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Observers' fairness perceptions change with contrasting information for employee reprimands

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Abstract

In the current experiment, participants portrayed the role of third-party employees who witnessed a supervisor reprimanding a subordinate for ordering a part from the wrong company. Information was provided to participants conveying whether or not the reprimanded employee was responsible for the ordering error and then participants made ratings related to fairness. Subsequently, employee responsibility either changed or did not change (Time 2) and participants again provided the same ratings. Compared to the no-change condition, observers' final (Time 2) perceptions of fairness were very extreme for the responsible and the not responsible conditions when participants received contrasting information about employee responsibility. These data suggest that employee reprimands affect the perceptions of their co-workers, such that contrasting information generates dissonance arousal in observers, which can be damaging to work environments. Therefore, supervisors need to establish the facts before they openly reprimand employees or they should take strong steps to avoid such displays.

Keywords: Procedural fairness; Supervisor reprimand; Contrasting information; Cognitive dissonance

1. Introduction

Employees' perceptions of fairness determine how they feel, work, and interact, which means that employees' perceptions control the way that organizations function. Perceptions of fairness are related to self-esteem judgments (Koper et al., 1993), levels of job satisfaction (Forrest, 2002; Moorman et al., 1993; Xie et al., 2007), employees' evaluations of their supervisors (Greenberg, 1986; McFarlin & Sweeney, 1992), ratings of trust in supervisors (Barling & Phillips, 1993; McFarlin & Sweeney, 1992), organizational citizenship behaviors (Messer & White, 2006; Greenberg, 1993; Moorman et al., 1993; Tansky, 1993), person-organization fit (Roczniewska et al., 2018), and perceptions of organizational commitment (Barling & Phillips, 1993; McFarlin & Sweeney, 1992; Tansky, 1993). Although the research on perceived fairness has covered a vast array of social interactions that occur in the workplace, the majority of this research has primarily examined employees' reactions to their own personal interactions (e.g., Cobb & Frey, 1996; Krehibel & Cropanzano, 2000; Randall & Mueller, 1995). However, some procedural justice research has evaluated third-party perceptions of work-related, social interactions (e.g., Cuguero-Escofet et al., 2013; Umphress et al., 2013).

A supervisor publicly chastising an employee is an important type of social interaction that is likely to occur at varying levels of visibility and it can affect third-party employees' perceptions of fairness in the workplace. As the procedural justice literature suggests that employee responsibility influences third-party perceptions (e.g., Greer & Labig, 1987; Trevino, 1992), fairness perceptions should depend on information about the employee's responsibility. Additionally, a change in the information about the employee's responsibility for the incident should result in three possible

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reactions: an assimilation effect (Sumer & Knight, 1996), a contrast effect (Cooper & Fazio, 1984), or an extreme contrast effect based on cognitive dissonance (e.g., Cooper & Fazio, 1984; Stone & Cooper, 2001). The current study examined the degree that a supervisor's public reprimand of a subordinate affects observers' perceptions of fairness when information regarding employee responsibility for the act preceding the reprimand changes or remains constant.

1.1. Research on Layoff Survivors

Unfortunately, little of the initial empirical work on fairness examined the negative effects of punishments on third-party employees, but some of this research examined the perceptions of layoff survivors. The research on layoff survivors is relevant to third-party perceptions of punishment because a co-worker's layoff is a negative consequence that is imposed by management and observed by other employees. Brockner and Greenberg (1990) claimed that layoff survivors frequently evaluated the extent to which downsizing affected them throughout the layoff process. In addition, layoffs can affect a wide range of survivor attitudes and behavior, such as organizational commitment and work performance. For instance, if employees perceived that the layoff process was unfair, they felt negatively about the organization and they decreased their work output (i.e., Brockner, 1990). Similarly, Brockner et al. (1994) showed that employees reduced their commitment to the organization and they desired layoff regulation procedures when they perceived that the layoff was handled unfairly. Brockner and his colleagues' research makes the point that employees do not like to see their co-workers treated unfairly because they realize that they may be the next one to receive unjust treatment, which supports Lind and Tyler's (1988) group-value model and Trevino's (1992) conceptual framework.

1.2. Procedural Fairness, Organizational Punishment, and Third-Party Perceptions

Hard-working employees are satisfied with their jobs, and they are committed to their organizations (Locke & Lotham, 1990), and both important workplace outcome variables depend on procedural justice (Cobb & Frey, 1996; Forrest, 2002; Xie et al., 2007), or the fairness of the allocation decision process (e.g., Konovsky, 2000; Randall & Mueller, 1995). In business organizations, fairness appeals to both supervisors and employees, who perceive it as a unifying value that provides fundamental principles, binds conflicting parties together, and creates stable social structures (Konovsky, 2000). Conversely, procedural injustice lowers employees' commitment and performance, and it increases noncompliance with rules and regulations (Lind & Tyler, 1988). Procedural injustice also produces negative emotions in employees (Krehibel & Cropanzano, 2000; Mikula et al., 1998; Williams, 1999), which last longer and are more intense than the positive emotions evoked by procedural fairness (Mikula et al., 1998). These negative emotions provoked by perceptions of injustice and unfairness can lead to potential health implications and a proneness to take sick leave (Reknes et al., 2021).

Furthermore, Reknes et al. (2021) examined the relation between perceived injustices in the workplace and employees' intention to leave. The results of the study showed that employees' desire to leave the workplace was present when workplace leaders were perceived as unjust, facilitating an unhealthy work environment and distrust in coworkers. Procedural unfairness may result in a perceived loss of social support, stripping organizational members of potential coping resources, which may negatively impact employees' when they perceive coworkers being unjustly reprimanded. Contrarily, procedural justice may be a protective factor that reduces employee desire to leave the workplace and improves workplace bullying, creating a workplace environment of mutual respect (Reknes et al., 2021).

Punishment is an important supervisor-employee interaction that can influence perceptions of fairness in the workplace. Punishment commonly occurs in organizations where supervisors apply negative consequences or they remove positive consequences following an employee's undesirable behavior. Supervisors punish their employees to modify their undesirable behaviors, and punishment is accepted by employees, who perceive the action as fair in some cases. For example, Greer and Labig (1987) found that employees' reactions to deserved punishments were not as severe as undeserved punishments, and punishment was even viewed as fair if several conditions were met. In particular, the delivery had to be pleasant, the supervisor had to be accurate in their description of the employee's act, the supervisor/subordinate relationship had to be positive prior to the discipline, and the supervisor had to present a reason for the discipline. Employees were also more likely to stop doing the undesirable act when the discipline was intense. However, for third-parties who perceive the punishment as unfair, they are motivated to act against the perceived injustice (Urbanska et al., 2019).

Some research has gone beyond this dyadic view and explored the effect of punishment on third-party observers. This research is important because observers' reactions to punishment are more important for management than the lone disciplined employee's reaction (Trevino, 1992). Schanke (1986) studied whether punishment could be used effectively in work settings. In a simulated work setting, groups increased their own work output when they observed a co-worker's pay being reduced for low work output. Therefore, punishment informed observers about inappropriate behavior, which allowed them to adjust their own behavior. O'Reilly and Puffer (1989) found that punishment produced

other positive effects on third-party observers. That is, when applied to a group member, deserved punishment increased observers' motivation, satisfaction, and productivity. The studies by Schanke and O'Reilly and Puffer showed that punishing a deserving employee in public can motivate third-party observers to work harder than they did previously. However, these researchers did not measure the negative consequences of punishment, which exist as well.

Additionally, perceived power impacts employers and employees view of punishment (Wiltermuth et al., 2013; Mooijman & Graham., 2018). Wiltermuth et al. (2013) examined power dynamics in the workplace by manipulating perceived power and analyzing leaders' moral clarity. Participants were randomly assigned to either a management role (high-power) or a builder role (low power). The participants assigned to the management role were asked to recall a time they felt powerful, whereas the participants in the builder role group were asked to recall their day. Both groups were then asked to judge the ethics of six moral dilemmas. The results showed that individuals with an increased sense of power advocated for harsher punishments compared to those individuals with a reduced sense of power, impacting the perceived fairness of punishments in the workplace. Perceived power of authority figures improves employee perception of punishment, allowing them to justify their punishments even if the punishment is unfair. Employers unjustly reprimanding employees for perceived bad behavior can lead to employees increasing their misconduct in response to the unfair punishment, creating a never-ending cycle of distrust within the workplace (Mooijman & Graham., 2018).

Public reprimands of employees can potentially damage the relationships between supervisors and their employees and third-party observers may develop some of the same negative attitudes as the disciplined employee. According to the group-value model proposed by Lind and Tyler (1988), all group members should be interested in the way their supervisor treats any single group member because each member may receive similar treatment in the future. Fair treatment benefits both third-party observers and their group because it causes employees to perceive that they can trust their supervisor. Therefore, employees prefer that their fellow employees are treated fairly. According to Trevino's (1992) conceptual framework, observers' emotions, attitudes, productivity, commitment, loyalty, and job satisfaction improve when they believe that an employee was disciplined fairly.

Whereas most of the initial research on procedural justice has examined employees' reactions to their own workplace interactions, the interest in third-party perceptions of social interactions in the workplace has grown, possibly because, in 2003, Hegtvedt and Johnson argued that the implications of procedural justice for the collective had generally been ignored. Moreover, this work is important because employees will observe more workplace injustice during their careers than they will personally experience (Cuguero-Escofit et al., 2013). This growing body of research has examined the relation of various factors to fairness perceptions. For example, Goldberg et al. (2011) suggested that group identification with the targets of injustice should lead to low ratings of perceived fairness in third-party observers. Hegtvedt and colleagues agreed with Goldberg et al. about the importance of group identification and they showed that the strength of observers' group identification does, indeed, affect the fairness perceptions of third-party observers (Hegtvedt et al., 2003; Hegtvedt et al., 2009).

Third-party observers may have a strong emotional bond to their co-workers making them susceptible to feelings of discomfort in witnessing discipline and adopting adverse feelings towards their employer (Atwater et al., 2001), contributing to third-party observers' perception of fairness. Atwater et al. (2001) interviewed participants who were recipients of workplace discipline and observers of workplace discipline to compare the experiences of the recipient and the observer. The results showed that observers reported to learn from their coworkers' discipline, even if they perceived the discipline as unfair. For instance, the servers learned the behaviors that they should not emit to avoid punishment, but observers also learned the behaviors they would refrain from doing if they were in a management position. The recipients of discipline were unaware of the impacts of their discipline on their co-workers, displaying the need for research to examine procedural justice in the workplace. The implications of these findings highlight the necessity of employer accountability and perceived fairness.

Other empirical work on third-party perceptions of fairness has shown that type of response (formal vs. informal) and the emotional effect of the outcome (negative vs. positive) influenced fairness perceptions in observers (Gilson et al., 2005). In addition, the recent literature on third-party perceptions of fairness demonstrated that monetary compensation, apologies, and procedural changes enhance justice perceptions in third-party observers after an injustice had been viewed (Cuguero-Escofit et al., 2013). Umphress et al. (2013) noted the growing literature on fairness perceptions in observers and they found that supervisor intent to harm reduced fairness perceptions and it did so to a greater extent than expressed victim perceptions of low injustice. Even though the recent literature on fairness has focused on third-party perceptions of social interactions in the workplace, including employee-supervisor interactions, it has not examined the effect of changing information about employee responsibility on these perceptions.

1.3. Responsibility Attributions and Performance Evaluations

For an observed supervisor reprimand of an employee, both the disciplined employee and third-party observers should base their fairness perceptions on employee responsibility. That is, observers should view punishment as fair if the reprimanded employee was responsible for an unacceptable work-related mistake and they should view punishment as unfair if the employee was not responsible for the mistake. Cullen et al. (1985) supported this notion; they showed that the disciplined employee and third-party observers perceived social interactions as fair when employees were responsible for a mistake that resulted in a reprimand. In fact, observers' punitive evaluations are stronger for employees who are responsible for unacceptable work-related behaviors (e.g., Greer & Labig, 1987; Trevino, 1992).

Because perceptions of fairness should be based on an employee's responsibility for some unacceptable act, perceptions of fairness should change over time when the initial information about employee responsibility is wrong. Although the fairness literature has not examined this issue, the literature on performance evaluations has assessed the effect of previous knowledge on subsequent evaluations of performance. This body of literature provides evidence for both assimilation and contrast effects (Murphy et al., 1985; Smither et al., 1988; Sumer & Knight, 1996). An assimilation effect refers to a bias in the direction of previous performance, whereas a contrast effect refers to a bias away from the direction of the previous performance.

Sumer and Knight (1996) found evidence for both assimilation and contrast effects in performance ratings. Participants reviewed a script of either good or poor performance and half of the participants rated the performance. Then, participants read and rated another script of average performance. When participants did not rate the initial performance, an assimilation effect occurred where participants rated average performances as consistent with prior performance. However, when participants did rate the previous performance, a contrast effect occurred where participants rated the average performance as different from the initial performance. Apparently, participants rated each performance independently when they were given the chance, but they made ratings for the average of the two performances when they did not rate the initial, previous performance. Therefore, initial ratings seem to be important in establishing a baseline record for observed performance.

1.4. The Current Study

Although research has examined the effect of employee responsibility on third-party perceptions and it has evaluated third-party perceptions of supervisor-employee interactions, it has not examined the effect of changing information about employee responsibility on fairness perceptions for a supervisor reprimand of an employee for a work failure. The current study examined these factors because employees are likely to observe a supervisor reprimand of an employee in the workplace and changing information about employee culpability should affect their perceptions, but our interest is the extent of this effect. We measured perceived fairness, and we asked participants to portray an employee who observed a fellow employee being reprimanded. The reprimanded employee was either responsible or not responsible for ordering a mechanical part from the wrong company. Participants then made several ratings (e.g., perceived fairness, employee responsibility, and supervisor responsibility) and then they were given information about employee responsibility that either confirmed or contradicted the original information.

Three outcomes are possible from this research and each outcome supports a different explanation: contrast effect, assimilation effect, or cognitive dissonance. If the outcome is the result of a contrast effect, ratings of perceived fairness should change with employee responsibility in the contrasting information condition, producing a crossover interaction with similar differences[1] between the two responsibility conditions before and after the contrasting information. If assimilation effects are apparent, the final ratings should become significantly more extreme than the initial ratings in the no change condition, and the effect of responsibility for the final ratings should be similar[1] across the contrasting information and no change conditions. Finally, dissonance arousal is the explanatory mechanism for the outcome if contrasting information causes participants to make ratings, in such a way as to reduce dissonance and reverse the effects of aversive events (e.g., Cooper & Fazio, 1984; Stone & Cooper, 2001) or avoid perceiving themselves negatively (e.g., Aronson, 1969). That is, participants in the contrasting information condition should attempt to make extreme ratings at Time 2 (greater than the control group that does not receive contrasting information) [2] to make amends for their previous, ill-informed judgments.

2. Methods

2.1. Participants

A total of 385 undergraduate students from a large midwestern university participated in the current study. To assess scenario comprehension, participants were asked to match the four employees in the scenario with a description of their role. Participants had to match the roles perfectly to ensure that participants understood the story, which further ensured that participants' perceptions were guided by factors manipulated in the study. The data for participants who did not understand the roles in the scenarios (N = 65; 17%) were dropped from the analyses. Therefore, the data for 320 participants (193 female; 127 male) were analyzed in the current study. The resulting sample was 91% Caucasian with a mean age of 19 years. The current study received the approval of the University Institutional Review Board and it adhered to the guidelines of the American Psychological Association (APA, 2020) in treating participants ethically, which included briefing, consent, and debriefing.

2.2. Procedure

Participants were assigned to either an experimental (contrasting information) or baseline (same information) condition. All participants were given a general description of the experiment and instructions. Participants also completed a questionnaire containing demographic questions, which asked for participants' past experience as an employee or a supervisor and they completed a questionnaire that asked for their attitudes towards management. Following these questionnaires, the participants were given one of two sets of information about an employee; the employee was portrayed as either responsible or not responsible for ordering an automotive part from the wrong company. Participants then read a scenario describing a supervisor reprimanding the employee for the ordering error.

Participants then filled out a questionnaire with items related to perceived fairness and management style, as well as employee and supervisor responsibility and consequences. Following completion of the first questionnaire, participants performed a 10-min. filler task not related to the study. Participants in the contrasting information condition then received new information about the employee's accountability that contradicted the original information. For example, if participants were originally led to believe that the employee was responsible for the ordering error, they were given new information, which led them to believe that the employee was, in fact, not responsible. Conversely, participants in the baseline condition received new information about the employee's accountability that confirmed the original information after completing the 10-min. filler task. After the participants completed the 10-min. filler task and received the "new" (consistent or contrasting) information, they completed a second questionnaire identical to the first one, except for the order of the items.

The four cell sizes did not contain equal numbers of participants. Specifically, 80 participants took part in the initially not responsible, no-change condition, and 77 participants experienced the initially responsible, no-change condition. In addition, 78 participants took part in the initially not responsible, contrasting-information condition, and 85 participants experienced the initially responsible, contrasting-information condition. A chi square analysis found that the distribution of participants was not statistically significant, $\chi^2(1, N = 320) = 0.31$, $p < .05$. Therefore, the data were analyzed via ANOVA (analysis of variance).

2.3. Measures

The measures utilized in this study included attitudes towards management, perceived fairness, management style, employee responsibility, supervisor responsibility, employee consequences, and supervisor consequences. All measures were rated on Likert-type scales. Except for employee and supervisor consequences, which were ordinal measures, all measures were interval measures.

Attitudes towards management. Participants' attitudes towards management were assessed via a 9-item scale (e.g., In disputes, I tend to side with the employee rather than the supervisor.). The attitudes towards management questions were answered on a 5-point Likert-type scale, which ranged from 1 = "strongly disagree" to 5 = "strongly agree."

Perceived fairness. Perceived fairness was assessed via an 8-item scale (e.g., Overall, do you believe the employee was treated as fairly as he could have been?). Perceived fairness was assessed using a 5-point Likert-type scale, ranging from 1 = "not at all" to 5 = "very much so."

Management style. Management style was assessed via a 4-item scale (e.g., The purchasing supervisor handled the situation in an effective and appropriate manner.). Management style was assessed using a 5-point Likert-type scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree."

Employee responsibility. Employee responsibility was assessed via a 1-item measure (e.g., Bob Smith, the temporary fill-in from the marketing department, is at fault for the problem). The item was answered using a 5-point Likert-type scale, which ranged from 1 = "strongly disagree" to 5 = "strongly agree."

Supervisor responsibility. Supervisor responsibility was assessed via a 1-item measure (e.g., Jim Brown, the purchasing supervisor, is at fault for the problem). The item was answered using a 5-point Likert-type scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree."

Employee consequences. Employee consequences were assessed via a 1-item measure (e.g., what should happen to Bob Smith, the temporary fill-in from the marketing department?). The 6-point Likert-type scale ranged from 1 = "nothing should happen" to 6 = "should be put on probation."

Supervisor consequences. Supervisor consequences were assessed via a 1-item measure (e.g., what should happen to Jim Brown, the purchasing department supervisor?). The 6-point Likert-type scale ranged from 1 = "nothing should happen" to 6 = should be dismissed."

2.4. Design

Both employee and supervisor consequences were excluded from all analyses because they were ordinal variables. Ratings of fairness (perceived fairness combined with management style), employee responsibility, and supervisor responsibility were placed in a 2 (Information Change) x 2 (Responsibility) x 2 (Time) mixed-factorial design, and they were analyzed using a multivariate analysis of variance (MANOVA), followed by univariate analyses of variance (ANOVAs). Information change was a between-subjects factor where participants either received the same or contrasting information at Time 1 and Time 2. Responsibility was a between-subjects factor because half of the participants rated scenarios in which the reprimanded employee was initially accountable for an ordering error and the other half of the participants rated scenarios where the reprimanded employee was not accountable for an ordering error. Time was a repeated-measures factor because all participants made ratings at Time 1 and Time 2.

3. Results

3.1. Correlations

Tables 1 and 2 display the intercorrelations between dependent variables in the no-change and contrasting information conditions, respectively. Both tables show the correlations, the means, and the standard deviations for perceived fairness, employee responsibility, and supervisor responsibility at both Time 1 and Time 2.

Table 1 Correlations, Means, & Standard Deviations for Dependent Variables in the No Change Condition at Time 1 and Time 2

Dependent Variables	Time 1			Time 2			Mean	Std. Dev.
	Fairness	Emp. Resp.[1]	Sup. Resp.[2]	Fairness	Emp.Resp.	Sup. Resp.		
Time 1								
Fairness	1.00						2.28	0.81
Emp. Resp.	0.30**	1.00					3.04	1.14
Sup. Resp.	-0.20*	-0.26**	1.00				2.97	1.23
Time 2[3]								
Fairness	0.74**	0.16*	-0.18*	1.00			2.32	0.86
Emp. Resp.	0.14	0.43**	-0.02	0.31**	1.00		2.99	1.23
Sup. Resp.	-0.19*	-0.12	0.59**	-0.31**	-0.14	1.00	2.96	1.27

Note. N=163. * $p < 0.05$. ** $p < 0.01$; 1 Employee Responsibility; 2 Supervisor Responsibility; 3 The correlation of a dependent variable at Time 1 and Time 2 (e.g., stability) is bolded

Table 2 Correlations, Means, & Standard Deviations for Dependent Variables in the Contrasting- Information Condition at Time 1 and Time 2

Dependent Variables	Time 1			Time 2			Mean	Std. Dev.
	Fairness	Emp. Resp.[1]	Sup. Resp.[2]	Fairness	Emp. Resp.	Sup. Resp.		
Time 1								
Fairness	1.00							2.38
Emp. Resp.	0.26**	1.00						3.31
Sup. Resp.	-0.22**	0.33**	1.00					2.99
Time 2[3]								
Fairness	0.50**	0.02	0.07		1.00			2.44
Emp. Resp.	0.05	0.02	0.09		0.46**	1.00		3.42
Sup. Resp.	-0.01	0.03	0.19*		-0.46**	-0.38**	1.00	2.99

Note. N=157. * p < 0.05. ** p < 0.01. ** p < 0.01; 1 Employee Responsibility; 2 Supervisor Responsibility; 3 The correlation of a dependent variable at Time 1 and Time 2 (e.g., stability) is bolded

3.2. Factor Analyses

Principal components factor analyses were conducted for 1) attitudes towards management and 2) perceived fairness. A single factor was not found for attitudes towards management. Therefore, attitudes towards management could not be used as a blocking variable. The initial factor analysis for perceived fairness in the present study included 14 items: 8 items about procedural fairness, 4 items about management style, and 2 items about employee and supervisor responsibility. The 14 items were obtained following the public reprimand (Time 1) and after new information was provided (Time 2) yielding 28 items. All 28 items (14 items from Time 1 and 14 items from Time 2) were then analyzed using an exploratory principle-components factor analysis with varimax rotation. Factors with eigen values of greater than 1.00 were extracted from the solution. The initial solution yielded several factors. When a single factor was forced, however, the 24 items related to procedural fairness and management style loaded on the single factor (using a criterion of 0.4 for including items in a factor). This factor was identified as perceived fairness. The perceived fairness scale accounted for 49% of the variance with a coefficient alpha of 0.95. Items related to employee and supervisor responsibility at Times 1 and 2 did not load onto this factor.

3.3. Multivariate Analyses of Variance (MANOVA)

The combined measures of perceived fairness, employee responsibility, and supervisor responsibility yielded significant main effects for information change ($F(3, 313) = 4.36$, $p < 0.05$, $\eta^2 = .04$, $\phi = .87$) and responsibility ($F(3, 313) = 2.96$, $p < 0.05$, $\eta^2 = .03$, $\phi = .70$). However, we did not find a main effect for time. The significant main effects were qualified by significant two-way interactions, including the Information Change x Responsibility interaction ($F(3, 313) = 13.55$, $p < 0.05$, $\eta^2 = .11$, $\phi = 1.00$) and the Responsibility x Time interaction ($F(3, 313) = 14.89$, $p < 0.05$, $\eta^2 = .12$, $\phi = 1.00$), but not the Information Change x Time interaction. The main effects and the two-way interactions were qualified by a significant Information Change x Responsibility x Time interaction, $F(3, 313) = 41.42$, $p < 0.05$ ($\eta^2 = .28$, $\phi = 1.00$). As we predicted, this three-way interaction suggested that participants' perceptions changed from Time 1 to Time 2 with a larger change occurring in the presence of contrasting information.

3.4. Univariate Analyses of Variance (ANOVA)

As indicated by the MANOVA, the three-way interaction was significant for perceived fairness, employee responsibility, and supervisor responsibility. Given the significant three-way interactions, all lower-order interactions and main effects were not discussed. The results for the ANOVAs are found in Table 3. The means and standard deviations for all measures in all four conditions are shown in Table 4.

For perceived fairness, a statistically significant Information Change x Responsibility x Time interaction was found, $F(1, 316) = 87.70$, $p < 0.05$ ($\eta^2 = .22$, $\phi = 1.00$). Similarly, a statistically significant Information Change x Responsibility x Time interaction was found for employee responsibility, $F(1, 316) = 49.12$, $p < 0.05$ ($\eta^2 = .13$, $\phi = 1.00$). In addition, the Information Change x Responsibility x Time interaction was statistically significant for supervisor responsibility, $F(1,$

316) = 57.59, $p < 0.05$ ($\eta^2 = .15$, $\phi = 1.00$). As in the MANOVA, these three-way interactions suggested that participants' perceptions changed from Time 1 to Time 2 with a larger change occurring in the presence of contrasting information.

Table 3 Main and Interaction Effects for all Dependent Variables

Dependent Variables	Type of Effect for Univariate ANOVAs						
	Info. Change	Responsibility	Time	Info. Change x Resp.	Info. Change x Time	Resp. x Time	Info. Change x Resp. x Time
Perceived Fairness	1.86	1.95	3.20	7.82**	0.37	28.42**	87.70**
Employee Responsibility	12.20**	0.07	0.47	17.94**	1.33	17.44**	49.12**
Supervisor Responsibility	0.06	4.91*	0.11	28.64**	0.09	25.15**	57.59**

Note. Degrees of freedom is 316 for all dependent variables.* p < 0 .05. ** p < 0.01

Table 4 T-Test Results of Mean Comparisons[a]

Dependent Variables	No-Change Condition						Contrasting-Information Condition					
	Initially Not Responsible 1			Initially Responsible 2			Initially Not Responsible 3			Initially Responsible 4		
	Time 1	Time 2	t-test	Time 1	Time 2	t-test	Time 1	Time 2	t-test	Time 1	Time 2	t-test
Perceived Fairness	2.30 (0.80)	2.19 (0.78)	1.58	2.27 (0.83)	2.46 (0.92)	-2.76	2.29 (0.85)	2.91 (0.86)	-6.92*	2.47 (0.82)	2.02 (.71)	6.90*
Employee Responsibility	2.91 (1.19)	2.66 (1.27)	1.76	3.16 (1.09)	3.34 (1.10)	-1.29	3.08 (1.18)	4.08 (0.83)	-6.29*	3.53 (1.14)	2.81 (1.27)	4.32*
Supervisor Responsibility	3.29 (1.23)	3.47 (1.22)	-1.25	2.62 (1.14)	2.44 (1.11)	1.67	3.27 (1.17)	2.35 (1.23)	6.19*	2.74 (1.22)	3.58 (1.11)	-5.55*

[a] Standard deviations are in parentheses; [1] Sample size is 80.; [2] Sample size is 77.; [3] Sample size is 78.; [4] Sample size is 85.; * $p < 0.00125$.

3.5. Post-hoc Analyses

Post-hoc *t*-tests were conducted to support the predictions in the current study. Ratings at Time 1 and Time 2 were compared across responsible and not responsible conditions for the no-change and contrasting-information conditions (see Table 4). In addition, ratings for responsible and not responsible conditions were compared across both no-change and contrasting-information conditions for Time 1 (see Table 5) and Time 2 (see Table 6), respectively. Bonferroni *t*-tests determined the alpha level to be 0.00125 for all post-hoc *t*-tests. The post-hoc analyses comparing Time 1 to Time 2 (Table 4) revealed that ratings generally did not change in the no-change condition, which did not support the assimilation explanation for the results. However, the ratings did change in the contrasting-information condition, which showed that contrast effects or cognitive dissonance accounted for the results in the current study.

Table 6 shows that the mean ratings for the responsible and not responsible conditions at Time 2 were always significantly different for the contrasting-information condition. However, mean ratings for the responsible and not responsible conditions at Time 2 were not always significantly different in the no-change condition (Table 5). In addition, the magnitudes of the *t*-test values were always larger in the contrasting-information condition than in the no-change condition. Based on a criterion of at least 2 standard deviations[4], the effects of responsibility on the final ratings of perceived fairness and employee responsibility were clearly larger in the contrasting information condition than in the no-change condition. Therefore, the results for perceived fairness and employee responsibility supported the cognitive dissonance explanation for the results, where participants made extreme final ratings in the contrasting information condition to reduce their dissonance arousal created by making initial ratings based on erroneous information. The results for supervisor responsibility, however, showed a contrast effect.

Table 5 Mean Comparisons of Guilt Conditions Across Information Conditions at Time 1

Dependent Variables	No-Change Condition			Contrasting-Information Condition		
	Initially Not Responsible 1	Initially Responsible 2	t-test	Initially Not Responsible 3	Initially Responsible 4	t-test
Perceived Fairness	2.30	2.27	-0.21	2.29	2.47	1.35
Employee Responsibility	2.91	3.16	1.27	3.08	3.53	2.49
Supervisor Responsibility	3.29	2.62	-3.58*	3.27	2.74	-2.82

1 Sample size is 80; 2 Sample size is 77; 3 Sample size is 78; 4 Sample size is 85; * $p < 0.00125$

Table 6 Mean Comparisons of Guilt Conditions across Information Conditions at Time 2

Dependent Variables	No-Change Condition			Contrasting-Information Condition		
	Initially Not Responsible [1]	Initially Responsible [2]	t-test	Initially Not Responsible [3]	Initially Responsible [4]	t-test
Perceived Fairness	2.19	2.46	1.95	2.91	2.02	-7.16*
Employee Responsibility	2.66	3.34	3.57*	4.08	2.81	-7.46*
Supervisor Responsibility	3.47	2.44	-5.51*	2.35	3.58	6.74*

1 Sample size is 80; 2 Sample size is 77; 3 Sample size is 78; 4 Sample size is 85; * $p < 0.00125$.

4. Discussion

Managers are often faced with situations in which they must reprimand or punish an employee who has acted inappropriately. Therefore, employee reprimands have been heavily researched in the organizational justice literature. However, most of this research has focused on the disciplined employee rather than on uninvolved observers. Although recent research has examined the fairness perceptions of third-party observers and it has examined them for interactions of supervisors and employees (e.g., Hegtvedt et al., 2009; Umphress et al., 2013), past research has not examined the effect of changing employee responsibility on third-party employee perceptions of a supervisor reprimand of an employee. The current study examined these effects because employees are likely to observe these types of interactions and their perceptions may be based on partial or incorrect information that changes across time and we wanted to understand the degree of these effects. Specifically, participants' ratings of a reprimand changed and followed a predictable pattern when they were presented with contrasting information. Generally, the supervisor was viewed more positively, and the employee was viewed more negatively when the employee was ultimately responsible for an ordering error and observers were previously informed to the contrary. The converse was also true.

The findings in the current study are consistent with previous research, which has shown that evaluations of punishment depend on attributions of responsibility (Cullen et al., 1985). Although the effects for supervisor responsibility showed a contrast effect consistent with the one demonstrated by Sumer and Knights (1996), the results for employee responsibility and perceived fairness are *not* best explained as contrast effects or assimilation effects. Although participants' final ratings of employee responsibility were significantly different in the two responsibility conditions, the effect of responsibility for final ratings was even larger in the contrasting-information condition than in the no-change condition. Therefore, cognitive dissonance explained employee responsibility. Moreover, participants' final ratings of perceived fairness were not significantly different across responsibility conditions in the no-change condition, but this effect of responsibility on final ratings of perceived fairness was large in the contrasting-information condition. Therefore, cognitive dissonance explained the results for perceived fairness.

Participants likely made extreme final ratings of perceived fairness and employee responsibility after receiving information about employee responsibility that contradicted the information upon which their initial ratings were based. The change in perceptions likely occurred to reduce the dissonance arousal created by making ratings based on erroneous information. The literature on cognitive dissonance has demonstrated that unwanted aversive events create cognitive dissonance, which must be resolved (e.g., Cooper & Fazio, 1984; Johnson et al., 1995; Goethals & Cooper, 1972;

Scher & Cooper, 1989; Stone & Cooper, 2001). In fact, the self-consistency model of dissonance suggests that individuals may change their attitudes as a way of restoring the consistency between their behavior and their personal standards because inconsistency generates negative self-perceptions (Aronson, 1969; Steele, 1988; Thibodeau & Aronson, 1992). This model applies to the current results in that participants in the contrasting-information condition may have experienced cognitive dissonance arousal when they learned that their initial ratings were based on erroneous information. Therefore, participants made ratings at Time 2 that were extreme and opposite of their initial ratings to reverse the negative emotions brought about by their initial ratings. That is, participants resolved their dissonance by changing their attitudes (i.e., ratings at Time 2) to match their behavior (i.e., ratings made at Time 1), possibly to perceive themselves as "fair" and informed about the reprimanded employee's responsibility.

Models of cognitive dissonance fit well with Trevino's (1992) conceptual framework due to the involvement of emotions. Based on that framework, the fair and unfair treatment of the employees in the scenarios used in the current study attracted and held the participants' attention and involved them emotionally. The results of the current study also supported Lind and Tyler's (1988) group-value model. According to this model, participants were interested in the way that their supervisors treated their peers, because the chastised employees were part of their group. Moreover, the participants understood that their supervisor could treat them in the same way. Therefore, participants expressed extreme ratings of perceived fairness and employee responsibility in the contrasting-information condition after they understood that they had been previously duped into making ratings based on false information.

In addition to the results showing cognitive dissonance, two other findings were of interest. First, the low, overall fairness ratings suggest that participants generally viewed the reprimand negatively. Therefore, third-party observers do not like to see their fellow employees publicly chastised because they know that they may be reprimanded similarly (e.g., Brockner, 1990; Brockner et al., 1994). Again, these results support Lind and Tyler's (1988) group-value model and Trevino's (1992) conceptual framework. Second, the ratings at Time 2 were very closely related in the contrasting-information condition (Table 2), which suggests that participants fell into a mindset after receiving contrasting information. Specifically, participants developed a negative mindset when they were told that the reprimanded employee was not accountable for an ordering error, after they had initially been informed to the contrary. Because employee reprimands may create extremely negative perceptions in the workplace, supervisors should make sure that they have their facts straight before they reprimand an employee in public. In fact, supervisors should avoid public reprimands altogether because they create negative employee perceptions (Trevino, 1992), which can reduce both job satisfaction and organizational commitment (Barling & Phillips, 1993; Forrest, 2002; McFarlin & Sweeney, 1992; Xie et al., 2007; Tansky, 1993).

If the scenario described above creates a negative mindset, it may simply fade over time, along with the memory for the incident because research has shown that memory deteriorates as a function of time (Neisser & Harsch, 1992; Smith et al., 1991; Thompson et al., 1996). Alternatively, the negative mindset may persist and become paired with the workplace, evoking both stress and anxiety, which may hinder creativity and productivity. Future research could determine the duration and effects (i.e., fairness and commitment) of employee reprimands and the number of reprimands necessary to create a relatively permanent change in the workplace.

The current study contained several limitations. For example, dissonance arousal seemed to best explain the extreme ratings for perceived fairness and employee responsibility in the current study, especially after eliminating contrast and assimilation effects as explanations. Nevertheless, we did not directly assess dissonance arousal. Future studies could correct this flaw and validate the interpretations of the results from the current study. Specifically, future research could evaluate several physiological measures (e.g., cortisol levels, heart rate, galvanic skin response, perspiration, blood pressure) as participants make their initial and final ratings. If dissonance arousal explains the extreme ratings in the current study, physiological measures should be more extreme at Time 2 in the contrasting-information than in the no-change condition and the measures should show more change in the contrasting-information condition than in the no-change condition.

Another limitation is the fact that 17% of the participants did not read and comprehend the scenarios well enough to correctly answer questions about them at the two different times that ratings were collected. Because these individuals were selected from an open-admissions university, poor reading ability might explain the poor comprehension displayed by the participants in the current study. We reanalyzed the data in the current study using data from the entire sample and the results did not change. Nevertheless, we wanted to base our interpretations on results generated from informed participant responses.

The current study was also limited because it tested students using a written vignette instead of testing employees in a workplace setting. Reprimands in the workplace could produce vastly different results. For example, employee

responsibility might not affect a third-party observer's perceptions of fairness if they already experienced negative feelings toward the co-worker who was responsible for the reprimand. Similarly, third-party employees might not change their fairness perceptions if their favorite supervisor unjustly chastised a fellow employee. Although such scenarios are possible, they should be the exception rather than the rule. We expect findings in the workplace to mirror the results from the current study because the student participants will one day be a part of the workforce. In fact, the effects found in the current study should underestimate the effects produced by similar situations in workplaces where third-party observers have strong allegiances with their supervisor and their co-workers.

Unfortunately, such research cannot be ethically undertaken due to the deceit that would be necessary to successfully conduct this study in a real workplace. However, future research should extend the current study by using real employees as participants who would complete scenarios for contrived situations like the one in the current study. Such research should demonstrate large effects for real employees who should be sensitive to negative emotions in an environment where they spend long hours.

As an alternative to asking employees to imagine and rate a scenario in their workplace resembling the one depicted in the current study, employees could be asked about their perceptions of real past reprimands that they have observed. In such a procedure, real reprimands may have occurred long ago, which means that participants would have to rely on their memory to make ratings. Because memory fades over time, participants may generate inaccurate ratings (Neisser & Harsch, 1992; Smith et al., 1991; Thompson et al., 1996). Therefore, participants should be asked to report on reprimands they have observed or experienced in the past month. Future research should also examine observers' perceptions of fairness for other types of punishment, such as suspensions and terminations. Trevino (1992) suggested that verbal reprimands are less harsh than suspensions and terminations. Because suspensions and terminations are more extreme forms of punishment than verbal reprimands, they should produce ratings that are much more extreme than the ones in the current study.

As an alternative to punishment, future research could also examine whether positive supervisor-employee interactions affect perceptions of fairness and commitment. The results of such a study should mirror the results in the present study, except in a positive direction. For example, supervisors' public acknowledgments of employees should increase the fairness perceptions of third-party employees in the workplace, especially when the employee is initially not responsible for the acknowledgment, and, later, they become responsible for the acknowledgment. Future research using reward scenarios could also add measures, such as organizational commitment and employee satisfaction in the workplace. In contrast to the ethical dilemmas created by feigned punishment scenarios, researchers could study the effects of fabricated reward scenarios in real workplace settings if the reward is not removed from the recipients.

In summary, Trevino (1992) speculated that justice considerations may hold less importance to observers than punishment recipients because observers typically have less detailed information than punished recipients. However, our study showed that observers made strong judgments regarding fairness and, in fact, viewed the punishment process as being unfair overall when they were provided with specific details. In addition, contrasting information yielded extreme ratings from observers that opposed their initial ratings, which was due to dissonance arousal created by participants initial ratings made based on erroneous information concerning employee responsibility for an ordering error. Consequently, supervisors need to ensure that they gather all the relevant information before they reprimand an employee because observers will change their perceptions in an extreme manner if they later discover that their supervisor unjustly reprimanded a fellow employee. In fact, these perceptions will be more extreme than if observers initially thought the reprimand was just. Such a scenario may decrease employees' commitment to the company or cause them to rate their supervisor more harshly in subsequent evaluations (Barling & Phillips, 1993; Moorman et al., 1993; Trevino, 1992).

5. Conclusion

The results of the current study demonstrate that supervisors need to be mindful that their interactions with their employees can be perceived positively or negatively by other employees, and those perceptions can influence the way that organizations function.

Compliance with ethical standards

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Disclosure of conflict of interest

We have no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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