, p. 106). Investigations of perceptions of outcome difference under ambiguous circumstances as compared to unambiguous conditions would contribute to the understanding of the relationship between outcome difference and perceptions of control.

Although the present study demonstrated the effects of outcome difference on control, responsibility, and blame, temporal relationships among these variables were not examined, limiting the conclusions that can be drawn in regard to these variables. For example, according to Heider's (1958) conception of responsibility, judgments of responsibility initially require only global association between the behavior of the actor and outcome. Later, judgments become increasingly influenced by inferences about more subjective states, and require that the outcome be foreseeable, intentional, and justifiable. Thus, the present study is limited in that it only considers attributions of responsibility immediately following an aversive event. Whether or not these perceptions would change

after an individual had time to consider the foreseeability, intentionality, and justifiability of the actor's actions is unknown. Similarly, it has been recommended that investigations of blame assignment compare the effects of self-blame near the time of event occurrence with self-blame long after the event (Malcarne, Compas, Epping-Jordan, & Howell, 1995). Failure to consider the role of temporal factors in regard to perceptions of blame might explain the findings of the present study that failed to support the view that self-blame enhances perceptions of control. Specifically, Janoff-Bulman (1992) argues that it may be naïve to assume that self-blame will result in enhanced feelings of control over relatively short periods of time.

Emphasis on changes in event perceptions over time is also consistent with other stress-related theory. According to reformulations of the transactional stress appraisal and coping model (Lazarus, 1990, 1993), trait dispositions may influence situation-specific appraisals and subsequent coping efforts. Lazarus (1993) argues, however, that the relative contributions of trait dispositions and contextual processes cannot be understood "unless coping strategies are examined in the same persons over time or across stressful encounters" (pp. 236-237). Only in this manner can consistencies (e.g., trait dispositions) and inconsistencies (e.g., contextual processes) in coping under diverse circumstances be determined.

Methodological implications. The finding that choice and outcome difference differentially affect perceptions of control has significant implications for future research. Consistent with Kipnus' (1998) recommendation, results of the present study suggest that future research continue to evaluate the relationship between characteristics of events and subsequent perceptions in order to clarify those objective conditions most associated with

perceived control. In light of these findings, measures for both choice and making a difference should be included in order to distinguish the extent to which these are differentially related to event characteristics and the degree to which they differentially contribute to subsequent perceptions of control.

Results of the present investigation imply a degree of complexity among the variables of control, responsibility, and blame that is inconsistent with the limited measures typically used to assess these perceptions. Most apparent is the importance of the distinction by Brickman et al. (1985) between attributions for an event and attributions for solutions. Results of the present study found differences between attributions for the event and those for consequences of the event for control, responsibility, and blame. Although some studies have distinguished between perceptions of an event and those for consequences of the event (e.g., Frazier & Schauben, 1994; Wall et al., 2000), many others do not distinguish between these different targets of concern. The observed differences in the present study are consistent with previous findings that have shown different results for events versus outcomes. For example, Amirkhan (1998) found that attributions of controllability for coping (as compared to attributions for events) were superior predictors of subsequent behavior. Similarly, better recovery following rape has been associated with future control (e.g., Frazier, 1990; Frazier & Schauben, 1994), but thinking about why the assault occurred (characteristics of the event) has been found to be associated with more distress. Thus, focusing on the solutions or what follows an event seems more adaptive than focusing on the attributions for the event in this circumstance. Expanded measurements of control, responsibility, and

blame are needed in order to reveal the complex relationships among attributions for various aspects of events.

Results of the present investigation also support the view that researchers distinguish between responsibility and blame. Although it has been recommended that perceptions of both responsibility and blame be included in any investigation of these concepts (Shaver, 1985), many studies include measures for one to the exclusion of the other. For example, Alicke, Weigold, and Rogers (1990) measure responsibility by having participants rate the degree to which they were “very much deserving of blame” to “slightly deserving of blame” (p. 291). According to these researchers, “measures of praise and blame were used instead of responsibility because responsibility is a multifaceted term, involving elements of causation, blame and punishment” (p. 291). The researchers also state that they assumed it would be easier for participants to interpret ratings of blame and praise.

Findings of the present study suggest that although self-responsibility and blame are similarly affected by outcome difference, the patterns of relationships these measures have with other variables are not identical. Thus, it is implied that different results might be observed depending on whether participants are asked to give ratings of ‘responsibility’ versus ‘blame.’ In addition, results suggest that people perceive differences among these concepts and use them differentially when constructing their experiences. As pointed out by Shaver (1985), it is important to consider the degree to which people who establish the theoretical language of attribution are using the distinctions inherent in everyday speech. Specifically, because attribution theory proposes to account for the way in which ordinary perceivers explain the causes of their

own actions and the behavior of others, the terms used in research must closely resemble terms that those perceivers would have used on their own. Accordingly, findings of the present study suggest that future research investigate the relationships between objective conditions and these concepts in order to reveal how these terms are used in cognitive constructions of events.

The present study extends previous research conducted in accordance with the reconceptualization of control by moving from contrived experimental situations to real-life situations described in scenarios. However, the use of such a "role-playing" methodology raises important questions about the generalizability of the results to actual life-events. The differential pattern of responding for individuals in the experimental groups lends support to the view that outcome difference is associated with differences in perceptions of control, responsibility, and blame. However, other research has demonstrated differences between attributions for an event between victims and observers (e.g., Janoff-Bulman, 1982; Davis & Lehman, 1996). Thus, the extent to which the responses of participants in the present study are representative of the responses of individuals in actual events remains a question for future research. One possible alternative may be to evaluate perceptions of choice and outcome difference in situations in which participants are going to be exposed to aversive stimuli that represent a serious real-life event. For example, medical treatments are considered highly aversive to patients. Devising methods that increase patients' awareness of outcome difference versus choice in these situations might allow researchers to investigate the differential effects of these variables on individual coping with highly aversive stimuli.

In a recent review examining the research in the areas of social, personality, clinical, and health psychology, Snyder, Tennen, Affleck, and Cheavens (2000) make a number of recommendations for future research, many of which have implications for extensions of the present study. For example, they recommend that more emphasis be placed on “hard markers,” including behaviors and physiological indices. Similar to previous studies (e.g., Nickels et al., 1992), the present investigation used self-report measures to assess the effects of the choice and outcome difference manipulations. Future research might investigate the relationship between these variables and measures other than ratings (i.e., behavioral measures such as performance or physiological effects). Such investigations would increase our understanding of how choice and outcome difference affect experiences of stressful events.

Snyder et al. (2000) also note that converging evidence suggests that some individuals are changed in positive ways in the aftermath of negative events (e.g., Ickovics & O’Leary, 1998). Accordingly, the authors recommend that future studies consider the concept of stress-related growth (Snyder et al., 2000). In the context of previous research demonstrating the various benefits of perceived controllability, the present findings suggest that Nickels’ (1980) reconceptualization of control is a promising model from which to explore these questions.

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Appendix A: Instructions

What is your first language? _____

Gender (please circle): MALE FEMALE

INSTRUCTIONS:

A story is presented in the following pages in which an actor experiences a negative event. This story is divided into three stages: ACTION, OUTCOME, and RECOVERY. Your task is to imagine yourself as the person in the story. In doing so, carefully read the story as it begins in the ACTION stage and answer the question associated with this stage before going on to the the OUTCOME stage. Continue reading the story in the OUTCOME stage and answer the questions associated with this stage before you go on to the RECOVERY stage. Finally, continue reading the story in the RECOVERY stage and answer the questions associated with this stage.

Appendix B: Free-Choice/Outcome-Difference for Scenario 1

ACTION

You had been planning for some time to withdraw a large sum of money you once invested and move the funds into your bank account. You considered whether to withdraw your funds that day or the following day. Because you wanted to run some errands that day, you went to withdraw your invested money the following day.

1. To what extent did you have a CHOICE between going to withdraw your invested money that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to withdraw your funds the following day, you learned that the value of your funds had dropped drastically overnight due to an unpredictable turn of events, and all of your invested money had been lost. You realized that if you had withdrawn your funds the day before, you would NOT have lost your invested money

2. In the above scenario, suppose you had withdrawn your funds the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your invested money? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your invested money? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your invested money. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your invested money, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your invested money, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your invested money, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your invested money, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

13. Given the loss of your invested money, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

14. Given the loss of your invested money, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix C: Free-Choice/No-Outcome-Difference for Scenario 1

ACTION

You had been planning for some time to withdraw a large sum of money you once invested and move the funds into your bank account. You considered whether to withdraw your funds that day or the following day. Because you wanted to run some errands that day, you went to withdraw your invested money the following day.

1. To what extent did you have a CHOICE between going to withdraw your invested money that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to withdraw your funds the following day, you learned that the value of your funds had dropped drastically two days ago due to an unpredictable turn of events, and all of your invested money had been lost. You realized that even if you had withdrawn your funds the day before, you would have lost your invested money.

2. In the above scenario, suppose you had withdrawn your funds the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your invested money? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your invested money? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your invested money. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your invested money, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your invested money, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your invested money, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your invested money, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

13. Given the loss of your invested money, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

14. Given the loss of your invested money, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix D: Restricted-Choice/Outcome-Difference for Scenario 1

ACTION

You had been planning for some time to withdraw a large sum of money you once invested and move the funds into your bank account. You considered whether to withdraw your funds that day or the following day. Because you were required by law to appear in court for jury duty that day, you went to withdraw your invested money the following day.

1. To what extent did you have a CHOICE between going to withdraw your invested money that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to withdraw your funds the following day, you learned that the value of your funds had dropped drastically overnight due to an unpredictable turn of events, and all of your invested money had been lost. You realized that if you had withdrawn your funds the day before, you would NOT have lost your invested money.

2. In the above scenario, suppose you had withdrawn your funds the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your invested money? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your invested money? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your invested money. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your invested money, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your invested money, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your invested money, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your invested money, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

13. Given the loss of your invested money, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

14. Given the loss of your invested money, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix E: Restricted-Choice/No-Outcome-Difference for Scenario1

ACTION

You had been planning for some time to withdraw a large sum of money you once invested and move the funds into your bank account. You considered whether to withdraw your funds that day or the following day. Because you were required by law to appear in court for jury duty that day, you went to withdraw your invested money the following day.

1. To what extent did you have a CHOICE between going to withdraw your invested money that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to withdraw your funds the following day, you learned that the value of your funds had dropped drastically two days ago due to an unpredictable turn of events, and all of your invested money had been lost. You realized that even if you had withdrawn your funds the day before, you would have lost your invested money.

2. In the above scenario, suppose you had withdrawn your funds the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your invested money? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your invested money? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your invested money? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your invested money. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your invested money, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your invested money, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your invested money, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your invested money, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

13. Given the loss of your invested money, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

14. Given the loss of your invested money, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix F: Free-Choice/Outcome-Difference for Scenario 2

ACTION

You had been enrolled for some time in an academic program leading to a career you wanted and you needed to take one required course to complete your degree. You considered whether to register for the course that day or the following day. Because you wanted to run some errands that day, you went to register for the course the following day.

1. To what extent did you have a CHOICE between going to register for the course that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to register for the course the following day, you learned that the course had been cancelled just that morning due to limited enrollment. You were told that if you had called to register for the course the day before, you would NOT have lost your opportunity to graduate this year.

2. In the above scenario, suppose you had gone to register for the course the day before. To what extent would this have MADE A DIFFERENCE as to whether or not you lost your opportunity to graduate this year? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent did you CONTROL whether or not you lost your opportunity to graduate this year? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are you RESPONSIBLE for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your opportunity to graduate this year. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your opportunity to graduate this year, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your opportunity to graduate this year, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your opportunity to graduate this year, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your opportunity to graduate this year, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

13. Given the loss of your opportunity to graduate this year, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

14. Given the loss of your opportunity to graduate this year, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix G: Free-Choice/No-Outcome-Difference for Scenario 2

ACTION

You had been enrolled for some time in an academic program leading to a career you wanted and you needed to take one required course to complete your degree. You considered whether to register for the course that day or the following day. Because you wanted to run some errands that day, you went to register for the course the following day.

1. To what extent did you have a CHOICE between going to register for the course that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to register for the course the following day, you learned that the course had been cancelled two days ago due to limited enrollment. You were told that even if you had called to register for the course the day before, you would have lost your opportunity to graduate this year.

2. In the above scenario, suppose you had gone to register for the course the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your opportunity to graduate this year? (Circle the most appropriate number.)

no difference at all 0—1—2—3—4—5—6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your opportunity to graduate this year? (Circle the most appropriate number.)

no control at all 0—1—2—3—4—5—6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your opportunity to graduate this year. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your opportunity to graduate this year, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your opportunity to graduate this year, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your opportunity to graduate this year, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your opportunity to graduate this year, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

13. Given the loss of your opportunity to graduate this year, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

14. Given the loss of your opportunity to graduate this year, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix H: Restricted-Choice/Outcome-Difference for Scenario 2

ACTION

You had been enrolled for some time in an academic program leading to a career you wanted and you needed to take one required course to complete your degree. You considered whether to register for the course that day or the following day. Because you were required by law to appear in court for jury duty that day, you went to register for the course the following day.

1. To what extent did you have a CHOICE between going to register for the course that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to register for the course the following day, you learned that the course had been cancelled just that morning due to limited enrollment. You were told that if you had called to register for the course the day before, you would NOT have lost your opportunity to graduate this year.

2. In the above scenario, suppose you had gone to register for the course the day before. To what extent would this have MADE A DIFFERENCE as to whether or not you lost your opportunity to graduate this year? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent did you CONTROL whether or not you lost your opportunity to graduate this year? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are you RESPONSIBLE for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your opportunity to graduate this year. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your opportunity to graduate this year, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your opportunity to graduate this year, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your opportunity to graduate this year, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your opportunity to graduate this year, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

13. Given the loss of your opportunity to graduate this year, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

14. Given the loss of your opportunity to graduate this year, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix I: Restricted-Choice/No-Outcome-Difference for Scenario 2

ACTION

You had been enrolled for some time in an academic program leading to a career you wanted and you needed to take one required course to complete your degree. You considered whether to register for the course that day or the following day. Because you were required by law to appear in court for jury duty that day, you went to register for the course the following day.

1. To what extent did you have a CHOICE between going to register for the course that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to register for the course the following day, you learned that the course had been cancelled two days ago due to limited enrollment. You were told that even if you had called to register for the course the day before, you would have lost your opportunity to graduate this year.

2. In the above scenario, suppose you had gone to register for the course the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your opportunity to graduate this year? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your opportunity to graduate this year? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your opportunity to graduate this year? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your opportunity to graduate this year. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your opportunity to graduate this year, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your opportunity to graduate this year, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your opportunity to graduate this year, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your opportunity to graduate this year, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

13. Given the loss of your opportunity to graduate this year, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

14. Given the loss of your opportunity to graduate this year, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix J: Free-Choice Outcome-Difference for Scenario 3

ACTION

You had been aware for some time that a large oak tree next to your garage was leaning slightly. You considered whether to reinforce the tree that day or the following day. Because you wanted to run some errands that day, you went to reinforce the tree the following day.

1. To what extent did you have a CHOICE between going to reinforce the tree that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to reinforce the tree the following day, you observed that heavy winds earlier that morning had blown the tree onto your garage damaging the structure beyond repair. You realized that if you had gone to reinforce the tree the day before, you would NOT have lost your garage.

2. In the above scenario, suppose you had gone to reinforce the tree the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your garage? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your garage? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your garage. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your garage, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your garage, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your garage, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your garage, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

13. Given the loss of your garage, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

14. Given the loss of your garage, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix K: Free-Choice/No-Outcome-Difference for Scenario 3

ACTION

You had been aware for some time that a large oak tree next to your garage was leaning slightly. You considered whether to reinforce the tree that day or the following day. Because you wanted to run some errands that day, you went to reinforce the tree the following day.

1. To what extent did you have a CHOICE between going to reinforce the tree that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to reinforce the tree the following day, you observed that heavy winds earlier that morning had blown some of the larger tree branches onto your garage damaging the structure beyond repair. You realized that even if you had gone to reinforce the tree the day before, you would have lost your garage.

2. In the above scenario, suppose you had gone to reinforce the tree the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your garage? (Circle the most appropriate number.)

no difference at all 0—1—2—3—4—5—6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your garage? (Circle the most appropriate number.)

no control at all 0—1—2—3—4—5—6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not to blame at all 0---1---2---3---4---5---6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your garage. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your garage, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your garage, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your garage, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your garage, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

13. Given the loss of your garage, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

14. Given the loss of your garage, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix L: Restricted-Choice/Outcome-Difference for Scenario 3

ACTION

You had been aware for some time that a large oak tree next to your garage was leaning slightly. You considered whether to reinforce the tree that day or the following day. Because you were required by law to appear in court for jury duty that day, you went to reinforce the tree the following day.

1. To what extent did you have a CHOICE between going to reinforce the tree that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to reinforce the tree the following day, you observed that heavy winds earlier that morning had blown the tree onto your garage damaging the structure beyond repair. You realized that if you had gone to reinforce the tree the day before, you would NOT have lost your garage.

2. In the above scenario, suppose you had gone to reinforce the tree the day before. To what extent would this have **MADE A DIFFERENCE** as to whether or not you lost your garage? (Circle the most appropriate number.)

no difference at all 0---1---2---3---4---5---6 complete difference

3. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent did you **CONTROL** whether or not you lost your garage? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

4. Considering **ONLY** the actions and events during the 2 days described in the above scenario, to what extent are you **RESPONSIBLE** for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your garage. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your garage, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your garage, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your garage, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your garage, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

13. Given the loss of your garage, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

14. Given the loss of your garage, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.

Appendix M: Restricted-Choice/No-Outcome-Difference for Scenario 3

ACTION

You had been aware for some time that a large oak tree next to your garage was leaning slightly. You considered whether to reinforce the tree that day or the following day. Because you were required by law to appear in court for jury duty that day, you went to reinforce the tree the following day.

1. To what extent did you have a CHOICE between going to reinforce the tree that day or the following day? (Circle the most appropriate number.)

no choice at all 0---1---2---3---4---5---6 complete choice

Please go on to the next page.

OUTCOME

When you went to reinforce the tree the following day, you observed that heavy winds earlier that morning had blown some of the larger tree branches onto your garage damaging the structure beyond repair. You realized that even if you had gone to reinforce the tree the day before, you would have lost your garage.

2. In the above scenario, suppose you had gone to reinforce the tree the day before. To what extent would this have MADE A DIFFERENCE as to whether or not you lost your garage? (Circle the most appropriate number.)

no difference at all 0—1—2—3—4—5—6 complete difference

3. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent did you CONTROL whether or not you lost your garage? (Circle the most appropriate number.)

no control at all 0—1—2—3—4—5—6 complete control

4. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are you RESPONSIBLE for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely responsible

5. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) RESPONSIBLE for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely responsible

6. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your character (i.e., the kind of person you are) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

7. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent is your behavior (i.e., the things you did) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

8. Considering ONLY the actions and events during the 2 days described in the above scenario, to what extent are other factors (i.e., other people, chance, etc.) to BLAME for the loss of your garage? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

RECOVERY

People have different ways of coping with negative events in their lives. Imagine yourself trying to cope with the loss of your garage. Take some time to imagine some of the consequences that might follow this event. Imagine the feelings and thoughts you might experience and behaviors you might engage in following this event. Then, answer the questions that follow.

9. Given the loss of your garage, to what extent do you think you can CONTROL how well you cope with the consequences of this loss? (Circle the most appropriate number.)

no control at all 0---1---2---3---4---5---6 complete control

10. Given the loss of your garage, to what extent do you think you are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 completely responsible

11. Given the loss of your garage, to what extent do you think other factors (i.e., other people, chance, etc.) are RESPONSIBLE for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0---1---2---3---4---5---6 complete control

12. Given the loss of your garage, to what extent do you think your character (i.e., the kind of person you are) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

13. Given the loss of your garage, to what extent do you think your behavior (i.e., the things you did) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not to blame at all 0—1—2—3—4—5—6 completely to blame

14. Given the loss of your garage, to what extent do you think other factors (i.e., other people, chance, etc.) will be to BLAME for how well you cope with the consequences of this loss? (Circle the most appropriate number.)

not responsible at all 0—1—2—3—4—5—6 completely to blame

You have now completed the questionnaire. Please hand in to the experimenter. Thank you for your participation.