Looking Ahead in Times of Uncertainty: The Role of Anticipatory Justice in an Organizational Change Context

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Our study drew on past theorizing on anticipatory justice (D. L. Shapiro & B. L. Kirkman, 2001) and fairness heuristic theory (K. Van den Bos, E. A. Lind, & H. A. M. Wilke, 2001) to build and test a model of employee reactions to a smoking ban. The results of a longitudinal study in a hospital showed that employee levels of preban anticipatory justice were predicted by their global sense of their supervisor's fairness. The combination of anticipatory justice and global supervisory fairness then predicted the experienced justice of the ban 3 months after its implementation, with the effects of the 2 predictors dependent on perceptions of uncertainty and outcome favorability regarding the ban. Finally, experienced (interpersonal) justice predicted significant other ratings of employee support for the ban.

Keywords: justice, fairness, organizational change

Change is a natural component of employees' working lives (Leana & Barry, 2000; Piderit, 2000). Employees may experience a variety of changes during their organizational tenure, ranging from large-scale changes such as organizational relocations (Daly & Geyer, 1994) or mergers (Schweiger & Denisi, 1991), to new policies such as smoking bans (Greenberg, 1994) or pay freezes (Schaubroeck, May, & Brown, 1994). Past research has illustrated the impact of organizational change on employee attitudes and behaviors, including job satisfaction, organizational commitment, turnover intentions, job performance, and theft (Fedor, Caldwell, & Herold, 2006; Greenberg, 1990; Kickul, Lester, & Finkl, 2002; Schaubroeck et al., 1994). Given its impact on such outcomes, understanding how employees react to organizational change remains an important area of study.

Regardless of the nature of organizational changes, employees may cope with their inherent uncertainty by anticipating how fairly changes will be handled. For example, Kirkman, Shapiro, Novelli, and Brett (1996) showed that employees who were about to experience a team-based reorganization formed perceptions about how fairly they felt the change would be handled. Shapiro and Kirkman (1999, 2001) introduced the *anticipatory justice* construct to reflect such perceptions, defining anticipatory justice as expectations regarding whether one will (or will not) experience justice in the context of some future event. The *anticipatory* adjective conveys that justice is being foreseen—that employees are sensing it beforehand (Shapiro & Kirkman, 2001). Other scholars have used the term *justice expectations* in subsequent work to capture these same sorts of anticipations (Bell, Ryan, & Wiechmann, 2004; Bell, Wiechmann, & Ryan, 2006).

Like the experienced justice that is typically assessed in the justice literature, anticipatory justice can be conceptualized along

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specific dimensions. *Procedural justice* refers to the perceived fairness of decision-making procedures, with individuals assessing the extent to which procedures are consistent, bias free, accurate, correctable, ethical, and amenable to input (Leventhal, 1980; Thibaut & Walker, 1975). *Interpersonal justice* refers to the degree of respect and concern supervisors show when communicating with employees, and *informational justice* reflects the extent to which supervisors provide honest justifications when implementing procedures (Bies & Moag, 1986; Greenberg, 1993). *Distributive justice* refers to the perceived fairness of decision outcomes, determined by comparing one's perceived ratio of outcomes with inputs to the ratio of a comparison other (Adams, 1965; Leventhal, 1976).

The effects of anticipatory justice have begun to be examined in a handful of empirical studies (Bell et al., 2006; Ritter, Fischbein, & Lord, 2005; Shapiro & Kirkman, 1999), and some of these studies have explored anticipatory justice in the context of an organizational change (Bell et al., 2006; Shapiro & Kirkman, 1999). These studies support the notion that anticipatory justice is distinct from experienced justice and that anticipatory justice impacts reactions to change (Bell et al., 2006; Shapiro & Kirkman, 1999). However, there is still much that it is not known about anticipatory justice. For example, it remains unclear how perceptions of anticipatory justice are initially formed, how and when anticipatory justice impacts experienced justice, and what role a supervisor's past "justice reputation" plays in such judgments. It also remains unclear how anticipatory justice fits with the models and theories used to organize the mainstream justice literature. Without answers to such questions, it becomes difficult to understand exactly how justice impacts participants' ultimate support for an organizational change effort.

With these questions in mind, the purpose of this study was to build and test a model of anticipatory justice in the context of one specific organizational change: a smoking ban in a hospital system. We built our model by pairing Shapiro and Kirkman's (2001) seminal theorizing on anticipatory justice with fairness heuristic theory, a theory in the broader justice literature that focuses on the

formation and use of fairness perceptions (Lind, 2001; Van den Bos, 2001; Van den Bos et al., 2001). As shown in Figure 1, our model suggests that anticipatory justice perceptions are shaped by a global perception of a supervisor's past fairness. Although justice can refer to either organizational or supervisory sources (Blader & Tyler, 2003; Cropanzano, Byrne, Bobocel, & Rupp, 2001; Rupp & Cropanzano, 2002), we focused on supervisory fairness, because the supervisors were charged with implementing and executing the smoking ban in their units. Their actions, styles, and behaviors were therefore likely to be the most proximal driver of whether that implementation adhered to standards of procedural, interpersonal, and informational justice. Our model further suggests that anticipatory justice and global perceptions of supervisory fairness provide dual antecedents to experienced justice, with the effects of the two dependent on two aspects of the change: the uncertainty created by it and the degree to which it is viewed as a favorable outcome to the employee. Finally, our model suggests that the resulting experienced justice serves as the most proximal antecedent of an employee's actual support for the change. In the sections to follow, we provide a review of past work on anticipatory justice and fairness heuristic theory before describing the hypotheses summarized in our model.

Theory and Hypotheses

As noted above, Kirkman et al. (1996) first found evidence of anticipatory justice issues in a qualitative study of a team-based reorganization. They saw, for example, that participants expected that they might not have a say in how people would be assigned to teams (reflecting anticipated procedural injustice) and that their team members might show them less respect than their superiors

had (reflecting anticipated interpersonal injustice). These results led Shapiro and Kirkman (1999) to conduct a quantitative test of anticipatory justice effects; they found that high levels of anticipatory distributive justice were associated with less resistance to the change and higher levels of commitment to the organization (data on experienced distributive justice were not gathered in the study). These two studies culminated in a book chapter by Shapiro and Kirkman (2001) that formally introduced and defined the concept of anticipatory justice.

A few years later, Bell et al. (2004) extended this work by developing a conceptual model of anticipatory justice in a selection context. Relying on previous research on expectations, they proposed that justice anticipations were shaped by several antecedents, such as direct experiences with the selection process, others' experiences with the selection process, and the belief in a just world and went on to impact attitudes, cognitions, and behaviors. Following this conceptual work, Bell et al. (2006) empirically examined several consequences of anticipatory justice. The results of this study showed that anticipated justice was positively related to pretest levels of test-taking motivation and intentions to accept a job offer, as well as to experienced justice once the test had been taken. Experienced justice, in turn, reduced the negative affect associated with the test and decreased psychological withdrawal during the test.

These initial studies hinted at the theoretical importance of the anticipatory justice construct. The vast majority of studies in the justice literature begin by focusing on experienced justice, with the justice dimensions serving as exogenous influences on employee attitudes and behaviors (Colquitt, Greenberg, & Zapata-Phelan, 2005). Such studies have shown that current "snapshots"

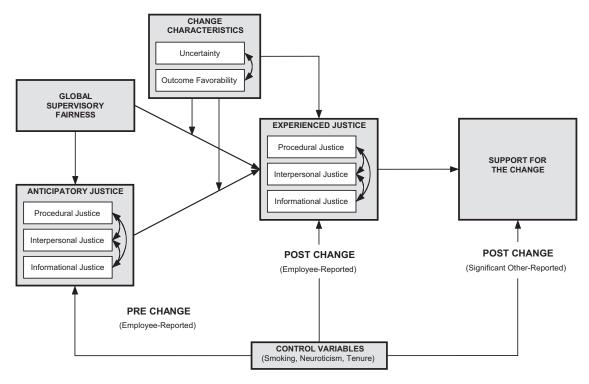


Figure 1. A model of anticipatory justice in an organizational change context.

of experienced justice are significant predictors of several key outcomes (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001). However, focusing on those snapshots neglects the critical question of where exactly those experienced justice perceptions come from—are they rooted in anticipations that were formed weeks or months before the event in question? If so, scholars and managers need to focus on those anticipations in order to better understand (and ultimately manage) justice perceptions.

Antecedents of Anticipatory Justice

One of the first questions we examined in our study concerns how anticipatory justice perceptions are formed. Drawing on fairness heuristic theory (Lind, 2001; Van den Bos, 2001; Van den Bos et al., 2001), our model proposes that anticipatory justice perceptions are anchored by the global perceptions of fairness that employees attach to their supervisors—akin to a sort of justice reputation. Fairness heuristic theory suggests that employees in organizations face a fundamental social dilemma when confronted with a decision to cooperate with an authority. On the one hand, such cooperation can provide personal benefits as the employee gains access to outcomes that would not have been possible without cooperation. On the other hand, the decision to cooperate increases the risk of exploitation, as authorities may seek to take advantage of the employee.

To cope with this dilemma, people rely on a fairness heuristic—a cognitive shortcut used to help determine whether to cooperate. The fairness heuristic represents "a global impression of fair treatment, rather than on one or another of the traditional modalities of fairness" (Lind & Van den Bos, 2002, p. 196). This global impression of fairness is formed quickly from readily available information and is then relied on to interpret experiences and guide reactions to events (Lind, 2001). Over time, fairness heuristic theory has evolved into uncertainty management theory (Lind & Van den Bos, 2002; Van den Bos & Lind, 2002). This theory broadens fairness heuristic theory's focus on concerns about exploitation to view fairness as a means of coping or mitigating virtually any form of uncertainty. At the same time, uncertainty management theory maintains the basic tenant of fairness heuristic theory regarding the formation and use of global fairness impressions

Lind (2001) argued that global fairness perceptions will be used to anchor reactions to future events, influencing subsequent justice perceptions, subsequent job attitudes, and subsequent job behaviors. According to Lind's (2001) description, global fairness perceptions can be distinguished from the traditional justice dimensions in two respects. First, global fairness is an overarching judgment, whereas the traditional dimensions focus on specific modalities (e.g., outcome, process, interpersonal interaction). Second, global fairness is typically connected to some entity, such as a supervisor or formal organization, whereas the traditional justice dimensions are typically connected to some event, such as a smoking ban or layoff (see Cropanzano et al., 2001, for more discussion of this entity vs. event distinction). In the case of anticipatory justice, a third distinction can be drawn. That is, global fairness is based on an amalgam of past justice-relevant experiences, whereas anticipatory justice is sensed beforehand. Fairness heuristic theory's mechanisms suggest that this "foreseeing" process will be shaped and molded by the global fairness that is attached to the relevant entity (Lind, 2001). This assertion echoes Shapiro and Kirkman's (2001) initial theorizing, as the authors speculated that anticipatory justice would be rooted to some extent in an individual's previous justice experiences (see also Davidson & Friedman, 1998; Fiske & Taylor, 1991).

Hypothesis 1: Global perceptions of supervisory fairness are positively related to anticipatory justice perceptions.

Anticipatory Justice and Experienced Justice

Having described one way that anticipatory justice perceptions may be formed, we turn our attention to the relationship between anticipatory justice and experienced justice. With the introduction of anticipatory justice to the justice judgment equation, employees who experience organizational change have two lenses through which to view the justice of the change. On the one hand, employees' experienced justice perceptions may be driven by the anticipated justice attached to the change itself. This assertion is consistent with the confirmatory bias phenomenon (Snyder & Swann, 1978) described in Shapiro and Kirkman's (2001) theorizing on anticipatory justice. The confirmatory bias creates a filter through which new information is interpreted. Information that is consistent with expectations is weighed and considered, whereas information that is inconsistent with expectations is ignored or discounted. Applied to our context, employees would view the ban's implementation as procedurally, interpersonally, and informationally just because their respective anticipations colored the way they viewed their ban experiences.

On the other hand, employees' experienced justice perceptions may be driven by the global fairness they attach to the supervisor, in much the same way that anticipatory justice perceptions were initially formed. This assertion is consistent with fairness heuristic theory in that global supervisory fairness should impact the perceived justice of an event by removing the desire to take a fresh look at justice relevant experiences (Lind, 2001; Van den Bos, 2001; Van den Bos et al., 2001). In the absence of that fresh look, reactions to events will be dictated by the existing, more stable set of fairness perceptions attached to the supervisor. Indeed, Lind (2001) explained that "the general justice judgment would be of little use as a heuristic if it were itself constantly being revised and updated with new information" (p. 70). Applied to our context, employees would view the ban's implementation as procedurally, interpersonally, and informationally just because their fairness heuristic prevented them from carefully attending to and interpreting their ban experiences.

These predictions, together with the hypothesized linkage between global fairness and anticipatory justice in Hypothesis 1, suggest the structure shown in Figure 1. Global fairness predicts anticipatory justice, which goes on to predict experienced justice. However, global fairness retains its own direct effect on experienced justice, resulting in a partially mediated structure.

Hypothesis 2: Anticipatory procedural, interpersonal, and informational justice are positively related to experienced procedural, interpersonal, and informational justice, respectively.

Hypothesis 3: Global perceptions of supervisory fairness are positively related to experienced justice perceptions.

Hypothesis 4: The relationship between global supervisory fairness and experienced justice is partially mediated by anticipatory justice.

The model in Figure 1 suggests that global fairness and anticipatory justice both serve as unique predictors of experienced justice. However, we further proposed that certain characteristics of the events can moderate the importance of those two antecedents to experienced justice. The distinction between entities and events can be used to examine this issue (Cropanzano et al., 2001). As noted earlier, global supervisory fairness is an entity judgment because it reflects a general appraisal of an authority's behavior as a whole. Anticipatory justice is an event judgment because it reflects a specific appraisal of one action or closely related cluster of actions. We proposed that organizational change characteristics that increased employees' focus on the event, rather than on the entity, would increase the relationship between anticipatory justice and experienced justice. We further proposed that this increased event focus would lessen the reliance on global impressions, decreasing the relationship between global supervisory fairness and experienced justice.

We tested those predictions by examining two specific change characteristics: uncertainty and outcome favorability. Drawing on uncertainty management theory, we define *uncertainty* as a perception that an employee lacks adequate information or understanding of situational features, resulting in an inability to predict the future (Van den Bos & Lind, 2002). *Outcome favorability* reflects the perception that an outcome has beneficial consequences for the employee (Brockner & Wiesenfeld, 1996). We focused on these change characteristics because prior research in both the organizational change and justice literatures suggests that they are important drivers of reactions to change (e.g. Fedor et al., 2006; Greenberg, 1994; Schweiger & Denisi, 1991). Furthermore, these change characteristics are appropriate because they can be used to categorize virtually any organizational change, regardless of its particular nature.

Regarding uncertainty, Shapiro and Kirkman (2001) proposed that anticipatory activity will be heightened when uncertainty surrounds an event. Anticipatory activity reflects a sort of sense making where individuals consider the questions they have about the event and engage in information search in an effort to gather data on those questions (Kirkman et al., 1996; Shapiro & Kirkman, 2001). Anticipatory activity represents a sort of contemplation and rumination on the forthcoming event, as employees attempt to make educated guesses that help them cope with uncertainty. That same sort of information search, contemplation, and rumination should be triggered by low levels of outcome favorability. In a series of experiments on attributional search, Wong and Weiner (1981) showed that individuals are more likely to search for information when the outcome of an event is negative. Similarly, Brockner and Wiesenfeld (1996) suggested that individuals react to negative events by engaging in more cognitive analysis of the events, making the procedures that led to the event more impactful. Whether triggered by uncertainty or outcome favorability, we proposed that this focus on the event would magnify the relationship between anticipatory justice and experienced justice.

Hypothesis 5: The perceived uncertainty created by the change moderates the relationship between anticipatory jus-

tice and experienced justice, such that the relationship is more positive when perceived uncertainty is high.

Hypothesis 6: The perceived outcome favorability of the change moderates the relationship between anticipatory justice and experienced justice, such that the relationship is more positive when perceived favorability is low.

What impact should this sort of event-focused cognitive activity have on the relationship between global supervisory fairness and experienced justice? According to fairness heuristic theory, global impressions of fairness are used as a sort of cognitive shortcut that guides attitude formation, as well as relevant intentions and behaviors (Lind, 2001; Van den Bos, 2001; Van den Bos et al., 2001). However, Lind (2001) acknowledged that there are times when that cognitive shortcut will be relied upon to a lesser degree. Specifically, Lind (2001) argued that times of organizational change can trigger a reduced focus on global impressions in favor of a fresh look at justice-relevant information. He listed changes such as new leadership, a restructuring effort, or a merger as contexts that should decrease one's reliance on global fairness. Those sorts of changes clearly represent high levels of uncertainty and may be viewed as potentially negative outcomes as well.

Hypothesis 7: The perceived uncertainty created by the change moderates the relationship between global supervisory fairness and experienced justice, such that the relationship is less positive when perceived uncertainty is high.

Hypothesis 8: The perceived outcome favorability of the change moderates the relationship between global supervisory fairness and experienced justice, such that the relationship is less positive when perceived favorability is low.

Justice and Support for the Change

Our model has thus far described how anticipatory justice perceptions may be formed and how they may predict experienced justice perceptions. A key question remains, however: Do those experienced justice perceptions impact support for the change? A handful of studies on justice during organizational change provide indirect evidence to suggest that this is the case. For example, Greenberg (1994) conducted a study showing that interpersonal and informational justice increased the acceptance of a smoking ban. Greenberg's (1994) "ban acceptance" variable was a multifaceted index including the perceived fairness and acceptability of the ban, employees' affective commitment to the organization, and their intentions to comply with the ban and remain a member of the organization. Other studies have similarly focused on attitudes or intentions that might best be termed *proxies* for change support, such as commitment and turnover intentions. For example, Brockner, Wiesenfeld, Reed, Grover, and Martin (1993) found that survivors of a job layoff were more committed to their organizations and tasks when the layoff was judged to be handled fairly (for similar effects, see Mansour-Cole & Scott, 1998, and Schaubroeck et al., 1994). Additionally, Kickul et al. (2002) found that justice interventions mitigated the effects of psychological contract breaches on turnover intentions in a variety of change contexts (for similar effects, see Daly & Geyer, 1994, and Korsgaard, Sapienza, & Schweiger, 2002).

The only study that has, to our knowledge, linked justice to specific behaviors that indicate support for a change was conducted by Fedor et al. (2006). This study attempted to link *change fairness* (an index combining procedural and informational justice) to *change commitment* (an index reflecting behaviors like convincing others to support the change, doing whatever it takes to make a change successful, and so forth). Contrary to the authors' hypothesis, change fairness did not have a significant main effect on change commitment, though an unhypothesized interaction effect suggested that fairness mattered more when the magnitude of the change was greater. It may be that the nonsignificant main effect is a function of Fedor et al.'s (2006) change fairness measure, which failed to assess a number of justice-relevant concepts and collapsed across justice dimensions that are typically kept separate.

Theoretical support for the relationship between experienced justice and change support can be derived from Novelli, Kirkman, and Shapiro's (1995) discussion of how justice concepts fit into the change management process. Existing models of effective change management include prescriptions such as promoting a shared vision of the change; spreading the change effectively throughout the organization; altering policies, systems, and structures to institutionalize the change; and monitoring and adjusting strategies when necessary (e.g., Beer, Eisenstat, & Spector, 1990). High levels of procedural justice during change implementation can increase the effectiveness of all of those steps by, for example, giving employees a voice in how the change is implemented in their unit, helping to ensure that the change is institutionalized in a consistent, accurate, and unbiased way, and allowing for appeals if errors occur during implementation. High levels of interpersonal and informational justice can also increase the effectiveness of the change management steps by, for example, conveying a sensitivity to any disruptions that accompany the change, respecting employees' needs during the process, and ensuring that the vision, policies, systems, and structures corresponding to the change are disseminated and justified in an open and honest manner.

Hypothesis 9: Experienced justice is positively related to ban support.

Method

Procedure

The study was conducted in a hospital in the southeastern United States that was undergoing the implementation of a smoking ban. The smoking ban was designed by organizational leaders, together with a team of managers, to promote wellness and reduce absenteeism and health care costs. The policy banned smoking everywhere on the hospital campus and affected employees, patients, and visitors. Although the decision to create the ban rested largely with the administration, it was the department supervisors who were put in charge of the implementation and enforcement of the new policy. The hospital's administration recognized that department supervisors were most likely to face the day-to-day challenges of implementing and enforcing the ban because they shared similar shifts and worked in the same buildings as the employees. As a result, supervisors were given training sessions on the details of the policy as well as the authority to respond to policy breaches as they saw fit.

The smoking ban was formally introduced to employees through memos, notices mailed with paychecks, and e-mail announcements approximately 2 months before the ban went into effect. Shortly after this announcement, hospital employees were notified about the present study through a letter from the chief executive officer. Employees were then asked to complete a preban survey 3 weeks before the ban went into effect. In this survey, participants were asked to assess global supervisory fairness, perceived uncertainty regarding the ban, the perceived outcome favorability of the ban, and anticipatory justice. The employees were then mailed the follow-up survey approximately 3 months after the ban was implemented. The postban survey measured levels of experienced justice. Participants were also asked to have a significant other fill out a short survey during the postban period. For the purposes of this study, significant others were either family members or close friends that employees either lived with or with whom they shared their feelings about work. Significant others were asked to assess participant neuroticism for use as a control and to rate participants' support of the ban. Participants were provided with return-mailing envelopes for all three surveys, ensuring that all surveys were returned directly to the researchers and not to hospital management. Employees received \$5 for their complete participation.

Participants

Two hundred and eighty-five participants completed the preban survey, representing an initial response rate of 11%. During the lag between survey administrations, turnover resulted in the loss of a handful of participants. Additionally, several participants responded to the first survey with identification numbers that did not match hospital records. As a result of these two issues, we mailed the postban survey to 258 participants. Of these, 193 completed and returned the survey for a response rate of 75%. Of the final 193 participants, 34 failed to return the significant other survey, and 46 were removed from the sample due to missing data. The majority of the cases removed for missing data were deleted because significant others indicated on a "check-marked" box that they had not discussed the smoking ban with the employee extensively enough to reliably gauge support for the ban. These removals resulted in a final sample size of 113 employees with complete data on both employee surveys and the significant other survey.

Participants worked in a variety of departments in the hospital, including nursing, security, administration, and volunteer services. On average, participants were 48.5 years old (SD=11.4 years), with an average tenure of 7.8 years (SD=8.3 years). Ninety-two percent of the participants were women. Eighty-nine percent of the participants were White, 6% were African American, 3% were Hispanic, 1% was Native American, and 1% was Asian. There were no significant differences in demographic characteristics between the final sample and Time 2 nonrespondents (who were, on average, 47.7 years old, with an average tenure of 6.99 years).

Measures

Anticipatory justice. We measured participants' anticipated levels of procedural justice, interpersonal justice, and informational justice in regard to ban implementation with a modified version of Colquitt's (2001) organizational justice scale. Individuals used a 5-point scale ranging from $1 = to \ a \ very \ small \ extent$

to $5 = to \ a \ very \ large \ extent$ to assess the degree to which they agreed with the statements in each scale. As noted earlier, we referenced justice items to the supervisors, as they were responsible for implementing and executing the smoking ban. The instructions and some of the items were modified to reflect the anticipation of justice levels. For assessment of anticipatory procedural justice, participants were told to "refer to the procedures you anticipate your immediate supervisor will use when implementing the new policy." Anticipatory procedural justice items assessed expected adherence to the rules outlined in Leventhal (1980) and Thibaut and Walker (1975). Samples from the seven-item scale include "Will you be able to express your views while the tobacco free policy is being implemented?" "Will those procedures be applied consistently?" and "Will you be able to appeal the decisions arrived at by those procedures?" The coefficient alpha for this scale was .86.

For assessment of anticipatory interpersonal justice, participants were asked to "refer to how respectful you anticipate your immediate supervisor will be when discussing the new policy with you." The items measuring anticipatory interpersonal justice assessed expected adherence to the respect and propriety rules outlined in Bies and Moag (1986). Samples from the four-item scale include "Will your supervisor treat you in a polite manner?" and "Will your supervisor treat you with respect?" The coefficient alpha for this scale was .98. Finally, for assessment of anticipatory informational justice, participants were told to "refer to the explanations and justifications you anticipate your immediate supervisor will provide for the tobacco-free policy." The items that followed assessed participants' expectations that supervisors would adhere to the justification and truthfulness rules outlined in Bies and Moag (1986). Samples from the five-item scale include "Will your supervisor's explanations regarding procedures be reasonable?" and "Will your supervisor communicate details in a timely manner?" The coefficient alpha for this scale was .91.

Global supervisory fairness. Following recommendations by Colquitt and Shaw (2005), Lind (2001), and Lind and Van den Bos (2002), we measured the fairness heuristic concept with items capturing a global evaluation of a supervisor's overall fairness level. Participants were asked to respond to three items: (a) "How often does your immediate supervisor act fairly toward you?" using a scale ranging from $1 = almost\ never$ to $5 = almost\ always$, (b) "To what extent do you believe that your immediate supervisor is fair to you?" using a scale ranging from $1 = to\ a\ very\ small\ extent$ to $5 = to\ a\ very\ large\ extent$, and (c) "How fair do you think your immediate supervisor is to you?" using a scale ranging from $1 = very\ unfair$ to $5 = very\ fair$. These items referred specifically to supervisors in order to match the referent used in the anticipatory justice items. The coefficient alpha for this scale was .96.

Uncertainty. The perceived uncertainty created by the smoking ban was measured with nine items from a scale developed by Schweiger and Denisi (1991). This scale was originally designed to assess work aspects identified as sources of uncertainty during an organizational change (see Schweiger, Ivancevich, & Power, 1987). However, many of these sources of uncertainty were not applicable to the smoking ban, for example, uncertainty about "whether you will have to learn new job skills." Removing the items related to nonrelevant sources resulted in the nine-item scale administered to participants. Furthermore, the final nine items reflected themes that were explicit in the hospital's policy and

procedure information about the smoking ban or highly likely given the context. Participants were asked to assess the extent to which they felt uncertain about particular events when thinking about the impending smoking ban, using a 5-point scale ranging from 1 = almost never a source of uncertainty to <math>5 = almostalways a source of uncertainty. Sample items include "I'll have to transfer or relocate," "Friends and colleagues will lose their jobs," "The culture of the company will change," and "The company will be a good place to work." The hospital's policy information made it clear that supervisors could take a number of corrective actions when enforcing the ban, up to and including discharge. Additionally, the smoking ban represented a culture change in several ways. For example, the attitudes of employees, patients, and visitors who could no longer smoke were expected to change, as were break patterns since smokers were no longer permitted to step outside to smoke during their shifts. The coefficient alpha for this scale was .88.

Outcome favorability. We measured participants' perceptions of the favorability of the smoking ban with three items based on a scale provided by Mansour-Cole and Scott (1998). These items include "Overall, I will personally benefit from the new tobaccofree policy," "The outcome of the new tobacco-free policy will be positive for me," and "In general, this policy will be a good thing for me." Individuals used a 5-point scale ranging from $1 = strongly\ disagree$ to $5 = strongly\ agree$ to assess the extent to which they agreed with each statement. The coefficient alpha for this scale was .97.

Experienced justice. Once the ban had been implemented, experienced levels of procedural justice, interpersonal justice, and informational justice were measured using Colquitt's (2001) scales. Individuals used a 5-point scale ranging from $1 = to \ a \ very$ small extent to $5 = to \ a \ very \ large \ extent$ to assess the extent to which they agreed with the statements in each scale. As with anticipatory justice, the instructions for these scales explicitly referred to supervisors in order to match the referent used in the global supervisory fairness measure. The instructions for the procedural justice scale asked participants to "refer to the procedures your supervisor used to implement the new policy." For assessment of interpersonal justice, participants were told to "refer to how respectful your supervisor was when discussing the new policy with you." Finally, for assessment of informational justice, participants were asked to "refer to the explanations and justifications your supervisor provided for the new policy." The coefficient alpha was .80 for procedural justice, .97 for interpersonal justice, and .94 for informational justice.

Ban support. We asked a significant other of each participant to provide an assessment of the participant's support of the smoking ban. We measured this support using Fedor et al.'s (2006) four-item change commitment scale. Individuals used a 5 point scale ranging from 1 = strongly disagree to 5 = strongly agree to assess the extent to which they agreed with each item. The items for this measure include "My significant other does whatever he/she can to help this policy be successful," "My significant other is fully supportive of this policy," "My significant other is trying to convince others to support this policy," and "My significant other fully supports his/her supervisor during this policy." The coefficient alpha for this scale was .90. We also gathered a self-reported version of the scale as a check on the validity of the significant-other data. The correlation between significant-other-

reported ban support and self-reported ban support was .68, indicating a high level of convergence. Furthermore, replacing the significant-other version with the self-reported version did not significantly alter our tests of our hypotheses.

Control Variables

Smoking status. We controlled for whether the participant was a smoker, given that the ban would presumably have a more significant impact on smokers than nonsmokers. We measured smoking status by asking participants to indicate the number of packs of cigarettes they smoked in a typical week on the preban survey. Participant responses ranged from 0 to 17 packs per week, and smokers averaged 5.4 packs per week. Smoking status was related to employee perceptions of outcome favorability (r = -.42); however, the two concepts only shared a quarter of their variance and seemed conceptually distinct. For example, it is possible that some smokers were in favor of the ban because they were looking for an excuse to quit. Alternatively, it may be that some nonsmokers were opposed to the ban because they were uncomfortable with their employer dictating those types of personal life choices.

Neuroticism. We asked the participants' significant others to assess participant levels of neuroticism using the eight-item scale created by John, Donahue, and Kentle (1991). The items were rated on a 5 point scale ranging from 1 = strongly disagree to 5 =strongly agree with sample items including "In general, my significant other can be moody" and "In general, my significant other worries a lot." The coefficient alpha for this scale was .88. This general disposition to experience unpleasant moods may influence participant ratings of self-report measures, introducing a common method bias into a study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). It may also predispose individuals to react negatively to organizational change. Thus, we controlled for neuroticism in the tests of our hypotheses. As with our change support variable, we also gathered a self-reported version of the scale as a check on the validity of the significant other data. The correlation between significant-other-reported neuroticism and self-reported neuroticism was .47, a level of convergence that compares favorably with other investigations of other-reported personality (e.g., McCrae & Costa, 1987; Mount, Barrick, & Straus, 1994). In addition, replacing the significant other version with the self-reported version did not significantly influence any of the tests of our hypotheses.

Organizational tenure. Participants were asked to report the total length of time that they had worked for the hospital. We controlled for tenure because it is likely to influence employee attitudes toward the organization, especially during times of change. Models of organizational change often cite Lewin's (1951) seminal concepts of unfreezing, change, and refreezing (Beer et al., 1990; Novelli et al., 1995). Employees who possess longer tenures with the organization may have a more difficult time with the unfreezing component of organizational change.

Confirmatory Factor Analysis

Our hypotheses included a variety of fairness-related concepts, including anticipatory justice, experienced justice, and global supervisory fairness. We therefore conducted a confirmatory factor analysis of these justice forms to support the separation proposed

in our model. Our hypothesized model included seven factors: anticipatory procedural, interpersonal, and information justice; experienced procedural, interpersonal, and informational justice; and global supervisory fairness. As shown in Table 1, this model provided an adequate fit to the data, $\chi^2(539, N=147)=1532.04$; $\chi^2/df=2.84$; comparative fit index (CFI) = .95; incremental fit index (IFI) = .95; standardized-root-mean-square residual (SRMR) = .075. Following the conventions outlined by Kline (2005), good model fit can be inferred when the χ^2/df ratio falls below 3.00, when CFI and IFI are above .90, and when SRMR falls below .10. Additionally, all factor loadings were statistically significant and ranged from .46 to .90 with an average of .74.

However, because these justice-related concepts are likely to be highly correlated, we compared the seven-factor model separating all of the justice dimensions to a variety of alternative models that combined different justice concepts (presented in Table 1). The alternative models included one that combined the three forms of anticipatory justice and the three forms of experienced justice, one that combined anticipatory and experienced forms of the three justice dimensions, and one that combined all of the justice concepts into one overall fairness factor. We nested these alternative models appropriately within the seven-factor hypothesized model by constraining the covariances between the latent variables of interest to 1.0 (see Kelloway, 1998). Chi-square difference tests showed that the hypothesized model fit significantly better than the alternative models.

Results

The means, standard deviations, and zero-order correlations are presented in Table 2. We used structural equation modeling in LISREL Version 8.52 to test the hypotheses summarized in Figure 1. Given our sample size, we tested the hypotheses using a partially latent model, in which scale scores were used as single indicators of the latent variable with factor loadings set to (1 – alpha)*variance (Kline, 2005). Kline (2005) suggested that statistical precision will be adequate when the ratio of sample size to observed variables exceeds 5 to 1, and a partially latent approach allowed our ratio to be 5.4 to 1. We should also note that our sample size of 113 exceeds the minimum requirement suggested by Boomsma (1982, 1985), lowering the likelihood of estimation problems.

We tested moderation hypotheses within structural equation modeling by following past recommendations (Cortina, Chen, & Dunlap, 2001; Mathieu, Tannenbaum, & Salas, 1992). More specifically, product terms were created after mean-centering the independent variables in order to reduce nonessential multicollinearity (Cohen, Cohen, West, & Aiken, 2003; Cortina et al., 2001). The product terms were then used as single indicators of the latent interaction variables. Factor loadings were again set to (1 – alpha)*variance, with the product term alphas computed using the formula ([reliability_X*reliability_Z] + r_{XZ}^2)/(1 + r_{XZ}^2), where X is the independent variable, Z is the moderator, and r_{XZ} is the correlation between those two latent variables (see Equation 14 in Cortina et al., 2001). In order to correctly interpret these product terms, we modeled direct effects from the moderators (uncertainty and outcome favorability) to the experienced justice dimensions, even though those paths were not the subject of formal hypotheses.

Table 1
Comparison of Factor Structures For Justice Variables

Model description	χ^2	df	χ^2/df	CFI	IFI	SRMR	χ^2 diff
Seven-factor model:							
Combines three anticipatory justice factors, three							
experienced justice factors, and global supervisory							
fairness	1532.04	539	2.84	.95	.95	.075	_
Six-factor model:							
Combines anticipatory interpersonal justice and							
global supervisory fairness	1758.45	540	3.26	.94	.94	.083	226.41*
Combines experienced interpersonal justice and							
global supervisory fairness	1787.74	540	3.31	.94	.94	.095	255.70*
Five-factor model:							
Combines anticipatory interpersonal justice,							
experienced interpersonal justice, and global							
supervisory fairness	1755.75	541	3.25	.94	.94	.100	223.71*
Combines anticipatory interpersonal and							
informational justice plus experienced interpersonal							
and informational justice	2368.09	541	4.38	.92	.92	.111	836.05*
4-factor model:							
Combines anticipatory and experienced procedural							
justice, anticipatory and experienced interpersonal							
justice, and anticipatory and experienced	2774 44	5.40	5.10	0.0	0.0	1.42	1040 40*
informational justice Three-factor model:	2774.44	542	5.12	.88	.88	.143	1242.40*
Combines anticipatory procedural, interpersonal, and informational justice plus experienced procedural,							
interpersonal, and informational justice	3127.55	545	5.74	.90	.90	.129	1595.51*
Two-factor model:	3127.33	343	3.74	.90	.90	.129	1393.31
Combines anticipatory and experienced procedural,							
interpersonal, and informational justice	4302.13	554	7.77	.85	.85	.109	2770.09*
One-factor model:	7302.13	554	7.77	.03	.03	.109	2110.09
Combines all of the justice and fairness scales	4596.28	560	8.21	.83	.83	.113	3064.24*

Note. N = 147. χ^2 difference (χ^2 diff) was judged relative to the hypothesized seven-factor model (top row). CFI = comparative fit index; IFI = incremental fit index; SRMR = standardized-root-mean-square residual; df = degrees of freedom. * p < .05.

In addition, as is a fairly common practice in structural equation modeling (e.g. Judge & Colquitt, 2004; Lim, Cortina, & Magley, 2008), we allowed the disturbance terms for the endogenous justice variables to covary to capture all unmeasured common causes. These disturbance covariances mimic the curved arrows that are modeled among exogenous variables by default in most structural equation models. In the end, this proposed model provided a good fit to the data, $\chi^2(62, N=113)=130.62; \chi^2/df=2.11;$ CFI = .97; IFI = .98; SRMR = .063. Given the sheer number of paths, the results of our structural equation modeling are presented across Tables 3 (which summarizes hypotheses for anticipatory justice), 4 (which summarizes hypotheses for experienced justice), and 5 (which summarizes hypotheses for ban support) instead of a single figure.

Hypothesis 1 predicted that global supervisory fairness would be significantly related to anticipatory justice. The portions of our structural equation model relevant to these predictions are summarized in Table 3. With respect to the controls, smoking status was negatively related to anticipatory procedural and interpersonal justice. Hypothesis 1 was supported because global supervisory fairness had a significant unique relationship with anticipatory procedural justice (b = .53), anticipatory interpersonal justice (b = .72), and anticipatory informational justice (b = .50), even when we controlled for neuroticism, tenure, and smoking status.

Hypothesis 2 predicted that anticipatory justice would be positively related to experienced justice, and Hypothesis 3 made the same prediction for global supervisory fairness. The portions of our structural equation model relevant to these predictions are summarized in Table 4. With respect to the controls, tenure was negatively related to perceptions of experienced interpersonal and informational justice. Hypothesis 2 was supported as anticipatory procedural justice was significantly related to experienced procedural justice (b = .29), anticipatory interpersonal justice was significantly related to experienced interpersonal justice (b = .35), and anticipatory informational justice was significantly related to experienced informational justice (b = .31). Hypothesis 3 was partially supported as global supervisory fairness was significantly related to experienced interpersonal justice (b = .33) and experienced informational justice (b = .53) but not to experienced procedural justice (b = .22).

Hypothesis 4 predicted that the relationship between global supervisory fairness and experienced justice is partially mediated by anticipatory justice. We tested this prediction using the product of coefficients approach advocated by MacKinnon, Lockwood, Hoffman, West, and Sheets (2002). From this perspective, mediation is shown when an independent variable has a statistically significant indirect effect on a dependent variable when a direct effect is also modeled. Figure 2 reproduces the portion of our

Table 2

Means, Standard Deviations, and Correlations

								Corr	elation						
Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Anticipatory procedural															
justice	4.00	0.86	.86												
2. Anticipatory interpersonal															
justice	4.53	0.81	.68*	.98											
3. Anticipatory informational justice	4.30	0.78	.70*	.74*	.91										
4. Experienced procedural	4.30	0.78	.70	.74	.91										
justice	3.95	0.78	.48*	.48*	.43*	.80									
5. Experienced interpersonal															
justice	4.59	0.75	.53*	.72*	.51*	.57*	.97								
6. Experienced															
informational justice	4.36	0.81	.54*	.63*	.53*	.60*	.71*	.94							
7. Global supervisory	1.52	0.76	.52*	.70*	.50*	.41*	.62*	.58*	06						
fairness 8. Uncertainty	4.53 1.61	0.76 0.82	.32 22*	31*	20*	16	20*	.38 22*	.96 17	.88					
9. Outcome favorability	4.13	1.16	.39*	.41*	.37*	.37*	.35*	.23*	.26*	16	.97				
10. Support for the change	4.15	0.94	.37*	.42*	.35*	.38*	.51*	.41*	.36*	24*	.54*	.90			
11. Neuroticism	2.30	0.77	22*	17	20^{*}	22*	16	08	19*	.06	14	.07	.88		
12. Tenure in years	8.54	8.64	.03	.03	.11	08	11	11	.04	02	.03	08	.09	_	
13. Smoking status ^a	0.67	2.30	23^{*}	19^{*}	13	31*	21*	15	09^{*}	.23*	42^{*}	49^{*}	26	.03	_

Note. N = 113. Coefficient alphas are listed on the diagonal.

structural model relevant to this mediation prediction and includes the effect decomposition statistics from LISREL that can be used to test mediation. The indirect effects of global supervisory fairness on the experienced justice dimensions were statistically significant in all three cases (.16 for procedural justice, .25 for interpersonal justice, and .15 for informational justice), supporting mediation. The results in Figure 2 are also indicative of partial mediation rather than full mediation, in that global supervisory fairness retains nonzero direct effects on experienced justice, with those direct effects reaching statistical significance in two of the three cases. Taken together, these results suggest that global su-

Table 3
Structural Equation Modeling Results for Anticipatory Justice

	Anticipatory justice						
Variable	Procedural	Interpersonal	Informational				
Neuroticism	13	02	13				
Tenure	.01	02	.10				
Smoking status ^a	21*	15*	10				
Global supervisory fairness	.53*	.72*	.50*				
R^2	.40*	.56*	.33*				

Note. The structural model includes all the paths in Tables 3–5 and provided a good fit to the data, $\chi^2(62, N=113)=130.62$; $\chi^2/df=2.11$; comparative fit index = 97; incremental fit index = .98; standardized-root-mean-square residual = .063. The path coefficients are the unstandardized coefficients from LISREL's default output.

pervisory fairness predicts experienced justice, in part, by anchoring employees' anticipations of future justice levels.

Hypotheses 5 and 6 predicted that uncertainty and outcome favorability would moderate the relationship between anticipatory justice and experienced justice. Table 4 includes the portion of our structural model relevant to these hypotheses. Regarding Hypothesis 5, the Anticipatory Justice × Uncertainty product term was statistically significant for interpersonal justice (b = .44) and informational justice (b = .35) but not for procedural justice (b = .14). Regarding Hypothesis 6, the Anticipatory Justice × Outcome Favorability product term was statistically significant for interpersonal justice (b = -.40) but not for procedural justice (b = -.03) or informational justice (b =-.01). To explore the pattern of these interactions, we conducted a simple slopes analysis using ordinary least squares regression (see Cohen et al., 2003, pp. 272-281 for a discussion of this analysis). Figure 3 presents the results of this analysis with experienced interpersonal justice as the outcome (the pattern was the same for the significant informational justice effect). As predicted, the relationship between anticipatory justice and experienced justice was more positive when uncertainty was high and when outcome favorability was low.

Hypotheses 7 and 8 predicted that uncertainty and outcome favorability would moderate the relationship between global supervisory fairness and experienced justice. Table 4 also includes the portion of our structural model relevant to these hypotheses. Regarding Hypothesis 7, the Global Supervisory Fairness \times Uncertainty product term was significant for interpersonal justice (b = -.41) and for informational justice (b = -.37) but not for procedural justice (b = -.34). Regarding Hypothesis 8, the Global Supervisory Fairness \times Outcome Favorability product term failed to reach statistical significant for any

^a Smoking status reflects the packs of cigarettes smoked, with higher numbers indicating more packs.

^{*} p < .05.

^a Smoking status reflects the packs of cigarettes smoked, with higher numbers indicating more packs.

p < .05.

Table 4
Structural Equation Modeling Results for Experienced Justice

	Experienced justice				
Variable	Procedural	Interpersonal	Informational		
Neuroticism	11	.03	.12		
Tenure	16	18^{*}	26^{*}		
Smoking status ^a	18	06	06		
Uncertainty (U)	.05	.08	05		
Outcome favorability (OF)	.13	.04	00		
Anticipatory procedural					
justice (AProc)	.29*	_			
Anticipatory interpersonal					
justice (AInter)		.35*			
Anticipatory informational					
justice (AInfo)	_	_	.31*		
Global supervisory					
fairness (GSF)	.22	.33*	.53*		
$AProc \times U$.14	_	_		
AInter \times U	_	.44*	_		
$AInfo \times U$	_	_	.35*		
$AProc \times OF$	03	_	_		
AInter \times OF	_	40^{*}	_		
$AInfo \times OF$	_	_	01		
$GSF \times U$	34	41^{*}	37*		
$GSF \times OF$	22	.28	00		
R^2	.46*	.67*	.58*		

Note. The structural model includes all the paths in Tables 3–5 and provided a good fit to the data, $\chi^2(62, N=113)=130.62$; $\chi^2/df=2.11$; comparative fit index = 97; incremental fit index = .98; standardized-root-mean-square residual = .063. The path coefficients are the unstandardized coefficients from LISREL's default output.

of the justice dimensions (b = -.22, .28, and -.00 for procedural, interpersonal, and informational justice, respectively). Figure 4 presents the pattern of the uncertainty interaction with experienced interpersonal justice as the outcome (the pattern was the same for

informational justice). As predicted, the relationship between global supervisory fairness and experienced justice was more positive when uncertainty was low.

Hypothesis 9 predicted that experienced justice would be positively related to support for the smoking ban. Table 5 highlights the portion of our structural model relevant to this hypothesis. Regarding the controls, high levels of neuroticism and smoking were associated with less support for the change. Controlling for those effects, experienced interpersonal justice had a significant unique relationship with ban support (b = .36). Contrary to expectations, experienced procedural justice (b = -.12) and experienced informational justice (b = .15) failed to yield significant unique effects. Hypothesis 9 was therefore partially supported. Given the significant effect of experienced interpersonal justice on ban support, we tested for an indirect effect of anticipatory interpersonal justice on ban support through the mechanism of experienced interpersonal justice. Indeed, this indirect effect was significant (b = .13, p < .05).

Discussion

Given the frequency of change in organizational life and the impact of those changes on employee attitudes and behaviors, gaining a better understanding of change responses is important both theoretically and practically. With that in mind, we paired Shapiro and Kirkman's (2001) theorizing on anticipatory justice with fairness heuristic theory's description of the justice judgment process to build and test a model of reactions to a smoking ban. The results of our study provide a number of theoretical contributions to the literature, as detailed below.

What Predicts Anticipatory Justice?

If anticipatory justice represents justice that is foreseen—that is sensed beforehand (Shapiro & Kirkman, 2001)—where does that sense come from? After all, how can employees create a justice judgment before the change in question has even occurred? To explore such questions, we provided in our study one of the first

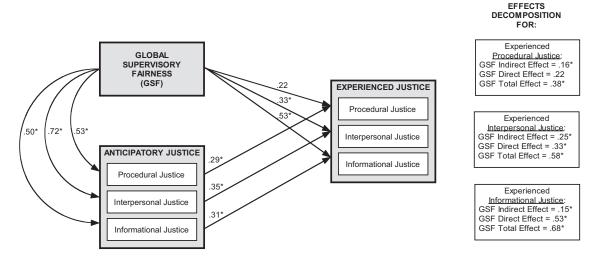
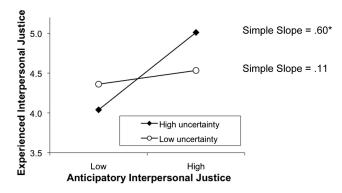


Figure 2. Tests of mediation for Hypothesis 4. * p < .05.

^a Smoking status reflects the packs of cigarettes smoked, with higher numbers indicating more packs.

^{*} p < .05.



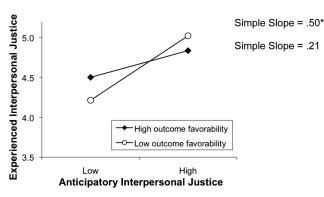


Figure 3. Moderating effects of uncertainty and outcome favorability on the effect of anticipatory interpersonal justice on experienced interpersonal justice. * p < .05.

field operationalizations of Lind and Van den Bos's fairness heuristic concept (Lind, 2001; Van den Bos, 2001; Van den Bos et al., 2001), with global perceptions of supervisory fairness constituting a sort of justice reputation for the person in charge of enacting and implementing the smoking ban. As expected, our results showed that global perceptions of supervisory fairness were strongly related to anticipated procedural, interpersonal, and informational justice. When employees worked for a supervisor they deemed fair, they anticipated that the impending change would be handled in a just manner. When employees worked for a supervisor they deemed unfair, their anticipations had a more unjust character. It may be that anticipatory justice is the result of a sort of anchoring

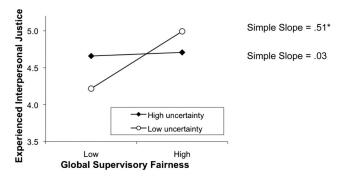


Figure 4. Moderating effect of uncertainty on the effect of global supervisory fairness on experienced interpersonal justice. * p < .05.

Table 5
Structural Equation Modeling Results for Support for the Change

Variable	Change support		
Neuroticism	22*		
Tenure	.07		
Smoking status ^a	47*		
Experienced procedural justice	12		
Experienced interpersonal justice	.36*		
Experienced informational justice	.15		
R^2	.52*		

Note. The structural model includes all the paths in Tables 3–5 and provided a good fit to the data, $\chi^2(62, N=113)=130.62$; $\chi^2/df=2.11$; comparative fit index = 97; incremental fit index = .98; standardized-root-mean-square residual = .063. The path coefficients are the unstandardized coefficients from LISREL's default output.

^a Smoking status reflects the packs of cigarettes smoked, with higher numbers indicating more packs.

and adjustment process, with global fairness perceptions serving as the anchor and specific qualities of the change creating variation away from that global impression.

These results illustrate that organizational changes do not occur in a vacuum—they occur in contexts with preexisting justice assumptions that color expectations for the change. Models of the change process acknowledge that supervisors play a critical role in executing changes in their particular corner of the organization (Beer et al., 1990; Novelli et al., 1995). Our model illustrates that a manager's impact can be felt much earlier. Even managers who adequately adhere to justice rules when implementing a change may suffer the consequences of past injustices in the form of pessimistic justice anticipations. From a practical perspective, such results illustrate the importance of establishing a strong justice reputation early in a manager's tenure. Fortunately, past research has shown that managers can be trained to adhere to justice principles more frequently (Skarlicki & Latham, 2005). Such training could be used to get new supervisors "off on the right foot" from a justice perspective or could be used to reverse any justice-related missteps that have occurred in a unit.

When Does Anticipatory Justice Predict Experienced Justice?

Shapiro and Kirkman (2001) and Bell et al. (2004) both suggested that anticipatory justice would impact the justice that was experienced during the organizational change. Our results support that contention, as the anticipated versions of the various justice dimensions did indeed have moderately strong relationships with the experienced versions (see also Bell et al., 2006). Thus, employees' perceptions of voice, consistency, bias suppression, correctability, sincerity, respect, truthfulness, and justification during the ban were colored not just by what was happening in the "here and now" but also by what was anticipated 4 months earlier. Given that those anticipations seem to flow, to some extent, from global fairness impressions, such results reveal another consequence of the heuristic described in fairness heuristic theory. Not only does the fairness heuristic serve as a direct predictor of justice experi-

p < .05.

ences, as Lind (2001) suggested, it may also serve as an indirect predictor of those experiences by shaping expectations.

These results have practical implications for the way organizations monitor the implementation of changes. Some organizations might be tempted to administer a postchange survey to gauge employee reactions to the event. Unfortunately, rather than indicating true reactions to the particulars of the event itself, such surveys may simply reproduce the same "reactions" that were anticipated before the change. A better approach would involve a prechange survey as well—one that was geared toward gauging the particular questions, concerns, or worries that are wrapped up in anticipations of injustice. Organizations that monitor those anticipations could then target the particular justice rules and criteria that seem to be most in doubt, potentially improving the way the change is experienced.

Although anticipatory justice was shown to predict experienced justice, it should be noted that global supervisory fairness had a unique direct effect on postban levels of interpersonal and informational justice. Thus, employees' experienced justice levels were actually colored by two types of preexisting beliefs: the anticipatory justice attached to the impending ban and the global sense of fairness attached to the particular supervisor. Our results showed that the anticipatory justice effects were strengthened (for interpersonal and, to a lesser extent, informational justice) when employees perceived the ban as high in uncertainty and low in outcome favorability. It seems likely that those two change characteristics inspired more anticipatory activity, with employees forming questions about the ban and carefully considering information that could help speak to those questions. Our results also showed that the global fairness effect was weakened when uncertainty perceptions were high, with those effects again occurring for interpersonal and informational justice. Lind (2001) argued that instances of organizational change could result in less of a focus on the cognitive shortcut provided by global impressions, with employees instead desiring a fresh look at justice-relevant information.

What Predicts Support for the Change?

Finally, our study examined how perceptions of experienced justice—formed in part from the combination of anticipatory justice and global fairness—went on to predict support for the change. Although past research has focused more on proxies for change support, we followed Fedor et al. (2006) by focusing on whether employees proactively attempt to get others to go along with the smoking ban while doing what is necessary to support their supervisor and the policy. Fedor et al.'s (2006) results failed to show a significant relationship between a combination of procedural and informational justice and change support. Our results offer somewhat of a replication of that null result in that neither procedural nor informational justice had a significant direct effect on support for the ban.

Our results did, however, reveal a significant relationship between experienced interpersonal justice and ban support. When employees felt that their supervisor was polite, sincere, and respectful when discussing the ban, they were more likely to actively support the new policy. Novelli et al. (1995) suggested that interpersonal justice could increase the effectiveness of the change management process by conveying a sensitivity to the disruptions that inevitably accompany organizational change. The more significant effect for interpersonal justice relative to procedural and informational justice may be a function of the interpretability of that justice form. Fairness heuristic theory suggests that justicerelevant information that is frequently encountered and unambiguous is more impactful (Lind, 2001; Van den Bos, 2001; Van den Bos et al., 2001). It may be that in the context of the smoking ban, information on interpersonal justice was more readily available than information on procedural justice. For example, judging politeness and respectfulness may have been less ambiguous than judging consistency, bias suppression, or truthfulness. These same arguments could explain why our interaction predictions were supported more for interpersonal and informational justice than for procedural justice. If data on the former two justice forms are generally more available and interpretable, then changes in cognitive focus and information processing should have a greater impact on their predictive power.

Limitations

This study has two primary limitations that should be noted. First, some of our measures were assessed by the same source at the same time, which could increase common method variance, potentially inflating our correlations (Podsakoff et al., 2003). Due to the fact that the justice concepts are internal perceptions, we felt that a self-report methodology was appropriate.

However, it is important to note that we took several efforts to reduce sources of common-method inflation when possible. In particular, we separated preban and postban measures of justice concepts by 4 months, controlled for neuroticism, and gathered data on ban support from significant others.

Second, our sample size was somewhat small given our use of structural equation modeling and our incorporation of interaction effects. In part, this is a common cost of longitudinal data collection and data collection that uses significant other sources, as there was attrition across time and across sources. Still, it is important to note that our study possessed enough statistical power to support many of our hypotheses. Moreover, we replicated the interaction results in our structural equation modeling using a simple slopes analysis with ordinary least squares regression, lending some support to the robustness of our results.

Suggestions for Future Research

Despite these limitations, our study offers a number of suggestions for future research. Given that anticipatory justice remains a new topic of inquiry, more research on its antecedents and consequences is warranted. Although we predicted and found support for a cognitive antecedent of anticipatory justice, we also know that individuals draw on affective cues to form justice perceptions in contexts in which clear justice information is lacking (Van den Bos, 2003). Perhaps anticipatory justice has both cognitive and affective underpinnings, much like the trust construct (e.g. McAllister, 1995). If so, then leadership constructs that have an affective component, such as leader-member exchange (Graen & Uhl-Bien, 1995) or transformational leadership (Bass & Riggio, 2006), could also be strong predictors of justice anticipations.

With respect to consequences, it would be interesting to explore the behavioral ramifications of anticipatory justice during the time period leading up to the event in question. Scholars in the trust literature have shown that negative expectations about an authority's behavior can cause employees to lose focus on their jobs, with their efforts instead allocated to monitoring and contingency planning sorts of efforts (Mayer & Gavin, 2005). It may be that anticipations of injustice will prompt the same sorts of off-task efforts. More broadly, it may also be that some of the behaviors associated with experienced justice, such as citizenship behavior and counterproductive behavior, could be triggered solely by anticipations.

References

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 2, pp. 267–299). New York: Academic Press.
- Bass, B. M., & Riggio, R. E. (2006). Transformational leadership (2nd ed.). Mahwah, NJ: Erlbaum.
- Beer, M., Eisenstat, R. A., & Spector, B. (1990). Why change programs don't produce change. *Harvard Business Review*, 68, 158–166.
- Bell, B. S., Ryan, A. M., & Wiechmann, D. (2004). Justice expectations and applicant perceptions. *International Journal of Selection and As*sessment, 12, 24–38.
- Bell, B. S., Wiechmann, D., & Ryan, A. M. (2006). Consequences of organizational justice expectations in a selection system. *Journal of Applied Psychology*, 91, 455–466.
- Bies, R. J., & Moag, J. F. (1986). Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), Research on negotiations in organizations (Vol. 1, pp. 43–55). Greenwich, CT: JAI Press.
- Blader, S. L., & Tyler, T. R. (2003). What constitutes fairness in work settings? A four-component model of procedural justice. *Human Re-source Management Review*, 13, 107–126.
- Boomsma, A. (1982). The robustness of LISREL against small sample sizes in factor analysis models. In K. G. Jöreskog & H. Wold (Eds.), Systems under indirect observation: Causality, structure, prediction (Pt. 1, pp. 149–173). Amsterdam: North–Holland.
- Boomsma, A. (1985). Nonconvergence, improper solutions, and starting values in LISREL maximum likelihood estimation. *Psychometrika*, 50, 229–242.
- Brockner, J., & Wiesenfeld, B. M. (1996). An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures. *Psychological Bulletin*, 120, 189–208.
- Brockner, J., Wiesenfeld, B. M., Reed, T., Grover, S., & Martin, C. (1993).
 Interactive effect of job content and context on the reactions of layoff survivors. *Journal of Personality and Social Psychology*, 64, 187–197.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). Applied multiple regression/correlation analysis for the behavioral sciences (pp. 255– 301). Mahwah, NJ: Erlbaum.
- Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. Organizational Behavior and Human Decision Processes, 86, 278–321.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86, 386–400.
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86, 425–445.
- Colquitt, J. A., Greenberg, J., & Zapata-Phelan, C. P. (2005). What is organizational justice? A historical overview. In J. A. Colquitt, & J. Greenberg (Eds.), *Handbook of organizational justice* (pp. 3–56). Mahwah, NJ: Erlbaum.

- Colquitt, J. A., & Shaw, J. (2005). How should organizational justice be measured? In J. A. Colquitt, & J. Greenberg (Eds.), *Handbook of organizational justice* (pp. 113–152). Mahwah, NJ: Erlbaum.
- Cortina, J. M., Chen, G., & Dunlap, W. P. (2001). Testing interaction effects in LISREL: Examination and illustration of available procedures. *Organizational Research Methods*, 4, 324–360.
- Cropanzano, R., Byrne, Z. S., Bobocel, D. R., & Rupp, D. E. (2001). Moral virtues, fairness heuristics, social entities, and other denizens of organizational justice. *Journal of Vocational Behavior*, 58, 164–209.
- Daly, J. P., & Geyer, P. D. (1994). The role of fairness in implementing large-scale change: Employee evaluations of process and outcome in seven facility relocations. *Journal of Organizational Behavior*, 15, 623– 638.
- Davidson, M., & Friedman, R. (1998). When excuses don't work: The persistent injustice effect among black managers. Administrative Science Quarterly, 43, 154–183.
- Fedor, D. B., Caldwell, S., & Herold, D. M. (2006). The effects of organizational changes on employee commitment: A multilevel investigation. *Personnel Psychology*, 59, 1–29.
- Fiske, S. T., & Taylor, S. E. (1991). Social cognition (2nd ed.). New York: McGraw–Hill.
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship based approach to leadership: Development of leader-member-exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, 6, 219–247.
- Greenberg, J. (1990). Looking fair vs. being fair: Managing impressions of organizational justice. In B. M. Staw & L. L. Cummings (Eds.), Research in organizational behavior (Vol. 12, pp. 111–157). Greenwich, CT: JAI Press.
- Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 79–103). Hillsdale, NJ: Erlbaum.
- Greenberg, J. (1994). Using socially fair treatment to promote acceptance of a work site smoking ban. *Journal of Applied Psychology*, 79, 288– 297.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five Inventory: Versions 4a and 54. Berkeley: University of California, Berkeley, Institute of Personality and Social Research.
- Judge, T. A., & Colquitt, J. A. (2004). Organizational justice and stress: The mediating role of work-family conflict. *Journal of Applied Psychology*, 89, 395–404.
- Kelloway, E. K. (1998). *Using LISREL for SEM: A researcher's guide*. Thousand Oaks, CA: Sage.
- Kickul, J., Lester, S. W., & Finkl, J. (2002). Promise breaking during radical organizational change: Do justice interventions make a difference? *Journal of Organizational Behavior*, 23, 469–488.
- Kirkman, B. L., Shapiro, D. L., Novelli, L., & Brett, J. M. (1996).Employee concerns regarding self-managing work teams: A multidimensional justice perspective. Social Justice Research, 9, 47–67.
- Kline, R. B. (2005). Principles and practice of structural equation modeling. New York: Guilford Press.
- Korsgaard, M. A., Sapienza, H. J., & Schweiger, D. M. (2002). Beaten before begun: The role of procedural justice in planning change. *Journal* of Management, 28, 497–516.
- Leana, C. R., & Barry, B. (2000). Stability and change as simultaneous experiences in organizational life. Academy of Management Review, 25, 753–759.
- Leventhal, G. S. (1976). The distribution of rewards and resources in groups and organizations. In L. Berkowitz & W. Walster (Eds.), Advances in experimental social psychology (Vol. 9, pp. 91–131). New York: Academic Press.
- Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen,

- M. Greenberg, & R. Willis (Eds.), Social exchange: Advances in theory and research (pp. 27–55). New York: Plenum.
- Lewin, K. (1951). Field theory in social science. New York: Harper & Row
- Lim, S., Cortina, L. M., & Magley, V. J. (2008). Personal and workgroup incivility: Impact on work and health outcomes. *Journal of Applied Psychology*, 93, 95–107.
- Lind, E. A. (2001). Fairness heuristic theory: Justice judgments as pivotal cognitions in organizational relations. In J. Greenberg & R. Cropanzano (Eds.), Advances in organizational justice (pp. 56–88). Stanford, CA: Stanford University Press.
- Lind, E. A., & Van den Bos, K. (2002). When fairness works: Toward a general theory of uncertainty management. In B. M. Staw & R. M. Kramer (Eds.), *Research in organizational behavior* (Vol. 24, pp. 181– 223). Boston: Elsevier.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7, 83–104.
- Mansour-Cole, D. M., & Scott, S. G. (1998). Hearing it through the grapevine: The influence of source, leader-relations, and legitimacy on survivors' fairness perceptions. *Personnel Psychology*, 51, 25–54.
- Mathieu, J. E., Tannenbaum, S. I., & Salas, E. (1992). Influences of individual and situational characteristics on measures of training effectiveness. Academy of Management Journal, 35, 828–847.
- Mayer, R. C., & Gavin, M. B. (2005). Trust in management and performance: Who minds the shop while the employees watch the boss? Academy of Management Journal, 48, 874–888.
- McAllister, D. J. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. Academy of Management Journal, 38, 24–59.
- McCrae, R. R., & Costa, P. T. Jr. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Per*sonality and Social Psychology, 52, 81–90.
- Mount, M. K., Barrick, M. R., & Strauss, J. P. (1994). Validity of observer ratings of the Big Five personality factors. *Journal of Applied Psychol*ogy, 79, 272–280.
- Novelli, L., Kirkman, B. L., & Shapiro, D. L. (1995). Effective implementation of organizational change: An organizational justice perspective. In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behavior* (Vol. 2, pp. 15–36). New York: Wiley.
- Piderit, S. K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. Academy of Management Review, 25, 783–794.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method bias in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903.
- Ritter, B. A., Fischbein, R. L., & Lord, R. G. (2005). Implicit and explicit expectations of justice as a function of manager and subordinate race. *Human Relations*, 58, 1501–1521.
- Rupp, D. E., & Cropanzano, R. (2002). The mediating effects of social

- exchange relationships in predicting workplace outcomes from multifoci organizational justice. *Organizational Behavior and Human Decision Processes*, 89, 925–946.
- Schaubroeck, J., May, D. R., & Brown, F. W. (1994). Procedural justice explanations and employee reactions to economic hardship: A field experiment. *Journal of Applied Psychology*, 79, 455–460.
- Schweiger, D. M., & Denisi, A. S. (1991). Communication with employees following a merger: A longitudinal field experiment. Academy of Management Journal, 34, 110–135.
- Schweiger, D. M., Ivancevich, J. M., & Power, F. R. (1987). Executive actions for managing human resources before and after acquisition. *Academy of Management Executive*, 1, 127–138.
- Shapiro, D. L., & Kirkman, B. L. (1999). Employees' reaction to the change to work teams: The influence of "anticipatory" injustice. *Journal* of Organizational Change Management, 12, 51–66.
- Shapiro, D. L., & Kirkman, B. L. (2001). Anticipatory injustice: The consequences of expecting injustice in the workplace. In J. Greenberg & R. Cropanzano (Eds.), *Advances in organizational justice* (pp. 152–178). Lexington, MA: New Lexington.
- Skarlicki, D. P., & Latham, G. P. (2005). How can training be used to foster organizational justice? In J. Greenberg & J. A. Colquitt (Eds.), *The handbook of organizational justice* (pp. 499–522). Mahwah, NJ: Erlbaum.
- Snyder, M., & Swann, W. B. Jr. (1978). Behavioral confirmation in social interaction: From social perception to social reality. *Journal of Experimental Social Psychology*, 14, 148–162.
- Thibaut, J., & Walker, L. (1975). Procedural justice: A psychological analysis. Hillsdale. NJ: Erlbaum.
- Van den Bos, K. (2001). Fairness heuristic theory: Assessing the information to which people are reacting has a pivotal role in understanding organizational justice. In S. Gilliland, D. Steiner, & D. Skarlicki (Eds.), *Theoretical and cultural perspectives on organizational justice* (pp. 63–84). Greenwich, CT: Information Age.
- Van den Bos, K. (2003). On the subjective quality of social justice: The role of affect as information in psychology of justice judgments. *Journal* of Personality and Social Psychology, 85, 482–498.
- Van den Bos, K., & Lind, E. A. (2002). Uncertainty management by means of fairness judgments. In M. P. Zanna (Ed.), Advances in experimental social psychology (Vol. 34, pp. 1–60). Boston: Elsevier.
- Van den Bos, K., Lind, E. A., & Wilke., H. A. M. (2001). The psychology of procedural justice and distributive justice viewed from the perspective of fairness heuristic theory. In R. Cropanzano (Ed.), *Justice in the* workplace: Vol. 2. From theory to practice (pp. 49–66). Mahwah, NJ: Erlbaum.
- Wong, R., & Weiner, B. (1981). When people ask "why" questions, and the heuristics of attributional search. *Journal of Personality and Social Psychology*, 40, 650–663.

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