

Perceived Control as an Antidote to the Negative Effects of Layoffs on Survivors'
Organizational Commitment and Job Performance

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Abstract

Two field studies tested the hypothesis that high perceived control may serve as an antidote to the negative effects of layoffs on the employees who are not laid off (survivors). In Study 1 some participants witnessed the layoffs of fellow employees whereas others did not. In Study 2 all participants survived a layoff, but they varied in the extent to which they experienced the post-layoff environment as threatening to their well-being. Conceptually analogous results emerged across the two studies. Study 1 showed that the negative impact of layoffs on survivors' organizational commitment was reduced when perceived control was relatively high. Study 2 showed that the tendency for survivors' job performance to be adversely affected by high threat to their well-being was reduced when perceived control was relatively high. Stated differently, perceived control was more strongly related to: (1) employees' organizational commitment in the presence than in the absence of layoffs, in Study 1, and (2) survivors' job performance when they experienced the post-layoff environment as more threatening, in Study 2. These findings serve the theoretically useful purposes of: (1) accounting for additional variance in the reactions of layoff survivors, and (2) identifying *when* perceived control will be more versus less strongly related to employees' work attitudes and behaviors. Practical implications for the management of organizational downsizings also are discussed.

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Layoffs are pervasive in contemporary organizations. The rationale underlying organizations' decision to downsize is straightforward: by reducing costs, executives hope to improve firm profitability. And yet, studies show that the effects of layoffs on organizational performance are mixed at best, often (though not always) failing to produce the desired improvements (e.g., Cascio, 1993). Other studies have examined the work attitudes and behaviors of the "survivors" (i.e., the remaining employees who are not laid off). Here, too, the reactions have been found to be quite varied. Whereas many layoff survivors react negatively, e.g., in the form of reduced organizational commitment or job performance, a smaller percentage of survivors are either unaffected or may actually respond more positively (Mishra, Spreitzer, & Mishra, 1998).

Studies conducted at the individual level of analysis have identified some of the factors that account for the variability in survivors' reactions. For example, survivors have been shown to respond more negatively when: (1) the layoffs were perceived to be handled unfairly (e.g., Brockner et al., 1994), (2) trust in management was relatively low (Spreitzer & Mishra, 2002), (3) survivors were more psychologically close to the people who were laid off (Brockner et al., 1987), and (4) the threat of future layoffs was relatively high (Brockner et al., 1993). In all of these studies, however, much of the variance in survivors' reactions was left unexplained, suggesting the need for further theory and research to elucidate the determinants of survivors' reactions. Accordingly, one purpose of the present studies is to provide further insight into the

factors affecting survivors' reactions to layoffs. In particular, the present studies were guided by the notion that layoffs may be a source of considerable stress for the employees who remain.

Stress as An Organizing Framework

The present studies were derived from much prior theory and research suggesting that high levels of stress have an adverse effect on employees' attitudes and behaviors. Exchange theory (Homans, 1961), for example, provides one framework that helps to account for the harmful effects on employees of work stress. Built on the principle of reciprocity, exchange theory posits that individuals will "give back" commensurately with what they perceive they have received (or failed to have received) from the other party in the relationship. Thus, the more that employees experience stress in the workplace, the more likely they may be to conclude that the organization is not treating them well (by contributing to their experience of stress). As a result, individuals may reciprocate by exhibiting more negative attitudes (e.g., reduced organizational commitment) and/or behaviors (e.g., lower job performance; Jamal, 1984).

According to Lazarus and Folkman (1984), the level of stress that people experience depends upon their assessments of the degree of threat to their physical and/or psychological well-being in their environments (i.e., primary appraisal), and their beliefs about the likelihood of being able to counteract the negative consequences of the threats in their environments (i.e., secondary appraisal). Stress is jointly and interactively determined by people's primary appraisal (which refers to the perception of threat) and their secondary appraisal (which refers to the perception of control). Stress is experienced most intensely when people encounter stimuli that they perceive

to threaten their well-being, particularly when they believe that they will be unable to counteract the harmful effects of the threatening stimuli.

Lazarus and Folkman's (1984) framework suggests that the post-layoff work environment may be experienced as quite stressful (combining perceptions of high threat and low control) by the employees who remain. For example, layoffs create uncertainty, leaving survivors to wonder (and worry) about whether more layoffs are in the offing, and what their longer-term career prospects may be even if they were to survive future rounds of layoffs (e.g., Greenhalgh & Rosenblatt, 1984). In addition, because workers tend to disappear more quickly than work, survivors often feel overextended by their post-layoff job responsibilities (Kozlowski, Chao, Smith, & Hedlund, 1993; Mishra, et al., 1998). Furthermore, and consistent with the threat-rigidity hypothesis (Staw, Sandelands, & Dutton, 1981) downsizing organizations may threaten the surviving workforce by introducing restrictions that limit their freedom. For example, activities that previously were left to employees' discretion may now have to be approved by more centralized decision-making bodies. In short, the presence of these (and other) threats along with survivors' perceptions of being unable to control or counteract these threats elicit high levels of stress, which, in turn are likely to be associated with reductions in important work attitudes (e.g., organizational commitment) and behaviors (e.g., job performance).

It is somewhat ironic that layoffs may impose high levels of stress on survivors. That is, precisely when downsizing organizations are dependent upon their remaining employees to focus on meeting organizational objectives, the high stress that often accompanies layoffs may make it more difficult for the survivors to do so. One of the challenges downsizing organizations face,

therefore, is to mitigate the potentially harmful effects of layoff-induced stress on survivors. In short, for both theoretical and practical reasons it is crucial to identify factors that influence survivors' experience of stress, and hence their attitudinal and behavioral reactions to layoffs.

Research conducted outside of the layoff context has shown that employees who perceive themselves to have less control over their work environments exhibit greater stress as measured by coronary heart disease symptoms (Marmot et al., 1997). In a conceptual paper, Mishra and Spreitzer (1998) suggested that layoff survivors' perceptions of control influence their experience of stress and hence their work attitudes and behaviors. However, the effects of perceived control on survivors have received very little empirical scrutiny (see Spreitzer & Mishra, 2002, for a rare exception). The present studies are designed to redress this state of affairs, and in doing so, help to account for more of the variability in survivors' reactions to layoffs.

Conceptualizing Perceived Control

Organizational psychologists have conceptualized perceived control in two related but distinct ways that are not mutually exclusive (Greenberger et al., 1989; Spector, 1986). One conception (the "self-determination" framework) suggests that people's sense of control depends upon whether they perceive their behavior to be self-determined versus coerced, or to use DeCharms' (1968) terminology, whether they see themselves as "origins" who initiate behavior versus "pawns" who simply react to their environments. To the extent that survivors perceive that they have high levels of discretion over or input into their work activities, they are likely to experience a high degree of perceived control.

A second conception (the “impact” framework) suggests that perceived control depends upon how much people believe that important outcomes are contingent upon, rather than independent of, their behavior (Rotter, 1966). To the extent that they believe that their behavior influences important outcomes, they are likely to experience a high degree of perceived control. For example, people are likely to believe that their behavior influences important outcomes if they see themselves as having high levels of ability to perform the task at hand, or if they see themselves as being able to influence (i.e., “having the ear of”) those parties who control important outcomes (Seligman, 1998).

In summary, perceived control is reflected in employees’ perceptions of self-determination and/or impact, and will be treated as such in the present studies. Moreover, employees’ perceived control results from dispositional and/or situational factors, although it is beyond the scope of the present studies to evaluate the relative influence of dispositional and situational factors on perceived control. Some employees are dispositionally more likely to perceive control than others (e.g., Rotter’s locus of control, 1966), and some post-layoff work environments are likely to be more control-promoting than others (Mishra et al., 1998).

The Present Studies

Lazarus and Folkman’s (1984) conceptualization of stress suggests that perceived threat to well-being and perceived control in the post-layoff work environment will interactively combine to influence employees’ work attitudes (e.g., organizational commitment) and behaviors (e.g., job performance). Layoff survivors are expected to respond most negatively when perceived threat is

relatively high and perceived control is relatively low. Moreover, it is worth describing the form of the predicted interactive relationship between perceived threat and perceived control in two different ways. Whereas both depictions of the interactive relationship are consistent with the Lazarus-Folkman framework, each one has important (but somewhat different) theoretical implications. First, we expected perceived control to moderate the effect of threat to well-being on survivors' organizational commitment and job performance. More specifically, high perceived control was expected to reduce the extent to which high threat to well-being would have an adverse effect on survivors' organizational commitment and job performance, relative to when perceived control was low. Indeed, the perception of high control refers to employees believing that they have the resources (physical and/or psychological) to counteract the potentially harmful effects of the source(s) of threat, thereby minimizing their impact. In contrast, the perception of low control refers to people believing that they are unable to counteract the threat(s) in their environments, making them more susceptible to being adversely influenced by the threat(s). If perceived control is found to moderate the effect of threat on layoff survivors in the ways described above, it would suggest that perceived control could be added to the growing list of factors (e.g., fairness, trust in management) that account for some of the variability in survivors' reactions.

Second, we also expected threat to well-being to moderate the relationship between perceived control and survivors' organizational commitment and job performance. More specifically, the positive relationship between perceived control and survivors' organizational commitment and job performance was expected to be more pronounced when threat to well-being was high rather than low. The greater the threat to well-being, the more likely are survivors to assign importance

to perceiving themselves as able to counteract the harmful effects associated with the threat. For example, if people believe that they have more to lose as a result of the threat(s), they will assign greater importance to perceiving that they have control, i.e., to believing that they can do something to prevent the loss. Assigning greater importance to perceiving control, they are more likely in turn to be influenced by the extent to which they perceive themselves to have control, relative to when they are less threatened by the layoffs. If such findings were to emerge, it would extend the results of previous studies that have examined the effects of perceived control.

Whereas previous research (e.g., Greenberger et al., 1989; Spector, 1986) has shown the positive effects of high perceived control on employees' attitudes (e.g., satisfaction) and behaviors (e.g., performance), relatively few studies have delineated *when* perceived control will be more versus less strongly related to employees' attitudes and behaviors.

The present research consisted of two studies that examined the joint effects on employees of: (1) the perceived degree of threat to their well-being in the post-layoff work environment, and (2) their perceived level of control. Study 1 consisted of two groups of employees within a single organization; one group had survived an organizational downsizing whereas in the other group no downsizing had occurred. All participants in Study 2 were survivors of a layoff that had occurred in their organization. However, participants in Study 2 varied in the extent to which they experienced the post-layoff environment as threatening to their well-being. Perceived control was an independent variable in both studies.

Two different, albeit important, dependent variables were assessed in the two studies.

Organizational commitment was the dependent variable in Study 1 whereas job performance was

the dependent variable in Study 2. We expected that the tendency for employees to respond less favorably to layoffs (in Study 1), or to layoffs eliciting greater threat to well-being (in Study 2), would be less pronounced when perceived control was relatively high. In Study 1 higher levels of perceived control should reduce the negative effect of the layoffs on employees' organizational commitment. In Study 2 greater perceived control should reduce the extent to which high levels of threat have an adverse effect on survivors' job performance.

To state the predicted findings differently, the positive effects of high perceived control should be more likely to emerge in work environments that are perceived to be more threatening to employees' well-being. Thus, in Study 1 perceived control should be more positively related to employees' organizational commitment in the presence than in the absence of a layoff. In Study 2, perceived control should bear more of a positive relationship with the job performance of survivors who judged their post-layoff work environments as more threatening to their well-being.

STUDY 1

Participants in Study 1 were drawn from two sites within the same organization, one in which a layoff had taken place and the other in which no layoff had occurred. All participants completed a measure of perceived control. The dependent variable was organizational commitment.

Organizational commitment reflects the psychological attachment of an employee to his or her organization (Mowday, Steers, & Porter, 1982). We focused on the affective rather than the continuance component of organizational commitment (Meyer, Allen, & Smith, 1993), for two reasons. First, affective commitment has been shown to relate to important organizationally-relevant outcomes (e.g., job performance; Meyer et al., 1989) and personally-relevant outcomes

(e.g., individual well-being; Mathieu & Zajac, 1990). Second, the affective component of commitment has been emphasized in previous research on layoff survivors (e.g., Brockner et al., 1994), thereby enabling the present findings to be more easily related to previous research.

Hypothesis 1: Perceived control and the presence of layoffs are expected to interact with one another to influence employees' organizational commitment. The tendency for layoffs to have an adverse effect on organizational commitment will be less pronounced when perceived control is relatively high. Said differently, perceived control will be more positively related to organizational commitment in the presence than in the absence of layoffs.

Method

Sample and Data Collection

We sought two sites that had been similar to one another before the downsizing announcement to ensure a more meaningful comparison. Thus, two plants from the same division of an aerospace organization headquartered in Southern California were selected. Because both were from the same unit of the same organization, the firms had similar human resource management practices, products, and technology. Both sites were unionized, and neither had a history of poor labor relations. Both were located in the southwestern part of the USA, but were not physically proximate. The two sites made similar electronics products.

The two sites also had similar employee attitudes before the surveys were administered. T-tests of employee attitudes from an annual employee survey conducted by the company one month before our survey was administered indicated no significant differences between the two sites in terms of quality of work life, satisfaction with working conditions, or overall satisfaction. Given

that satisfaction is considerably related to organizational commitment (Mathieu & Zajac's (1990) meta-analysis results uncovered a weighted average correlation of .53), it is quite plausible that the two sites also had similar levels of commitment prior to the downsizing.

All employees were given the opportunity to complete the survey. At one site, a downsizing announcement was made one month before surveys were distributed. At the time of the downsizing, approximately 10 percent of the site's contract workers were laid off. Those laid off were chosen on the basis of their responsibilities being deemed redundant by the site's top management. Contract employees worked at the firm for many years, often as part of teams composed of regular employees. Their work content was indistinguishable from that of regular employees. Regular (non-contract) employees were told that regular employees also were going to be laid off within the next year. At the time the survey was distributed, the specific regular employees who were to be laid off had not yet been identified. Thus, the employees who were surveyed could be considered to be survivors of the first round of downsizing.

At the downsizing site, a total of 731 surveys were distributed through the company's internal mail system. All respondents were assured of confidentiality. Surveys were mailed back directly to the researchers using pre-addressed, postage-paid envelopes. A total of 350 surveys were returned for a response rate of about 48 percent. Analyses conducted on the measures of gender and years of service showed that the characteristics of those responding to the surveys were not significantly different from those who did not return the survey on these dimensions; however, respondents were slightly older (43 versus 41 years) than non-respondents. Educational

background was asked only in the survey so differences between respondents and non-respondents could not be assessed on this dimension.

At the non-downsizing site, 1772 surveys were distributed using the site's internal mail system, prior to the downsizing announcement at the downsizing site, so that there would be no confounding if these employees heard about the downsizing at that site. The same assurances of confidentiality were provided, and an identical survey return method was used. A total of 787 surveys were returned for a response rate of approximately 44 percent. A chi-square test showed that the return rates did not differ significantly from one another in the downsizing and non-downsizing sites ($p > .10$). Furthermore, analyses conducted on measures of age, gender, and years of service between those who responded and those who failed to respond in the non-downsizing site yielded no significant differences.

The demographic profiles of the two sites yielded some significant differences. T-tests indicated that respondents from the non-downsizing site were slightly older (45 versus 43 years of age, $p < .001$), had more tenure (14.5 versus 10.0 years, $p < .001$), were more educated (3.83 versus 3.65 on a seven-point scale described below, $p < .001$), and were more likely to be male (80 percent versus 69 percent, $p < .001$). As can be seen in Table 1, age and tenure were unrelated to the dependent variable of organizational commitment, whereas gender and education were significantly related to organizational commitment. Consequently, gender and education were included as control variables in the upcoming analyses.

Measures

Dependent Variable. The organizational commitment measure consisted of three items drawn from a shortened version of the organizational commitment scale developed by Mowday, Steers, and Porter (1982), and has been employed in previous research (Spreitzer & Mishra, 2002). Specifically, the items were, “I talk up my company as a great organization to work for,” “I am willing to put in effort beyond what is normally expected,” and “My company really inspires the very best in me in the way of job performance.” In a data set published by Mayer and Schoorman (1998), these three items were found to be highly related ($r = .93$) to the short form of the Mowday et al. measure of organizational commitment used widely in prior research. The three-item measure of organizational commitment was internally consistent (coefficient alpha = .76). Responses were averaged into an index.

Independent Variables. All survey measures were assessed with seven-point Likert scales with anchors ranging from “very strongly disagree” (1) to “very strongly agree” (7). To measure perceived control, we used the “self-determination” and “impact” subscales from Spreitzer’s (1995) measure of empowerment. The self-determination and impact subscales each consisted of three items. A sample self-determination item was: “I have significant autonomy in determining how I do my job,” and a sample impact item was: “My impact on what happens in my department is large.” Coefficient alpha for the entire six-item scale was .84. Therefore, participants’ responses were averaged into an index. (The two subscales were also significantly related to one another, $r = .39$, $p < .001$.)

A dummy variable was created to indicate whether a respondent was employed at the site in which layoffs had or had not occurred.

Control Variables (Demographic). A measure of employees' education (a seven-category scale ranging from not completing high school to completing a doctoral degree) was included on the survey. Education was treated as a continuous variable in the upcoming analyses; however, the main results were identical when we treated education as a categorical variable, using a set of dummy-coded variables. Information on participants' gender was collected from archival sources. Education and gender were included as demographic control variables for two reasons. First, significant differences on these dimensions were observed in the layoff versus the no layoff sites. Second, both factors were significantly related to the dependent variable of organizational commitment in the present study, consistent with the results of previous research. For example, a recent study by Mayer and Schoorman (1998) found (as we did) that level of education was negatively associated with commitment. Whereas length of service (tenure) and age differed between the layoff and no layoff sites, and have been shown to be related to organizational commitment in previous research (Cohen, 1993; Mathieu & Zajac, 1990), they were not included as control variables because they were not significantly related to organizational commitment in Study 1. Subsidiary analyses showed the regression results described below were virtually when age and tenure were controlled for along with gender and education.

Control Variables (Psychological). Several studies have shown that the organizational commitment of layoff survivors is positively related to their trust in management (e.g., Brockner et al., 1997). Hence, all participants completed Mishra and Mishra's (1994) 16-item measure of

trust in management (e.g., “I believe that site management communicates honestly with employees”). Responses were made along a seven-point scale, with endpoints labeled “very strongly disagree” (1) and “very strongly agree” (7). Coefficient alpha was .97. Participants’ responses to the trust measure were averaged into an index.

Numerous studies also have shown that layoff survivors’ organizational commitment depends upon the perceived fairness of the layoffs (e.g., Brockner et al., 1994). Perceived fairness, in turn, is based upon judgments of procedural, distributive, and interactional justice. Accordingly, we included separate subscales for each of these three dimensions of justice, adapted from items used by Niehoff and Moorman (1993). Slight wording changes were made to the items to make them relevant to the present context. An example of the six-item measure of distributive justice was, “The burdens of the downsizing are being shared by all members of the organization” (coefficient alpha = .90). An example of the four-item measure of procedural justice was, “The criteria for employee separations are fair and are being applied consistently across employees” (coefficient alpha = .91). An example of the six-item measure of interactional justice was, “Site management offered adequate justification for the downsizing decision” (coefficient alpha = .86). Responses to all justice measures were made along seven-point scales, with endpoints labeled “very strongly disagree” (1) and “very strongly agree” (7). Given that all of the justice questions pertained specifically to the downsizing, they were only asked of those participants in the site in which layoffs had taken place.

Test of Construct Adequacy

Confirmatory factor analysis was conducted to ensure that the constructs were distinct. A model was specified for three distinct factors of perceived control, organizational commitment, and trust in management. Based on previous research, the two dimensions of perceived control, self-determination and impact were specified, and four dimensions of trust (Mishra & Mishra, 1994) were also specified. Results show strong support for the hypothesized model (Root Means Square Error of Approximation = .07; Root Mean Square Residual = .04; Comparative Fit Index = .98; Non-Normed Fit Index = .98). Each item loaded significantly with its intended construct (as evidence by t-values) demonstrating convergent validity. In addition, Anderson and Gerbing (1988) advocated using a chi-square difference test between the unconstrained measurement model, and each of N-paired measurement models (where one pair of latent variables are correlated at 1.0). Chi-square tests indicated significant differences for each constrained model relative to the initial baseline measurement. Thus, discriminant validity was demonstrated. Further, Anderson and Gerbing (1988) suggest that evidence of construct validity is present if the estimate for each item is twice its standard error. This requirement was satisfied as well.

A confirmatory factor analysis was also conducted on the measures of distributive, procedural, and interactional fairness. (Recall that the fairness measures were only completed by participants in the site in which layoffs had occurred.) Results show good support for the hypothesized model (Root Means Square Error of Approximation = .11; Root Mean Square Residual = .08; Comparative Fit Index = .96; Non-Normed Fit Index = .95). Each item loaded significantly with

its intended construct (as evidence by t-values) demonstrating convergent validity. In addition, Anderson and Gerbing (1988) advocated using a chi-square difference test between the unconstrained measurement model, and each of N-paired measurement models (where one pair of latent variables is correlated at 1.0). Chi-square tests indicated significant differences for each constrained model relative to the initial baseline measurement. Thus, discriminant validity was demonstrated. Further, Anderson and Gerbing (1988) suggest that evidence of construct validity is present if the estimate for each item is twice its standard error. This requirement was satisfied as well.

Results

Summary statistics are presented in Table 1.

Test of Hypothesis

A hierarchical regression analysis of organizational commitment was conducted. In the first step we simultaneously entered the demographic control variables of gender and level of education. In the second step we added the control variable of trust in management. In the third step we added the main effects of downsizing and perceived control. Both variables were centered to reduce the potential for multicollinearity with the interaction term. In the fourth and final step we entered the interaction between downsizing and perceived control. As can be seen in Table 2 (Model 3), both the downsizing and perceived control variables yielded significant main effects. That is, organizational commitment was lower: (1) in the presence than in the absence of downsizing, and (2) when perceived control was relatively low.

Of greater importance, Table 2 (Model 4) shows that downsizing and perceived control interacted to influence employees' organizational commitment ($p < .02$). To illustrate the nature of the interaction, we used the procedures recommended by Aiken and West (1991), in which the predicted values of the relationship between perceived control and organizational commitment were calculated for both the layoff and no layoff sites at a high level of perceived control (one standard deviation above the mean) and at a low level of perceived control (one standard deviation below the mean). As predicted, and as can be seen in Figure 1, when perceived control was relatively low, organizational commitment was lower in the presence than in the absence of layoffs. However, when perceived control was relatively high the negative influence of layoffs on employees' organizational commitment was reduced, indeed, virtually eliminated.

To state the interaction effect differently, the positive relationship between perceived control and organizational commitment was significantly higher in the presence than in the absence of layoffs. Simple slope analyses showed that the relationship between perceived control and organizational commitment was positive and significant ($p < .001$) in both the layoff site ($b = .50$) and the no layoff site ($b = .35$), but, of course, the significant interaction effect between perceived control and the layoff variable shows that the relationship between perceived control and organizational commitment was significantly more pronounced in the presence than in the absence of layoffs.

Further Analyses

Decomposing Perceived Control. Perceived control is based upon employees' judgments of self-determination and impact. In the ensuing analyses we examine whether self-determination,

impact, or both interacted with the presence or absence of layoffs to influence employees' organizational commitment. First, we re-ran the analysis shown in Table 2 using only the items from the self-determination subscale (coefficient alpha = .76) as the measure of perceived control. Of greatest importance, the interaction between self-determination and the layoff variable did not even approach significance ($p > .15$). Next, we re-ran the analysis shown in Table 2 using only the items from the impact subscale (coefficient alpha = .84) as the measure of perceived control. In this case, the interaction between impact and the layoff variable was significant at the .03 level. Thus, decomposing perceived control into self-determination and impact shows that they do not produce identical results. Rather, impact was more likely than self-determination to interact with the layoff variable to influence employees' organizational commitment.

Controlling for Fairness Among Layoff Survivors. Employees in the site in which layoffs had occurred had evaluated the fairness of the layoff (on distributive, procedural, and interactional grounds). Accordingly, we conducted an additional hierarchical regression only on those participants from the layoff site. In the first step we simultaneously entered the demographic control variables. In the second step we added the measures of distributive, procedural, and interactional justice. On the third step we added trust in management as a predictor. Finally, perceived control (based upon the composite of self-determination and impact) was added to the equation. From Table 3, Model 2, it can be seen that both distributive and interactional justice were positively related to organizational commitment, replicating previous findings (e.g., Brockner et al., 1994). Correlational analyses (not shown in Table 3) showed that each of the fairness dimensions (distributive, procedural, and interactional) was significantly related to trust

in management ($r_s = .72, .65, \text{ and } .61$, respectively, all p values $< .001$). Furthermore, consistent with previous findings showing that fairness effects are attributable to trust in management (e.g., Konovsky & Pugh, 1994), Table 3, Model 3 shows that the effects of the fairness variables were less pronounced when trust was controlled, relative to when it was not. Of greatest importance, however, Table 3, Model 4 shows that the effect of perceived control on survivors' organizational commitment was highly significant ($p < .001$), above and beyond the effects on commitment of fairness and trust in management.

Discussion

Study 1 offers both conceptual and methodological contributions to the literature on survivors' reactions to layoffs. At the conceptual level, previous research has shown that survivors' organizational commitment may be accounted for by a host of factors, such as trust in management (Brockner et al., 1997) and perceptions of fairness (Brockner et al., 1994; Spreitzer & Mishra, 2002). Study 1 not only replicated these findings, but also showed that perceived control may account for a significant portion of the variance in survivors' organizational commitment beyond that attributable to trust in management and fairness. Thus, the results of Study 1 help to further delineate the factors affecting survivors' reactions to organizational downsizings.

At the methodological level, Study 1 is the first to examine the impact of the presence or absence of a layoff on employees in an actual field setting. Previous research on survivors' reactions has taken one of two forms. In some studies, the effect of the presence or absence of a layoff has been investigated under controlled laboratory conditions (e.g., Brockner, Davy, & Carter, 1985),

raising questions about the generalizability of the findings to actual organizational settings. In many other studies which were conducted in the field, the presence versus absence of layoffs was not an independent variable; rather, all participants had survived layoffs. In these studies researchers examined the role of various factors (e.g., fairness, trust in management) in accounting for survivors' reactions. Whereas the results of these field studies usefully identified factors that accounted for some of the variability in survivors' reactions, the absence of a no layoff group in the research design made it difficult to know if these factors were any more or less influential in the presence of layoffs. By including both a layoff and a no layoff group, Study 1 showed in an actual field setting that perceived control was more likely to predict employees' organizational commitment in the presence than in the absence of layoffs.

Study 1 also calls attention to a subtle distinction in how organizational psychologists have conceptualized the construct of perceived control. On certain occasions perceived control has referred to self-determination (e.g., Spector, 1986), i.e., the extent to which employees judged themselves to have autonomy in their expression of behavior. In other instances perceived control has referred to impact (e.g., Greenberger et al., 1989), i.e., the extent to which people believed that their actions influenced important outcomes. The results from Study 1 show that the distinction between self-determination and impact as elements of perceived control is empirically as well as conceptually meaningful. Impact was more likely than self-determination to interact with the presence or absence of layoffs to influence employees' organizational commitment.

STUDY 2

Study 2 was designed to evaluate further the role of perceived control in accounting for survivors' reactions to layoffs. First, we employed a different dependent variable in Study 2 in an attempt to evaluate the generality of the results of Study 1. Rather than assessing employees' organizational commitment, we measured their job performance. On the independent variable front, the threat to well-being associated with layoffs was operationalized differently than in Study 1. In Study 1 some of the participants witnessed layoffs whereas others did not. In contrast, all of the participants in Study 2 were working in an environment in which layoffs had occurred; thus, all of them were survivors. However, we assessed the extent to which they perceived a threat to their well-being in the post-layoff work environment. Perceived control also was operationalized differently than in Study 1. More specifically, survivors' perceptions of their ability to influence significant people at work served as the measure of perceived control in Study 2. Perceived control is derived in part from people's beliefs that their behavior has impact, i.e., that they can exert influence over outcomes of importance to them. One likely determinant of how much people experience themselves as having impact (and hence perceiving control) is the extent to which they believe that they can influence significant co-workers.

We expected perceived control to interact with the degree of threat in the post-layoff work environment to influence survivors' job performance. In Study 1 we hypothesized and found that the presence of layoffs did not always elicit more negative reactions, in the form of reduced organizational commitment. Rather, it was only when perceived control was relatively low that organizational commitment was lower in the presence than in the absence of the layoffs. In like fashion, in Study 2 we did not expect that high levels of threat would always lead survivors to respond unfavorably, in the form of reduced job performance. Rather, it was only when

perceived control was relatively low that we expected survivors' job performance to be adversely affected by higher levels of threat. To state differently the predicted interaction effect between perceived control and threat, we expected perceived control to be more positively related to survivors' job performance when threat was relatively high. Note that the predicted forms of the interaction effect in Study 2 are conceptually analogous to those found in Study 1.

The cross-sectional nature of the research design in Study 1, in which the independent variables were assessed at the same point in time as the dependent variable, also introduces several important shortcomings. First, the extent to which the independent variables were causally related to the dependent variable is ambiguous at best. Second, it is uncertain whether the independent variables would have similar effects on the dependent variable over a longer period of time. To address these concerns, Study 2 employed a predictive rather than cross-sectional research design. That is, the dependent variable of job performance was assessed at a considerably later point in time than were the independent variables of perceived control and threat to well-being.

Summary

All participants in Study 2 had survived a layoff in their organization. One month after the layoffs they completed a survey that included measures of the independent variables of perceived control (judgments of their ability to influence significant others) and threat to well-being in the post-layoff environment. Six months after the independent variables were assessed, supervisors provided ratings of survivors' job performance. Given the many differences between Studies 1 and 2 in the measurement/operationalization of the independent and dependent variables,

convergence in the results will help to establish the reliability of the findings.

Hypothesis 2: Perceived control and threat to well-being following layoffs are expected to interact with one another to influence survivors' job performance. Threat to well-being will bear less of a negative relationship with survivors' job performance when perceived control is relatively high. Said differently; perceived control will be more positively related to survivors' job performance when threat to their well-being is high rather than low.

Method

Sample and Data Collection

Surveys were distributed to all 220 employees of a financial management firm located in the Southeastern United States one month after a layoff occurred (i.e., 25 percent of the workforce was released). Top-level management was responsible for identifying individuals working on jobs/tasks deemed to be "redundant." Once this list was compiled, performance scores were used as the basis for layoff decisions. The survey included all control variables (with one exception, described below) and both independent variables. In addition, six months after the survey was completed we collected supervisory performance ratings for each employee. A total of 103 respondents completed surveys for an overall response rate of 46.8 percent.

The initial sample consisted of 55 females (53.4 percent) and 48 males (46.6 percent). The average age of respondents was approximately 44 years ($M = 44.25$, $SD = 8.31$), and organization tenure ranged from 1-19 years ($M = 6.54$, $SD = 3.86$). All sample demographic

characteristics mirrored those of the entire population of 220. For example, the population consisted of 54 percent females and averaged 43.8 years in age.

Measures

Dependent Variable. Each participant's direct supervisor appraised his or her performance six months after the survey was completed. Supervisors completed a nine-item measure, including the following examples: (a) communicates effectively across all levels, (b) contributes to the success and well-being of colleagues, and (c) behaves in a way that supports the Service Profit Chain. A three-point response format was used (1 = *needs improvement*, 2 = *accomplished*, 3 = *exemplary*). Respondents' performance scores ($M = 2.17$) were virtually identical to those of the entire population ($M = 2.15$). Because the performance ratings were internally consistent (coefficient alpha = .72), they were averaged into an index.

Independent Variables. To measure perceived control, participants completed a six-item measure of the extent to which they perceived themselves as able to influence important others at work (Ferris et al., in press). Sample items were, "I am good at using my connections and networks to make things happen at work," and "I am good at building relationships with influential people at work." Responses were made along five-point scales, with endpoints ranging from "strongly disagree" (1) to "strongly agree" (5). Coefficient alpha was .85. Responses were averaged into an index.

Threat to well-being was measured with House and Rizzo's (1972) six-item scale. Sample items include, "I work under a great deal of stress," and "Problems associated with my job have kept

me awake at night.” Once again, responses were made along five-point scales, with endpoints ranging from “strongly disagree” (1) to “strongly agree” (5). Coefficient alpha was .87.

Responses were averaged into an index.

Control Variables. The following factors were included as control variables: (1) participants’ gender, which was shown to be related to the dependent variable in Study 1, (2) participants’ job performance prior to the layoffs, which was expected to be related to their job performance subsequent to the layoffs, and (3) three psychological factors that have been shown in prior research to be significantly related to survivors’ reactions (Brockner et al., 1993; Brockner et al., 1987), including employees’ trust in management, the perceived threat of further layoffs, and the extent to which survivors felt close to their former co-workers who had lost their jobs.

Gender was assessed through self-reports on the same survey in which the independent variables were measured. Participants’ prior job performance was based on supervisors’ ratings that were garnered from participants’ records. The prior performance measure consisted of a single item which was scored on a scale ranging from one to four, as follows: (1) *Unacceptable* (Current performance is unacceptable), (2) *Developing* (Did not meet several objectives), (3) *On Target* (Met all significant objectives), and (4) *Above Target* (Met and exceeded most objectives).

Trust in management consisted of a three-item measure (e.g., “What’s best for the organization drives most decisions in this company”). Coefficient alpha for this measure was .91. Perceived threat of future layoffs was based on a four-item measure (e.g., “I am waiting for the ‘next shoe to fall’ in that I am wondering if my job will be the next to go”). Coefficient alpha for this

measure was .83. The closeness of participants' relationship with the people who had lost their jobs consisted of a three-item measure used by Mansour-Cole and Scott (1998) (e.g., "I knew many of the employees whose jobs were affected by workforce reductions"). Coefficient alpha for this measure was .70. For all three measures, responses were made along a seven-point scale, with endpoints labeled "strongly disagree" (1) and "strongly agree" (7), and were averaged into respective indices.

Test of Construct Adequacy

We examined the factor structure of Study 2 constructs (e.g., pre-layoff performance, threat of future layoffs, trust in management, relationship with layoff victims, threat to well-being, perceived control, and post-layoff performance) before conducting the regression analysis. An examination of the modification indices and loadings indicated that two post-layoff performance items ("Promotes and fosters positive growth within people" and "Creates and contributes to a positive work environment") cross-loaded with other constructs, and were thus removed.

Confirmatory factor analyses were conducted on the remaining scale items (Root Means Square Error of Approximation = .04; Root Mean Square Residual = .08; Comparative Fit Index = .91; Non-Normed Fit Index = .90). Cutoff scores for the seven-factor solution indicate reasonable construct adequacy (Kelloway, 1998; Jaccard & Wan, 1996). Further, each item loaded significantly with its intended construct (as evidence by t-values) demonstrating convergent validity. In addition, Anderson and Gerbing (1988) advocated using a chi-square difference test between the unconstrained measurement model, and each of N-paired measurement models (where one pair of latent variables is correlated at 1.0). Chi-square tests indicated significant

differences for each constrained model relative to the initial baseline measurement. Thus, discriminant validity was demonstrated.

Results and Discussion

Summary statistics are presented in Table 4.

Test of Hypothesis

The hypothesis was tested with the use of a hierarchical multiple regression. In the first step we entered gender as well as prior job performance simultaneously. In the second step we added trust in management, threat of future layoffs, and the closeness of survivors' relationships with those who had lost their jobs. In the third step we added the main effects of perceived control and threat to well-being (as in Study 1, both variables were centered to reduce the potential for multicollinearity with the interaction term), and in the fourth step we added the interaction between perceived control and threat to well-being. Of greatest importance, and as can be seen in Table 5, the interaction effect was significant at the .01 level. To illustrate the nature of the interaction, we computed the predicted values of the relationship between perceived control and job performance at a high level of threat to well-being (one standard deviation above the mean) and at a low level of threat to well-being (one standard deviation below the mean). As predicted, and as can be seen in Figure 2, when perceived control was relatively low, threat to well-being was inversely related to job performance. The inverse relationship between threat to well-being and job performance disappeared, however, when perceived control was relatively high.



To state the interaction effect differently, perceived control and job performance were much more positively related to one another when threat to well-being in the post-layoff environment was relatively high. In fact, simple slope analyses conducted within the high threat and low threat conditions showed that when threat to well-being was relatively high, perceived control was significantly (and positively) related to survivors' job performance, $b = .25$, $p < .01$. However, when threat to well-being was relatively low, perceived control was not significantly related to survivors' job performance, $b = -.07$, $p > .15$.

In summary, with the use of a predictive rather than cross-sectional research design, Study 2 exhibited results conceptually analogous to those observed in Study 1. Threat to well-being and perceived control (both assessed six months earlier) interacted to influence survivors' job performance. As in Study 1, high perceived control reduced the extent to which threat to well-being had an adverse influence on survivors' reactions. To state the interaction effect differently, perceived control was more positively related to survivors' work performance when threat to well-being was relatively high.¹

General Discussion

Taken together, the results of both studies strongly suggest that survivors' perceptions of control in the post-layoff work environment influence their reactions to organizational downsizings. Importantly, conceptually analogous results emerged across the two studies in spite of their many procedural and operational differences. Two important yet different dependent variables were examined (organizational commitment and job performance). Furthermore, threat to well-being was operationalized in very different ways in the respective studies. Study 1 was based on the

assumption that participants would experience more of a threat to their well-being in the presence than in the absence of a layoff. In Study 2 the degree of threat to well-being that survivors experienced in the post-layoff work environment was measured directly. As might be expected, the main effects of these different operationalizations of threat to well-being were significant in each study. That is, employees exhibited lower organizational commitment in the presence than in the absence of a layoff (see Table 2, Model 3), and threat to well-being was inversely related to supervisors' ratings of survivors' job performance six months later (see Table 5, Model 3).

Of greater importance, the moderating influence of perceived control on the relationships between threat to well-being and survivors' reactions also was consistent across studies. Specifically, higher levels of perceived control reduced the adverse influence of: (1) the presence of layoffs on organizational commitment in Study 1, (2) threat to well-being on job performance in Study 2. The fact that consistent results emerged across such methodologically different studies bodes well for the generalizability and construct validity of the findings.

Theoretical Implications

Survivors' Reactions to Job Layoffs. The points of departure for the present research were two-fold. On the one hand, previous research on the effects of layoffs on survivors has identified a number of factors that influence their organizational commitment and job performance, such as the fairness with which the layoffs were handled, trust in management, threat of future layoffs, and the closeness of survivors' relationship with those people who had lost their jobs. On the other hand, much of the variance in survivors' reactions remained unexplained in previous

research. Hence, further theory and research are sorely needed to account for the work attitudes and behaviors of layoff survivors. Drawing on the stress framework of Lazarus and Folkman (1984), the present findings illustrate the importance of perceived control in conjunction with the layoff variable in Study 1 and the threat variable in Study 2 in shaping survivors' attitudes and behaviors. Importantly, the interaction effects involving perceived control accounted for a significant portion of the variance in survivors' reactions, beyond that attributable to the aforementioned factors, which were statistically controlled. Thus, the present findings contribute to a more complete understanding of the factors affecting survivors' reactions to layoffs.

Employee Involvement. The present studies also add to our understanding of employee involvement by delineating some of the conditions under which granting employees greater control elicits more positive reactions. The employee involvement literature *generally* extols the virtues of giving employees greater control in organizational decision-making (e.g., Lawler, 1992). For example, both Greenberger et al. (1989) and Spector (1986) present findings that show that higher levels of perceived control elicit more favorable work attitudes (e.g., job satisfaction) and behaviors (e.g., job performance). With a few exceptions (e.g., Vroom & Jago, 1988), employee involvement theorists have paid less attention to the theoretically and practically important question of *when* perceived control is more versus less likely to influence employees' attitudes and behaviors. Study 1 showed that perceived control was more strongly related to organizational commitment in the presence than in the absence of layoffs, whereas Study 2 found that control perceptions had more of an impact on job performance when threat to well-being was relatively high. One interpretation of these results is that work conditions that heighten threat to well-being make it more important for employees to perceive that they have

control, thereby magnifying the effect of perceived control on their work attitudes (e.g., organizational commitment) and behaviors (e.g., job performance). Moreover, perceptions of impact rather than self-determination (Study 1), or factors affecting perceived impact (the political skill construct examined in Study 2) may be especially likely to interact with perceived threat to influence employees' attitudes and behaviors.

Limitations/Suggestions for Future Research

In calling attention to the shortcomings of the present research, we are simultaneously offering suggestions for future research. The design of Study 1 calls into question the internal validity of the findings. In Study 1 we examined the reactions of two groups of employees, one in which layoffs had taken place and the other in which they had not. However, the layoff variable was not operationalized experimentally in Study 1. Whereas the layoff and no layoff groups in Study 1 did not differ from each other in many ways (e.g., job satisfaction prior to the layoffs), and whereas we controlled for those demographic dimensions in which the two groups were shown to differ (e.g., education), the design of Study 1 reduces our ability to make causal inferences concerning the influence of the layoff variable. The design of Study 2 helped to address threats to internal validity somewhat, in that the independent variables were assessed six months prior to the dependent variable. Nevertheless, future investigations on the determinants of survivors' reactions would benefit greatly from the use of research methods that allow researchers to draw causal inferences (e.g., experimental and/or longitudinal designs).

Second, whereas the results of the two studies were highly consistent with one another, they were not identical. That is, both studies suggested that high perceived control reduced the extent

to which threat to well-being was inversely related to employees' work attitudes and behaviors. Moreover, both studies found that perceived control was more positively related to the favorability of employees' attitudes and behavior when threat to well-being was relatively high. The primary difference in the findings between the two studies was that the main effect of perceived control was significant in Study 1 (see Table 2, Model 3) but not in Study 2 (see Table 5, Model 3). Perhaps perceived control is more closely aligned with attitudes such as organizational commitment than with behaviors such as job performance. After all, other factors such as ability may be more likely to influence job performance than organizational commitment. Alternatively, methodological factors may explain why perceived control was more positively related to the dependent variable in Study 1 than in Study 2. In Study 1 perceived control and the dependent variable of organizational commitment were assessed with common methods, and also at the same point in time. However, in Study 2, perceived control and the dependent variable of job performance were collected from different sources, and also six months apart. Either or both of these factors may explain why perceived control was more closely related to the dependent variable in Study 1 than in Study 2. In any event, further research is needed to explain why the results of the two studies were not identical.

Third, the conceptual distinction between self-determination and impact as aspects of perceived control warrants further consideration. Study 1 suggested that impact was more likely than self-determination to interact with threat to well-being to influence survivors' reactions. Further research is needed to evaluate whether impact generally has more of an effect on employees' attitudes and behaviors than self-determination, and if so, why.

Fourth, whereas the present studies provide evidence that threat to well-being and perceived control have a significant effect on survivors, the total amount of variance accounted for in both studies was still rather modest. Consequently, further theory and research on the determinants of survivors' reactions is clearly warranted. For example, the theory of planned behavior (e.g., Ajzen, 1991) posits that people's behavior is a function of their intentions, which in turn are influenced by a host of factors including, but not limited to their perceptions of control. Future research grounded in the theory of planned behavior may move us towards an even more complete understanding of why layoff survivors respond as they do.

Practical Implications

The present findings also extend previous studies in suggesting how to manage layoffs so as to elicit the most positive (or least negative) reactions among survivors. Whereas downsizing research guided by organizational justice theory highlighted the need for managers to be seen as fair *before and during* the implementation of layoffs, the present findings illustrate action steps that managers need to take *after* the layoffs occurred. Given that survivors are susceptible to experiencing high levels of threat in the aftermath of layoffs, it is particularly important that the management of organizational downsizings include steps that heighten survivors' perceived control. Actions that allow survivors to perceive the impact of their behavior may be particularly beneficial. For example, giving voice to the survivors, either in setting the direction towards which they should be moving, or in formulating plans on how to get there, may heighten perceived control. Also, having survivors work on certain activities in which they are likely to succeed may serve as a much-needed antidote for the sense of loss (and associated perceptions of lack of control) that they are likely to experience following layoffs. Furthermore, Study 2

suggests that one vehicle through which survivors may experience a heightened sense of control is by being able to influence important others in the workplace. This finding suggests that organizational authorities need to be perceived by survivors as accessible in the aftermath of layoffs.

More generally, the present findings also have implications for the question of *when* managers need to involve employees (or otherwise heighten their sense of perceived control). The results of both studies suggested that managers should be particularly attentive to employees' control perceptions in the face of threatening organizational events. Thus, involving employees may be beneficial not only in the aftermath of downsizings, but also in response to other significant organizational changes (e.g., mergers and acquisitions, divestitures) that increase the degree of importance employees attach to perceiving control (Gopinath & Becker, 2000). Previous contingency models of employee involvement suggested that employees should be more involved to the extent that: (1) they have the ability to provide meaningful input, and (2) successful implementation of the decision depends upon their commitment to the decision (e.g., Vroom & Jago, 1988). The present findings add to the list of contingency factors, by considering the role of employees' need for perceived control.

Conclusion

Given the ubiquity of organizational downsizings, it is both theoretically and practically important to delineate the factors affecting survivors' work attitudes and behaviors. The present studies illustrate that survivors' perceptions of control play an important role. Managers need to be attuned to how much downsizings (or other significant organizational changes, for that

matter) are experienced by employees as a threat to their well-being. The greater the threat to well-being, the more important it is for managers to take action that heightens, maintains, or restores employees' perceived control, by creating an environment in which employees believe that their actions make a difference. Layoffs handled in ways that address survivors' need to perceive that they have control are likely to lead to more positive consequences, for both organizations and employees alike.

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Footnote

1. Performance ratings were provided by 35 supervisors, with most of them rating two or three employees. We conducted a number of analyses to evaluate whether differences between raters had any effect on the results of Study 2, most notably the interactive effect of perceived threat and control on job performance. First, we re-ran the regression analysis adding rater as a control variable. Two findings are noteworthy. First, the rater effect was non-significant. Second, and of greater importance, the interaction between threat to well-being and perceived control continued to be significant at the .01 level.

We also conducted an analysis to evaluate the extent to which the ratings coming from the same raters were related to (versus independent of) one another. After all, whether or how much within-supervisor ratings are correlated with each other is an empirical question. Accordingly, we computed the Intraclass Correlation Coefficient (Bartko, 1976), and found it to be non-significant (.03), suggesting that within-supervisor ratings were not significantly related to one another. Given that the ratings coming from the same supervisor were basically independent of one another, the regression procedure employed in Study 2 is appropriate.

Table 1
Descriptive Statistics, Intercorrelations, and Reliability Estimates (Study 1)

Variable	N	Mean	S.D.	1	2	3	4	5	6	7	8
1. Gender ¹	1067	1.78	.42	-							
2. Service	1067	13.32	8.57	.15**	-						
3. Age	1067	44.66	9.97	.03	.56**	-					
4. Education	1102	3.78	1.32	.14**	-.08**	-.05	-				
5. Trust in Management	1125	3.81	1.29	-.05	-.04	.01	.02	(.97)			
6. Downsizing Site ²	1134	.31	.46	-.13**	-.25**	-.09**	-.06	.05	-		
7. Perceived control	1133	4.72	1.03	.01	.08**	.07*	-.04	.30**	.01	(.84)	
8. Org. Commitment	1133	4.53	1.22	-.07**	-.04	.01	-.15**	.50**	-.09**	.45**	(.76)

* $p < .05$

** $p < .01$

¹ Gender was coded "1" for female and "2" for male

² Downsizing Site was coded "0" for no layoffs and "1" for layoffs

Table 2
Results of Regression Analyses for Organizational Commitment (Study 1)

Variable	Model 1	Model 2	Model 3	Model 4
Gender	-.05 (.09)	-.03 (.08)	-.05 (.07)	-.05 (.07)
Education	-.14** (.03)	-.13** (.03)	-.13** (.02)	-.13** (.02)
Trust in Management		.49** (.03)	.40** (.03)	.39** (.03)
Downsizing Site (A)			-.13** (.07)	-.13** (.07)
Perceived Control (B)			.33** (.03)	.33** (.03)
A x B				.06* (.07)
<i>Df</i>	2,1025	3,1024	5,1022	6,1021
ΔR^2		.24**	.12*	.01
Adjusted R^2	.02	.26	.38	.39
<i>F</i>	12.72**	122.53**	126.07**	106.41**

* $p < .02$

** $p < .01$

Note: Standardized coefficients are presented with standard errors in parentheses

Table 3

Results of Regression Analyses for Organizational Commitment in Layoff Site Only (Study 1)

Variable	Model 1	Model 2	Model 3	Model 4
Gender	-.07 (.16)	-.02 (.14)	-.02 (.14)	.00 (.13)
Education	-.18** (.06)	-.20** (.06)	-.20** (.06)	-.22** (.05)
Interact Justice		.15* (.07)	.10 (.07)	.10 (.06)
Distributive Justice		.34** (.08)	.21** (.09)	.16* (.08)
Procedural Justice		.05 (.10)	.00 (.10)	.02 (.09)
Trust in Management			.28** (.07)	.18** (.06)
Perceived Control				.38** (.06)
<i>df</i>	2,303	5,300	6,299	7,298
ΔR^2		.22	.03*	.13
Adjusted R^2	.04	.26	.29	.42
\underline{F}	6.61*	22.16**	21.87**	32.69**

* $p < .05$

** $p < .01$

Note: Standardized coefficients are presented with standard errors in parentheses

Table 4
Descriptive Statistics, Intercorrelations, and Reliability Estimates (Study 2)

Variable	N	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1. Age	103	44.25	8.31										
2. Gender ¹	103	1.46	.52	.08									
3. Tenure	103	6.54	3.86	.25**	.01								
4. Pre-Layoff Performance	103	3.35	.53	-.13	.06	.35**							
5. Threat of Future Layoffs	103	4.04	1.43	-.26*	-.10	-.05	-.07	(.83)					
6. Trust in Management	103	4.97	1.36	.01	-.07	-.09	.01	-.13	(.91)				
7. Relationship w/ Victims	103	4.71	1.18	-.03	-.07	.17	-.01	.11	.20*	(.70)			
8. Threat to Well-Being	103	2.79	.85	-.04	-.07	.08	.12	.16	-.18	-.02	(.87)		
9. Perceived Control	103	3.41	.64	-.15	-.15	.08	.01	-.16	.01	.21*	-.04	(.85)	
10. Performance	103	2.17	.25	-.01	-.07	.12	.56**	-.04	.06	-.01	-.21*	.14	(.72)

* p < .05

** p < .01

¹ gender was coded "1" for female and "2" for male

Table 5
Results of Regression Analyses for Job Performance (Study 2)

Variable	Model 1	Model 2	Model 3	Model 4
Gender	-.09 (.02)	-.09 (.04)	-.08 (.04)	-.08 (.04)
Pre-Layoff Performance	.16** (.03)	.16** (.03)	.16* (.03)	.17* (.03)
Threat of Future Layoff		-.04 (.01)	.02 (.01)	.01 (.01)
Trust in Management		.06 (.01)	.04 (.02)	.04 (.01)
Relationship with Victims		-.02 (.02)	-.08 (.02)	-.10 (.02)
Threat to Well-Being (A)			-.20* (.02)	-.25** (.02)
Perceived Control (B)			.18 (.03)	.17 (.03)
A x B				.25** (.04)
<i>df</i>	2, 101	5,98	7,96	8,95
ΔR^2		.01	.02*	.06**
Adjusted R^2	.05	.06	.08	.14
F	2.07*	1.86	2.19*	2.51**
•	p < .05			
••	p < .01			

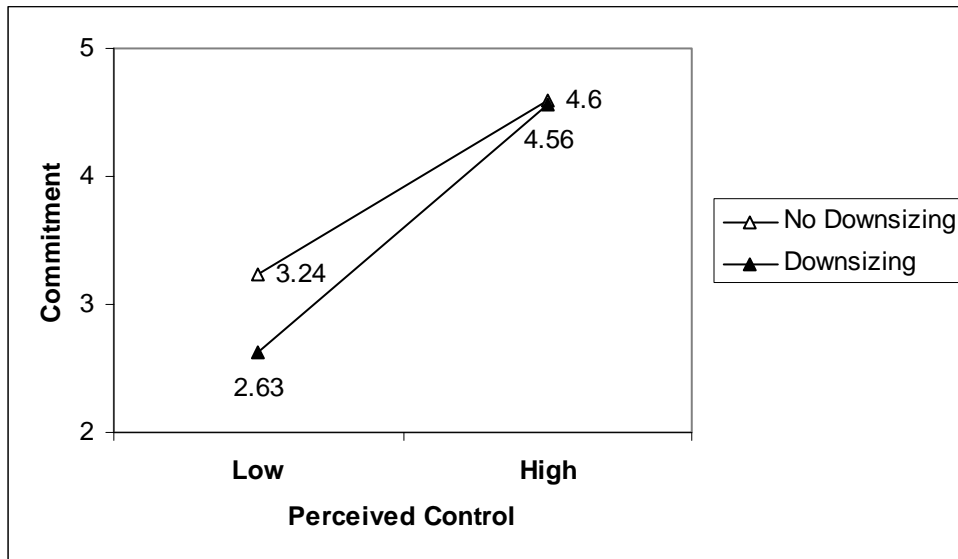


Figure 1. Predicted Values of Organizational Commitment as a Function of Perceived Control and Layoffs (Study 1)

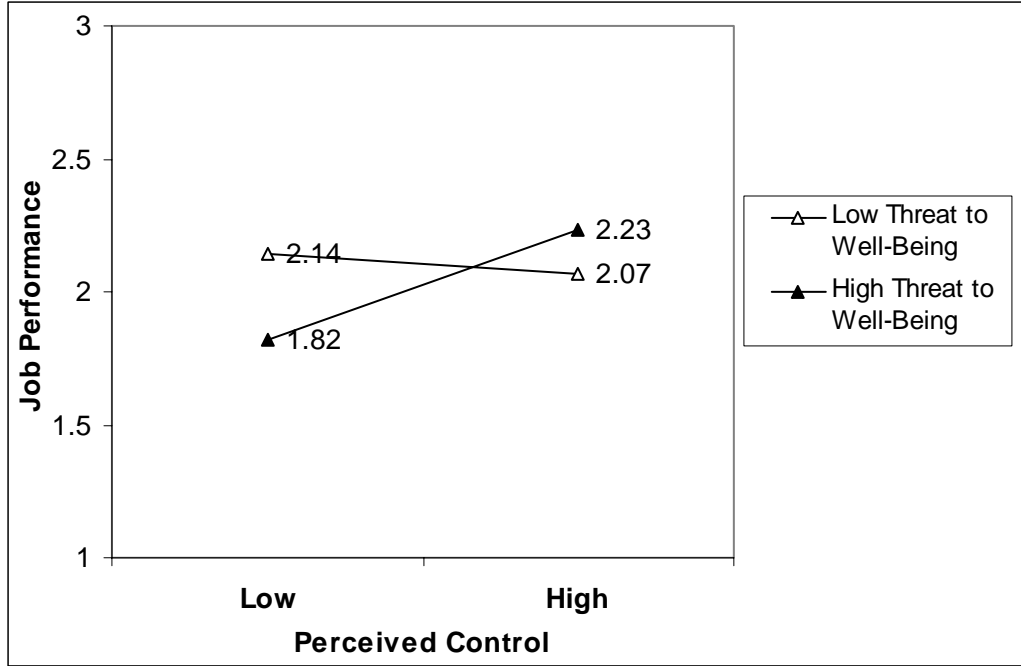


Figure 2. Predicted Values of Job Performance as a Function of Perceived Control and Threat to Well-Being (Study 2)